



WITHOUT
YOU
THERE IS
NO **US.**



Natural Gas Catalog

November 2025



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AYU: Knowledge at Your Fingertips

You know all those questions you had when you first entered the industry and even decades on the job? Well, we're here to finally answer them.

The industries that A.Y. McDonald serves consist of centuries worth of history and knowledge. It's information that is very rarely written down, located in one place, and not available for just anyone to access...until now.



As a result of the many Innovation Summits held in recent years, the concept of A.Y. McDonald University (AYU) was born. By organizing our vast knowledge and experience, this **FREE** e-learning platform is an educational opportunity not often found in our industry. These courses are ready to be viewed, clicked through, and read by you. Use your desktop, iPad, or smartphone – it all works the same. Whether you're in the field or at the office, AYU is knowledge available 24/7 right at your fingertips.



Find out what all the fuss is about by signing up today at aymcdonald.com!

Social Media & A.Y. Alerts

Our industry is booming and we're just here to make sense of it. Scan the QR code to stay connected with A.Y. McDonald on any of our social media platforms by following, liking, commenting, or subscribing and don't forget to sign up for A.Y. Alerts (email blasts) to stay up-to-date on A.Y. McDonald news and product information.



A.Y. McDonald Mfg. Co.'s Interactive Digital Product Catalogs

DCatalog Library



Make sure to navigate A.Y. McDonald Mfg. Co.'s system/service that takes static PDFs to interactive digital catalogs. This upgraded catalog system brings functionality to the process, can be viewed on all devices, and you are not required to download a massive PDF document (although this is still an option)! One of the features of the digital catalog is called "My Catalog". This customizable tool allows you to select specific pages from our main product catalogs, tailoring your catalog to match your unique needs. This means you can quickly access the products you use most frequently, saving valuable time on every search.



You can access the digital catalogs when you [visit aymcdonald.com](http://aymcdonald.com), click on 'Support', then click on 'Resources', and then click 'Catalogs'.



- Toggle between single and double page views based on preferences
- Download individual pages or page ranges to share or save
- Add notes throughout the catalog to keep track of comments, questions, and product options
- Send individual catalog pages directly to emails or post on social media with single click
- Crop images or specific pieces of catalog information to share, download, or print
- View page thumbnails for faster access to specific product sections
- Use the arrows, bookmarks or table of contents tab to make navigation a breeze



A.Y. Cares 24/7/365 – Access. Online. Anytime

SERVICE & SUPPORT | aymcdonald.com

A.Y. McDonald's customer service team is constantly looking for new ways to provide the power of information at your fingertips. In recent years, the online customer portal located at aymcdonald.com has served as a perfect example of this, making for a helpful tool for customers to not only order product online but to also check order status as well.

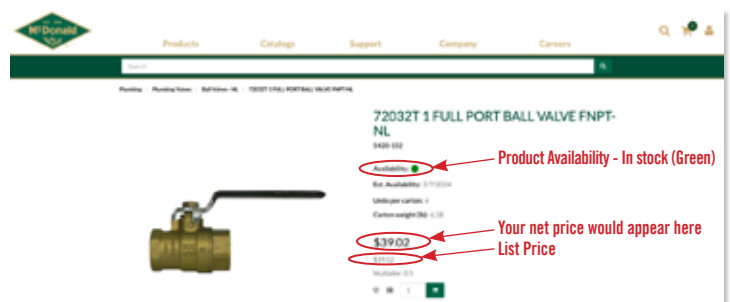
The portal's original design allowed a foundation for us to build more functionality and support for you, our customer, our boss. With 24/7 access, we have improved and built out new tools that we are ready to deliver to you today. You spoke, we listened. Learn about the portals features below.

Have an online account on A.Y. McDonald's website and you will be able to see this and much more:

- **Ability to search using keywords and attributes**
- **Check Order History*** - see estimated availability of items on order, as well as access to shipping costs and tracking information.
- **Price & Availability*** - enhanced visibility to net price and product availability!
- **Check invoices and invoice status**
- **Order Online*** - Fast and easy way to get your products!
- **Product Cross Reference** - allows for easy use to see comparable products across different companies
- **You ask and we answer.** Now you can live chat during normal business hours with a product expert on our aymcdonald.com website. Chat inquiries can include questions that pertain to products, installation instructions, submittal drawings, repair parts, etc.



Product Cross Reference



Product Availability, Net and List Pricing

Freight Program

I. PRODUCT GROUP QUALIFICATION LEVELS

Freight will be prepaid and allowed by Seller on orders that meet or exceed the following net prices or unit qualifiers (net prices reflect list prices less applicable discounts):

- 1. Natural Gas (may be combined with Plumbing Products) \$3,000 Net
- 2. Water Service Products (may be combined with Curb Boxes, Plumbing Products, Frames and Covers, Natural Gas, and Yoke Boxes) \$7,500 Net
- 3. Plumbing Products \$1,300 Net
- 4. Pit Setters
 - 15" diameter – 144 units
 - 18" diameter – 96 units
 - 21" diameter – 72 units
 - 24" diameter – 48 units
 - 30" and 36" diameter – 24 units

II. ADDITIONS

Once an order qualifies for freight in **any** product group, other products on your order ride free (excluding Pit Setters). However, additions to freight allowed orders will **NOT** be allowed once the original order is on board or a partial shipment has been made against the original order.

Freight qualifiers are subject to change without notice.

Dimensions and weights are reference only and are subject to change.

Trade Customs

CONTROLLING PROVISIONS: These terms and conditions supersede all previous terms and conditions and shall control any sale by A.Y. McDonald Mfg. Co. ("Seller"). No alteration or waiver of these terms and conditions shall be valid unless specifically accepted in writing by an authorized representative of Seller.

PRICES: Billing prices are those in effect at the time the order is shipped. All prices are subject to change without notice. Possession of a price sheet shall not be construed as an offer to sell. Seller reserves the right to reject any order.

TERMS: 2% 10th Prox., Net 25th (A 2% cash discount can be taken if paid via ACH/wire on the 10th of the month following the shipment. The month is defined as the 26th through the 25th. For example, a February 25th invoice is due 2% on March 10th, a February 26th invoice is due 2% April 10th, and all invoices are due net the 11th and considered past due on the 26th of the month. No cash discount is available for check payment). Without open credit terms, payment may be required prior to shipping. A 2% monthly service charge (or the maximum amount permitted by law) may be applied to the balance of any past-due invoice. Buyer shall pay any necessary collection fees, including reasonable attorney fees.

TAXES: Any sales tax, use tax, manufacturer tax, duty, or other cost imposed by any government entity shall, at Seller's option, be added to the purchase price and payable by buyer. Buyer must certify any tax exemption and agree to indemnify Seller against any tax imposed contrary to such certification.

FREIGHT: All prices are F.O.B. Seller's factory, with full freight allowed within the contiguous United States and Canada on the orders that qualify pursuant to the Freight Program schedule. Seller reserves the right to select the carrier and route of shipment and to ship at the most economical rate. All extra charges for special handling or delivery services will be paid for by the buyer. Terms for shipment outside the contiguous United States and Canada shall be established on a case-by-case basis.

"LIMITED WARRANTY Subject to the limitations stated herein, A.Y. McDonald Mfg. Co. ("Seller") warrants that natural gas products manufactured by Seller shall be free from defects in material and workmanship and shall perform the services for which they are intended when properly installed, under normal use, and under ordinary conditions, for a period of ninety (90) days from the date of shipment from Seller's factory. This Limited Warranty does not cover or apply to gas regulator products, water service products, plumbing products, or pumps or pump accessories manufactured by Seller. Seller warrants that gas regulator products manufactured by Seller shall be free from defects in material and workmanship and shall perform the services for which they are intended when properly installed, under normal use, and under ordinary conditions, for a period of twelve (12) months from the date of shipment from Seller's factory. Buyer must notify Seller in writing of a potentially defective product as soon as possible and not later than twelve (12) months from the date of shipment from Seller's factory for gas regulator products and not later than ninety (90) days from the date of shipment from Seller's factory for all other natural gas products. Upon receipt of such notice, Seller shall, at its option and at its expense, examine such product at Seller's factory or such other location as Seller shall determine. Should Seller agree to a return of the product, buyer shall follow in every respect the packaging and transportation instructions provided by Seller. In no case shall a product be returned without first obtaining the permission of Seller. If a product is proven to the satisfaction of Seller to be defective, then Seller shall, at its option and at its expense, repair or replace such product or reimburse buyer for the price paid by buyer for such product. The cost of shipping to buyer a repaired or replaced product shall be paid by Seller on the same shipping terms as the original shipment of such product to buyer. Except as stated herein, buyer shall assume all responsibility and expense for any dismantling, removal, reinstallation, and shipping in connection with this Limited Warranty, and no claims will be allowed for labor, shipping, materials, or other costs incident to the repair, replacement, or return of a product.

THIS LIMITED WARRANTY IS THE ONLY WARRANTY PROVIDED BY SELLER AND IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SELLER'S LIABILITY IS LIMITED TO REPAIR, REPLACEMENT, OR REIMBURSEMENT AS PROVIDED ABOVE, AND IN NO EVENT SHALL SELLER'S LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT(S) INVOLVED. THIS LIMITED WARRANTY PROVIDES THE EXCLUSIVE REMEDY AGAINST SELLER FOR CLAIMS RELATING TO PRODUCTS, WHETHER IN CONTRACT, IN TORT (INCLUDING NEGLIGENCE), OR UNDER ANY OTHER LEGAL THEORY, AND WHETHER ARISING OUT OF WARRANTIES, REPRESENTATIONS, INSTRUCTIONS, OR DEFECTS FROM ANY CAUSE. IN NO EVENT SHALL SELLER BE LIABLE FOR OR OBLIGATED TO PAY ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES OF ANY KIND.

THIS LIMITED WARRANTY EXTENDS ONLY TO BUYERS WHO PURCHASE SELLER'S PRODUCT(S) DIRECTLY FROM SELLER ("ORIGINAL PURCHASERS"), INCLUDING DISTRIBUTORS, WHOLESALERS, UTILITIES, AND CONTRACTORS. THIS LIMITED WARRANTY IS NOT ASSIGNABLE OR OTHERWISE TRANSFERABLE BY THE ORIGINAL PURCHASER TO ANY OTHER PARTY. SELLER EXTENDS NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO "CONSUMERS," AS THAT TERM IS DEFINED IN THE MAGNUSON-MOSS WARRANTY ACT (15 U.S.C. SECTIONS 2301 ET SEQ.) AND THE REGULATIONS PROMULGATED THEREUNDER. IN NO EVENT SHALL THE DURATION OF ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE BE LONGER THAN THE NINETY (90) DAY PERIOD PRESCRIBED HEREIN.

This Limited Warranty shall not apply to product failure or defect: due to a defect in the design, engineering, or installation of any water, gas, or other system; where the product has been modified without the prior written authority of Seller; caused by the failure to install or use the product in conformity with any instructions or specifications provided by Seller; caused by the improper installation, use, application, maintenance, repair, transportation, handling, or storage of the product; caused by the fault or negligence of anyone other than Seller or any other act or event beyond the control of Seller. Seller makes no warranties as to any products or product parts or components that are not manufactured by Seller. The limitations of liability contained in this Limited Warranty shall be effective without regard to Seller's performance or failure or delay of performance under any other term or condition of any trade customs, warranty, or other agreement. No co-worker, representative, or agent of Seller, nor any other person, has authority to assume or incur on behalf of Seller any liability, obligation, or responsibility in place of or in addition to this Limited Warranty."

CLAIMS: Inspect all shipments immediately upon receipt, examining products for damage and verifying quantity. Any claim of damage, shortage, or non-conformance must be made in writing within 5 business days of receipt of goods (any claim of damage or shortage must be noted on the Freight Carrier's signed delivery receipt).

ORDERS: Seller is not responsible for and shall not be held liable for damages resulting from delays or failures in shipment, nor shall Seller be liable for any delay or failure to provide goods where occasioned by any force majeure event, including without limitation: strikes and other labor disputes; fires; acts of God; floods, snowstorms, tornados, and other storms; unusually severe inclement weather conditions; fuel, energy, carrier, or material shortages or embargoes; war; terrorism; civil disturbances; acts of civil or military authority; court order or decree; partial or complete destruction of factory or other facility; acts of buyer; inability to obtain or retain fuel, energy, carriers, materials, facilities, or labor without litigation or the payment of penalties or unreasonable prices or the acceptance of unreasonable terms and conditions; and any other cause beyond Seller's control.

Trade Customs


RETURNS: Goods cannot be returned without the prior written approval of Seller. Return freight must be prepaid by buyer. After inspecting the returned goods, Seller may impose upon buyer: (1) a handling and restocking charge equal to a minimum of 25% of the invoiced cost of the returned goods; and, in addition thereto, (2) any costs required to put the goods in like-new condition. All credit memos are subject to cash discount terms as defined in our standard terms.

CANCELLATION: The contract resulting from Seller's acceptance of Buyer's order cannot be cancelled, terminated, or modified by Buyer, in whole or in part, except upon Seller's prior written approval.

NON-STOCK PRODUCTS: Non-stock products (i.e., customized or non-standard products) may require a minimum order and buyer should make prior inquiry

to Seller. Once production has begun, orders for non-stock products cannot be cancelled without the prior written approval of Seller. Seller will not accept the return of non-stock products.

CONSTRUCTION: All sales, contracts, and offers to buy or sell, all rights, remedies and duties of all persons, and the construction and effect of all provisions hereof, shall be governed by and construed according to the laws of the State of Iowa.

 **WARNING:** It is unlawful in **CALIFORNIA** and **VERMONT** (effective 1/1/2010); **MARYLAND** (effective 1/1/2012); **LOUISIANA** (effective 1/1/2013) and the **UNITED STATES OF AMERICA** (effective 1/4/2014) to use any product in the installation or repair of any public water system or any plumbing in a facility or system that provides water for human consumption if the wetted surface area of the product has a weighted average lead content greater than 0.25%. This prohibition does not extend to service saddles used in California, Louisiana or under USA Public Law 111-380. **WARNING:** This product can expose you to chemicals including lead, which is known to the State of **CALIFORNIA** to cause cancer and birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov.

WELCOME TO THE STANDARD OF SAFETY.

A.Y. McDonald Mfg. Co. designs and manufactures our natural gas products to comply with several industry standards – ASME, ANSI, and ASTM. But as of May 1, 2015, we took this a step further by starting to mark A.Y. McDonald Mfg. Co. natural gas products with a new barcode that was developed in the new ASTM F-2897-14 standard. As a real game changer, A.Y. McDonald Mfg. Co. is one step ahead when it comes to our commitment to gas safety and accountability through the use of traceability tags!

New times, new technology

Thanks to traceability, city streets and backyards can be a whole lot safer. With innovation and organization at its core, the ASTM F-2897-14 standard determines the information gas distribution products are marked with. In the event of an accident caused by a gas leak, gas utilities can access this information to locate other potentially faulty products. Through inspections and necessary replacements, we can prevent future accidents.

Making accountability easy

To make this standard of traceability convenient for you, A.Y. McDonald Mfg. Co. has made TRACE TAGS standard on each and every gas valve and meter bar we manufacture. These products come complete with a barcode detailing the type of material the product is made from; component details; and the date an A.Y. McDonald Mfg. Co. co-worker in Elizabethton, Tennessee, Albia or Dubuque, Iowa, machined, assembled, and tested the product.



All gas valves and meter bars you purchase from A.Y. McDonald Mfg. Co. will include a **TRACE TAG**. Once the tag is scanned for installation, enjoy the peace of mind of being forward thinking.

EVERY PART. COMPLETELY ACCOUNTED FOR.



Component Manufacturer

— Manufactured by A.Y. McDonald Mfg. Co.

Lot Code and Date Code

- Built-in Albia, or Dubuque, Iowa or Elizabethton, Tennessee
- Item Number
- Item Description
- Job Number (what cell it was built on, when it was built, and who was working on the cell)
- Date it was built

Connection Type and Size

— Inlet/Outlet Size

Component Type

- Plug Valve
- Ball Valve
- Meter Bar
- Meter Set Assembly (MSA)

Material

- Cast Iron
- Brass

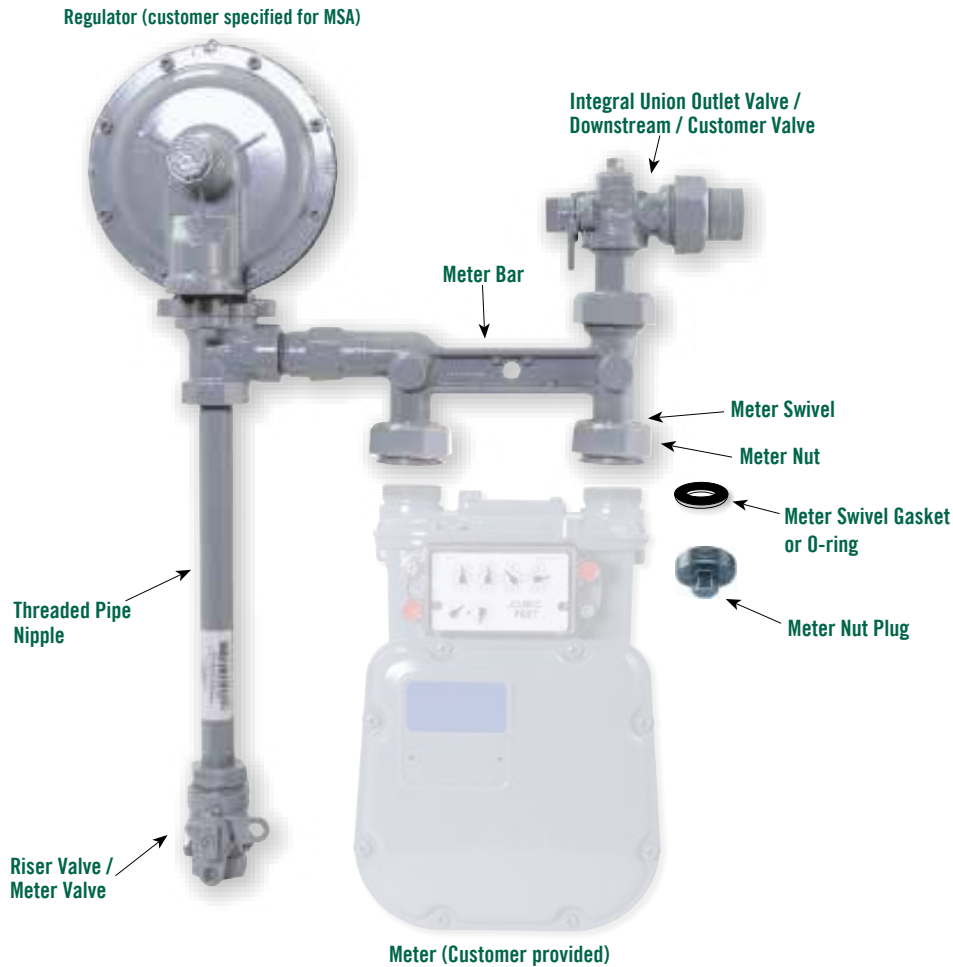


Learn more about making your community safer with **TRACE TAGS** by visiting our YouTube channel.



More than a brand. We're a family.

General Information



A.Y. McDonald Mfg. Co. is known in the gas industry for its wide variety of house piping valves and gas meter valves. Serving the needs of gas utilities is our number one priority. The items indicated above are the products we currently offer, produced at our state-of-the-art manufacturing facilities.

Traditionally a strong competitor in the industry, A.Y. McDonald Mfg. Co. continues to practice its founder's philosophy:

“WE WILL MAKE GOOD PRODUCTS AND SELL THEM HONESTLY”

Material Specifications

METER BAR - Cast Iron per ASTM A126 Class B

VALVE BODY/ENDPIECE - Cast Iron per ASTM A126 Class B or Ductile Iron per ASTM A536

PLUG - Cast Brass - ASTM B584/Alloy 83600 or Alloy 84400

BRASS BALL - CDA 36000 or CW617N

CAP (Ball Valve) - Diecast Zinc / Alloy #7

BRASS NUTS and WASHERS (Plug Valve) - ASTM B584/Alloy B83600 or Alloy 84400 or MPIF Std. 35 Code CZ 3002

O-RINGS/GASKETS - Buna-N (Nitrile) Rubber

PORT SEALS (Ball Valve) - PTFE

INSULATED UNION TAILPIECES - Super Tough Nylon 66 Insulation

UNION TAILPIECES - Zinc Plated Yellow Dichromate Finished Steel

STEM (Ball Valve) - Copper Alloy - CA 36000 CDA

UNION NUT - Malleable Iron per ASTM A47, ASTM A197 or Ductile Iron per ASTM A536

SWIVEL/SWIVEL NUT - Malleable Iron per ASTM A47, ASTM A197 or Ductile Iron per ASTM A536



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NO **US.**



Plug Valves

November 2025



Re-Lubrication Tool

FOR USE ON 175 PSI RE-LUBE VALVES AND WITH A.Y. MCDONALD MFG. CO. GREASE ONLY

A.Y. McDonald Mfg. Co. model number 558 Re-Lubrication Tool is an easy and economical way to lubricate 175 psi gas meter valves.

The tool is machined from steel alloy for durability and has an Allen wrench mounted to the body for convenience. It can be used to re-lubricate A.Y. McDonald Mfg. Co. valves in the fully open or fully closed position when the valve is pressurized or unpressurized. It can also lubricate valves of other manufacturers, check with them for their recommended procedures.



- **558 - Grease Tool**
- **558GR - Grease Sticks** for use with 558 Re-Lubrication tool. 24 sticks/box.

Watch our Re-Lubrication Tool demonstration video



1. A.Y. McDonald Mfg. Co. 175 psi gas valves may be re-lubricated in the **full open or the full closed position** when the valve is pressurized or unpressurized.

2. Remove the 1/8" NPT Allen Head pipe relube plug from the re-lubrication port in the head of the valve plug.

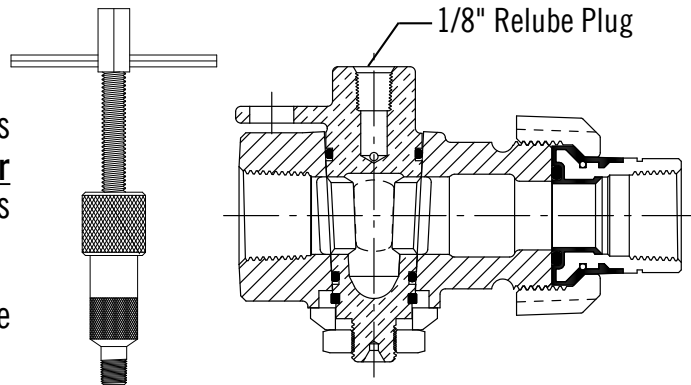
3. Clean nozzle tip and carefully thread relube tool into relube port. Use only A.Y. McDonald Mfg. Co. approved lubricant.

4. Turn tee handle clockwise to force lubricant into valve. If immediate resistance is felt, the valve may have a hardened grease deposit which must be removed. Relube carefully to insure that valve is not overlubricated.

5. After re-lubrication, the 1/8" NPT Allen Head pipe relube plug should be securely replaced in the relube port in the head of the valve plug.

A small amount of gas leakage from the relube port may be observed during this procedure depending on the amount of lubrication already in the valve body.

NOTE: Other commercially available relube tools may be used. Check with A.Y. McDonald Mfg. Co. before using.



NOTE:

- 100 psi gas valves do not have lube ports and cannot be relubricated.
- A small amount of gas leakage may be observed from the re-lube port while performing this procedure based on the amount of grease left in the valve prior to the valve being re-lubed.
- After a few trials, the field service personnel should be able to tell by the resistance of the handle when the plug is filled with an adequate amount of grease.

Natural Gas Plug Valves

175 PSI PLUG VALVES

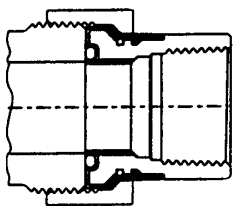
Precision machined and offer bubble tight leak protection while open or closed. Plug Valves can be re-lubricated while in service. Special machined grooves in the plug channel provide grease to all sealing surfaces.

All connections with pipe threads require use of thread sealant at installation. (PTFE tape is not recommended, see instruction sheet.)

Iron Body Gas Plug Valves Features

- A.Y. McDonald Mfg. Co.'s Iron Body, Brass Plug Valve is designed and tested to comply with ANSI/ASME B16.33 American National Standard for "Manually Operated Metallic Gas Valves for Use in Gas Piping Systems Up to 175 psi."
- Pressure rated at 175 psi.
- Each valve is factory lubricated and suitable for use with natural, manufactured, and LP gases.
- 175 psi valves can be re-lubricated while in service and under pressure. This renews the grease seal to a like new condition adding to the life of the valve.
- Plug valves are equipped with top and bottom O-rings for added security against external leakage.
- Tamperproof design prevents disassembly with normal household tools.
- The on/off turning torques are controlled at assembly by using torque machines to set the bottom nut which is also staked to maintain this torque.
- Pressure may be applied in either direction as A.Y. McDonald Mfg. Co.'s Plug Valve is a non-directional valve.
- Valve can be rotated full 360°. A 90° rotation provides a complete shut-off from fully open position.
- Available with or without lockwing. Both models accommodate industry-standard, separately-supplied locking devices such as the casket, barrel lock, and padlock.
- Port openings sized to accommodate the best known stop changers.
- Temperature Range: -20°F to +150°F.
- Available in FNPT x FNPT (560) or FNPT x Insulated Union with FNPT tailpiece (6276).
- Each valve is pressure tested electronically.

METER VALVE OUTLET UNION STYLES



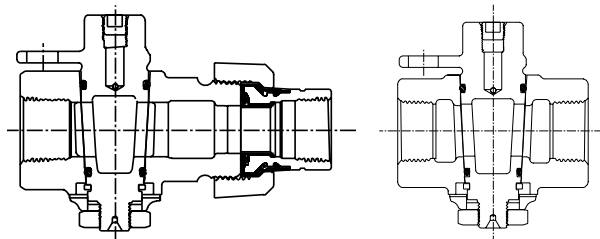
Insulated Union
with O-ring seal only
FNPT tailpiece



Plug Valve
Instruction Sheet

- A second O-ring is molded into the plastic to improve sealing without over tightening the union nut.
- The one piece molded insulator protects the service line and the main from stray currents.

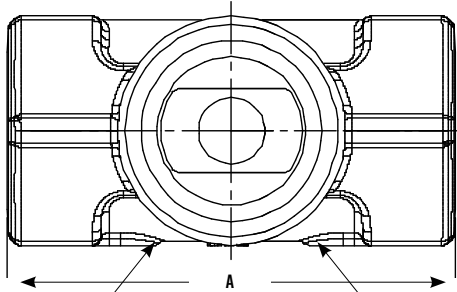
RE-LUBRICATION



Natural Gas Plug Valves - 559 Series

TAMPERPROOF, 175 PSI, FLAT HEAD, BRASS PLUG

These valves are designed for use with natural, manufactured, and LP gases only. All A.Y. McDonald Mfg. Co. 175 psi Plug Valves may be re-lubricated in the full open or full closed position when the valve is pressurized or unpressurized. All A.Y. McDonald Mfg. Co. plug style gas valves have factory set turning torque. **Do Not Tamper with Bottom Nut.**



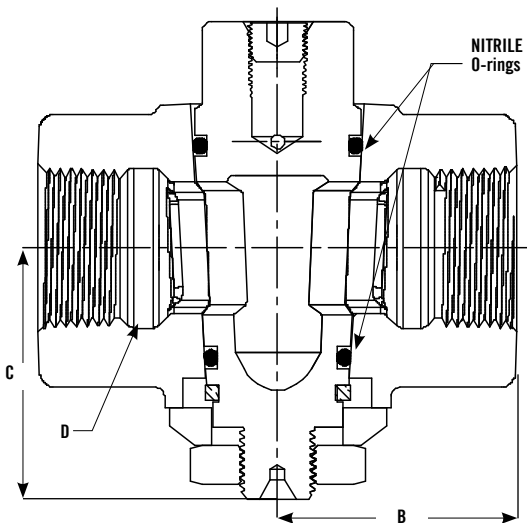
C - OPTIONAL 1/8" NPT TEST PORT (559BC)

D - OPTIONAL 1/8" NPT TEST PORT (559BD)



(Black Cast Iron Shown)

FNPT x FNPT



FINISH OPTIONS

559A Thermal-Diffusion Zinc

559B Black Cast Iron

559C Thermal-Diffusion Zinc and Painted

559PNT Painted

559BC Black Cast Iron with 1/8" Test Plug

559BD Black Cast Iron with 1/8" Test Plug

Taps available on all the above finish options.

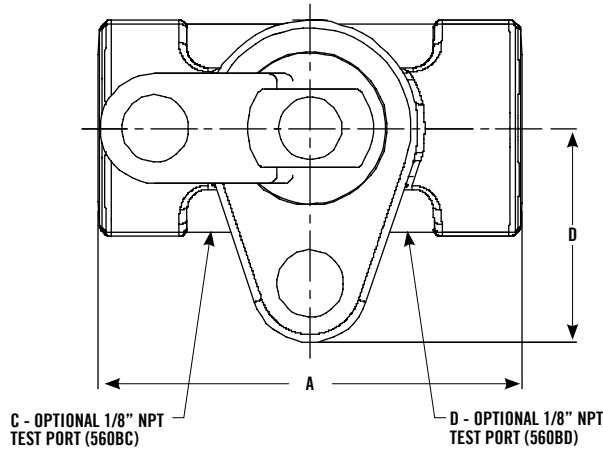
DIMENSIONS

Size	A	B	C	D
1/2"	3.1"	1.6"	1.6"	1/2"
3/4"	3.1"	1.6"	1.6"	3/4"
1"	3.4"	1.8"	1.8"	1"
1 1/4"	3.9"	2.0"	2.3"	1 1/4"
1 1/2"	4.7"	2.4"	2.6"	1 1/2"
2"	5.6"	2.8"	2.9"	2"

Natural Gas Plug Valves - 560 Series

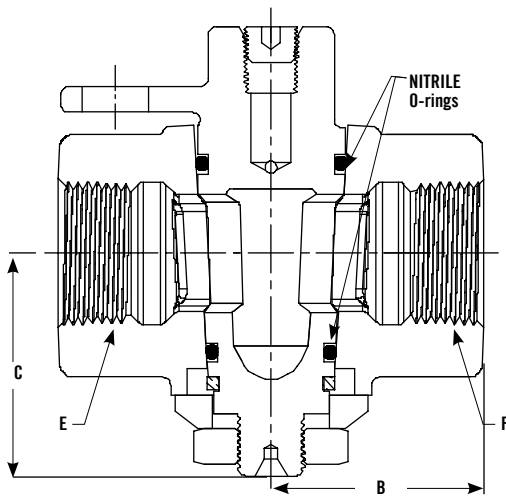
TAMPERPROOF, 175 PSI, FLAT HEAD, LOCKWING, BRASS PLUG

These valves are designed for use with natural, manufactured, and LP gases only. All A.Y. McDonald Mfg. Co. 175 psi Plug Valves may be re-lubricated in the full open or full closed position when the valve is pressurized or unpressurized. All A.Y. McDonald Mfg. Co. plug style gas valves have factory set turning torque. **Do Not Tamper with Bottom Nut.**



C - OPTIONAL 1/8" NPT TEST PORT (560BC)

D - OPTIONAL 1/8" NPT TEST PORT (560BD)



(Black Cast Iron Shown)

FNPT x FNPT

FINISH OPTIONS

560A Thermal-Diffusion Zinc

560B Black Cast Iron

560C Thermal-Diffusion Zinc and Painted

560PNT Painted

560BC Black Cast Iron with 1/8" Test Plug

560BD Black Cast Iron with 1/8" Test Plug

Taps available on all the above finish options.

DIMENSIONS

Size	A	B	C	D	E	F
1/2"	3.1"	1.6"	1.6"	1.6"	1/2"	1/2"
1/2" x 3/4"	3.1"	1.6"	1.6"	1.6"	1/2"	3/4"
3/4"	3.1"	1.6"	1.6"	1.6"	3/4"	3/4"
3/4" x 1"	3.4"	1.8"	1.8"	1.8"	3/4"	1"
1"	3.4"	1.8"	1.8"	1.8"	1"	1"
1 1/4"	3.9"	2.0"	2.3"	1.9"	1 1/4"	1 1/4"
1 1/2"	4.7"	2.4"	2.6"	2.3"	1 1/2"	1 1/2"
2"	5.6"	2.8"	2.9"	2.5"	2"	2"

Natural Gas Plug Valves - 6276 Series

TAMPERPROOF, 175 PSI, FLAT HEAD, LOCKWING, BRASS PLUG, INSULATED UNION

These valves are designed for use with natural, manufactured, and LP gases only. All A.Y. McDonald Mfg. Co. 175 psi Plug Valves may be re-lubricated in the full open or full closed position when the valve is pressurized or unpressurized. All A.Y. McDonald Mfg. Co. plug style gas valves have factory set turning torque. **Do Not Tamper with Bottom Nut.**

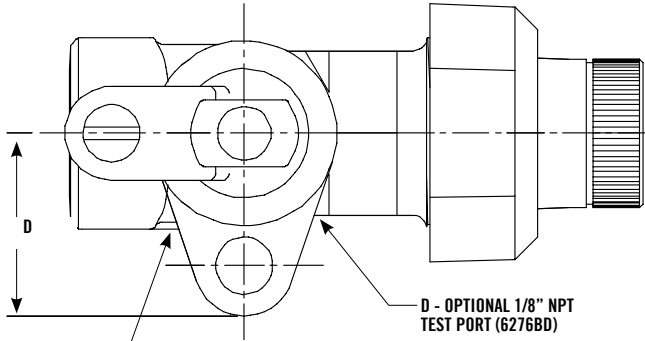


(Black Cast Iron Shown)

FNPT x Insulated Union with FNPT Tailpiece (O-ring only)

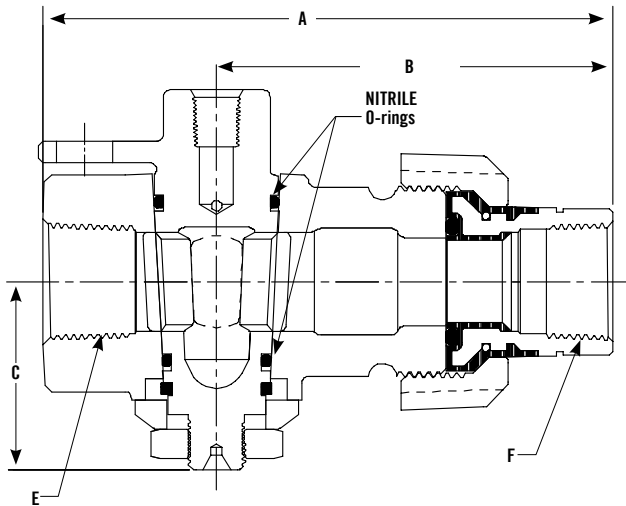
FINISH OPTIONS

- 6276A** Thermal-Diffusion Zinc
 - 6276B** Black Cast Iron
 - 6276C** Thermal-Diffusion Zinc and Painted
 - 6276PNT** Painted
 - 6276BC** Black Cast Iron with 1/8" Test Plug
 - 6276BD** Black Cast Iron with 1/8" Test Plug
- Taps available on all the above finish options.



C - OPTIONAL 1/8" NPT TEST PORT (6276BC)

D - OPTIONAL 1/8" NPT TEST PORT (6276BD)



DIMENSIONS

Size	A	B	C	D	E	F
3/4"	5"	1.5"	1.6"	1.6"	3/4"	3/4"
1"	5.8"	1.8"	1.8"	1.8"	1"	1"
1 x 3/4"	6"	2.5"	1.8"	1.6"	1"	3/4"
1 1/4" x 3/4"	6"	2.5"	1.8"	1.6"	1 1/4"	3/4"
1 1/4"	6.5"	2.2"	2.3"	1.9"	1 1/4"	1 1/4"
2"	7.8"	2.8"	2.8"	2.5"	2"	2"



Valve O-ring Repair Union

Valve Size	Insulated			Thermal-Diffusion		
	6300RB	6300RA	End O-ring	O-ring	Black Nut	Zinc Nut
3/4"	4821-004	4821-052	4811-599	3134-212	4822-356	4822-474
1"	4821-056	4821-058	4822-456	3134-217	4810-987	4811-803
1 1/4"	4821-059	4821-061	4811-807	3134-224	4810-989	4811-844
2"	4821-062	4821-064	4811-592	3134-231	4811-581	4811-846

O-ring included with insulated end



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Ball Valves

November 2025



Natural Gas Ball Valves

175 PSI BALL VALVES

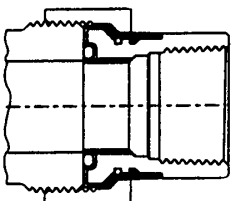
Precision machined and offers bubble tight leak protection both open and closed. Ball Valves offer the added feature of lower and more closely controlled operating torques for the life of the valve. The brass ball rides between two PTFE port seals that require no lubrication. The stem has a double O-ring seal and cannot be removed from the valve. The body and endpiece threads are pinned to prevent disassembly without damaging the valve. No field adjustment or maintenance of this valve is needed.

All connections with pipe threads require use of thread sealant at installation. (PTFE tape is not recommended, see instruction sheet.)

Additional Features

- A.Y. McDonald Mfg. Co.'s Iron Body, Brass Ball Valve is designed and tested to comply with ANSI/ASME B16.33 American National Standard for "Manually Operated Metallic Gas Valves for Use in Gas Piping Systems Up to 175 psi."
- Soft seat design does not rely on grease to prevent leakage to the atmosphere or through the valve seats. Sealing capability is maintained even after many cycles.
- Tamperproof design makes the A.Y. McDonald Mfg. Co. Ball Valve virtually impossible to disassemble without making the valve unusable, i.e. pinned endpiece requires excessive force to remove and valve cannot be reassembled if forcefully disassembled. The valve utilizes an internally loaded operating stem. The external cap is secured with a tamperproof stainless-steel screw.
- The on/off turning torques are controlled in excess of what can be turned "by hand" and yet low enough to ensure easy turning with a small wrench. Easy turning remains for normal life of valve.
- A 90° rotation provides complete shut-off from the open position. Valve can be rotated full 360°.
- Pressure may be applied in either direction as A.Y. McDonald Mfg. Co.'s Ball Valve is a non-directional valve.
- Traditional lockwing design easily accommodates industry-standard, separately-supplied lockwing devices such as barrel locks or padlocks.
- Full Port openings accommodate the best known stop changers and provide less flow restriction than non-circular openings or valves with reduced ports.
- Ball valve design isolates operating cap/stem seals and main shell from internal line pressure when the valve is in the normal used, full open position. The stem seals do provide the necessary external leak protection during cycling.
- In the normal open position, the sealing surface of A.Y. McDonald Mfg. Co.'s Brass Ball is isolated from the probable contaminants by the port seals. This results in a more reliable shut off over the life of the valve.
- No field adjustment or maintenance required.
- Each valve is pressure tested electronically.
- Temperature Range: -20°F to +150°F.
- Available in FNPT x FNPT (860) or FNPT x Insulated union with FNPT tailpiece (8276).
- These valves are designed for use with natural, manufactured, and LP gases only.

METER VALVE OUTLET UNION STYLES



Insulated Union
with O-ring seal only
FNPT tailpiece



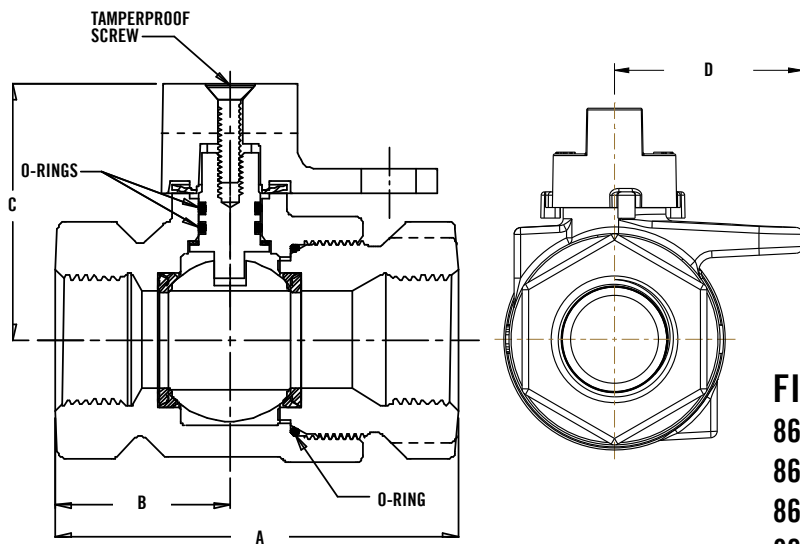
Ball Valve
Instruction Sheet

- A second O-ring is molded into the plastic to improve sealing without over tightening the union nut.
- The one piece molded insulator protects the service line and the main from stray currents.

Natural Gas Ball Valves - 860 Series

TAMPERPROOF, 175 PSI, FLAT HEAD, LOCKWING, FULL PORT BRASS BALL

These valves are designed for use with natural, manufactured, and LP gases only.



FINISH OPTIONS

860A Thermal-Diffusion Zinc

860B Black Cast Iron

860C Thermal-Diffusion Zinc and Painted

860PNT Painted

860BC - Black Cast Iron 3/4" and 1" with 1/4" Test Port

Taps available on all the above finish options.

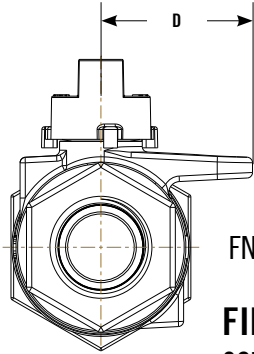
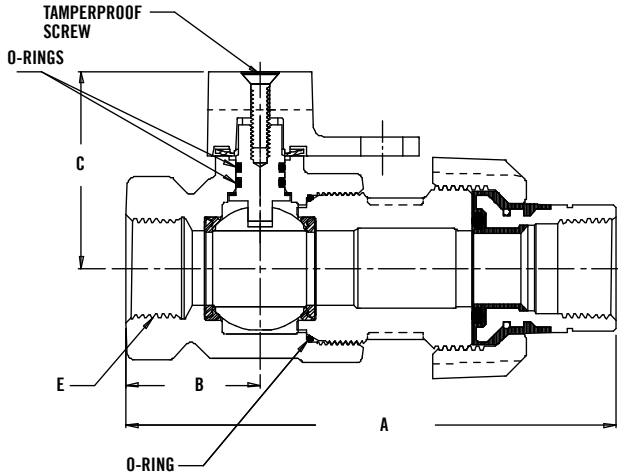
DIMENSIONS

Size	A	B	C	D
3/4"	3.1"	1.4"	2"	1.6"
3/4" x 1"	3.5"	1.4"	2"	1.6"
1"	3.6"	1.8"	2.1"	1.8"
1 1/4"	4.3"	1.9"	2.6"	2.3"
2"	5.4"	2.4"	3"	2.3"

Natural Gas Ball Valves - 8276 Series

TAMPERPROOF, 175 PSI, FLAT HEAD, LOCKWING, FULL PORT BRASS BALL, INSULATED UNION

These valves are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

FNPT x Insulated Union with FNPT Tailpiece (O-ring only)

FINISH OPTIONS

8276A Thermal-Diffusion Zinc

8276B Black Cast Iron

8276C Thermal-Diffusion Zinc and Painted

8276PNT Painted

8276BC - Offered in 3/4" and 1" with 1/4" test port

8276BD - Offered in 1" with 1/8" test port

Taps available on all the above finish options.

DIMENSIONS

Size	A	B	C	D	E
3/4"	5"	1.4"	2"	1.6"	3/4"
1"	5.8"	1.8"	2.1"	1.8"	1"
1 1/4"	6.9"	1.9"	2.6"	2.3"	1 1/4"
2"	8.4"	2.4"	3"	2.3"	2"



Valve O-ring Repair Union

Valve Size	Insulated End			Thermal-Diffusion Zinc Nut		
	6300RB	6300RA	O-ring	Black Nut	Zinc Nut	
3/4"	4821-004	4821-052	4811-599	3134-212	4822-356	4822-474
1"	4821-056	4821-058	4822-456	3134-217	4810-987	4811-803
1 1/4"	4821-059	4821-061	4811-807	3134-224	4810-989	4811-844
2"	4821-062	4821-064	4811-592	3134-231	4811-581	4811-846

O-ring included with insulated end



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Risers

November 2025



Connect with us on
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media platforms!

Anodeless Rigid Risers

Rigid Risers come pre-assembled with ASTM certified, polyethylene (PE) tubing. Designed for unmatched durability, the Rigid Riser has a solid carbon steel casing to protect the gas line from any above-ground damage as well as an electrostatically applied coating for corrosion resistance.

On the connection end, the heavy wall thread and convenient wrenching hex creates an ease of installation. Simply engage the CNC quality ANPT threads to the connection point, tighten it securely, and the work is done.

These risers are compatible for heat fusion joining with pipe or fittings manufactured from like or similar resin by butt fusion, socket fusion, or electrofusion methods. Mechanical fittings can be used to install Anodeless Rigid Risers depending on local requirements. Mechanical fitting options include stab and compression fittings.

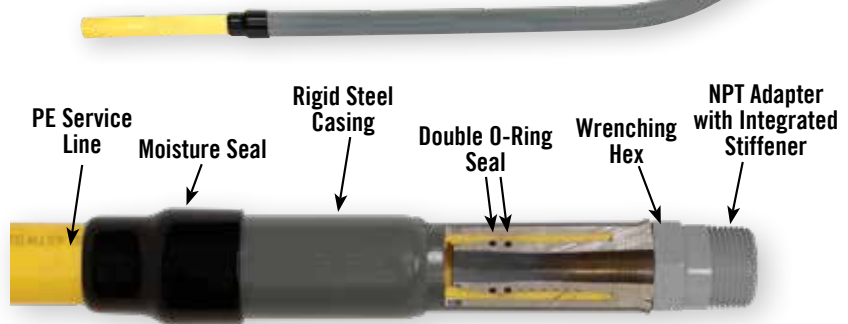
Before Meter Application



For more information, please scan this QR code.

Features:

- Double O-Ring Seal
- PE Tubing
- Heavy Wall Thread
- Electrically Applied Coating for Quality
- Traceability
- Wrenching Hex
- Electronic Leak Testing
- Meets all ASTM Performance Qualifications
- CNC Quality ANPT Threads
- Completely Coated Threads



Use model number system to fully build your customizable rigid riser. Contact factory for additional information.

RR	-	10	B*	-	12	-	24	-	36
RISER CODE		PE SIZE CODE	PE WALL CODE Wall Thickness		MPT CODE		Vertical Length		Horizontal Length
RR = Rigid Riser		10 = 1/2" CTS 17 = 3/4" IPS 18 = 1" CTS 21 = 1" IPS 27 = 1 1/4" IPS 31 = 1 1/2" IPS 38 = 2" IPS	B = .090" C = .095" E = .100" G = .151" H = .166" J = .119" K = .173" M = .216"		8 = 1/2" 12 = 3/4" 16 = 1" 20 = 1 1/4" 24 = 1 1/2" 32 = 2"		24 = 24" 30 = 30" 36 = 36"		24 = 24" 30 = 30" 36 = 36"



*Add "H" to PE Wall Code for HDPE tubing, Example: "B" to "BH"

CERTIFICATIONS RIGID RISERS

Chicago Fittings Corporation Certifies that all rigid risers manufactured with integral stiffeners will meet all applicable requirements defined under 49CFR Part 192, D.O.T. 192.281, 192.283(b), 192.375, ASTM D2513 Category 1, ASTM F1973, ASTM F1948-12 Category 1, NFPA 58, NFPA 54 (ANSI Z223.1) and IFGC Section 403. IAPMO/UPC/IPC/CSA 137.4 Listed.

Material Definitions

- 3.1 Adapter: AISI C12L14, C1213, C1215
- 3.2 Casing: A513 Type 1 or 2
- 3.3 Seals: Buna-N (Nitrile)
- 3.4 Tubing: ASTM D2513 MDPE and HDPE
- 3.5 Moisture Seals: Hot Dipped Vinyl



Semi-Rigid X-RISER®

Rigid Steel and Flexible Anodeless Riser for Natural Gas Application

This field assembled service head type riser is appropriate for both new construction and PE service line renewals. The Carbon steel casing can be used for rigid mounting while still allowing for flexible assembly underground. Use model number system to fully build your customizable semi-rigid riser.

This product meets NFPA54 requirements.



<u>RXR</u>	-	<u>10</u>		<u>B</u>	-	<u>12</u>	-	<u>24</u>	-	<u>36</u>
RISER CODE		PE SIZE CODE		PE WALL CODE Wall Thickness		MPT CODE		RIGID CODE Rigid Casing		FLEX CODE Flexible Conduit
RXR = Semi-Rigid/ Partial Flexible		10 = 1/2" CTS 13 = 1/2" IPS		A = .062" B = .090" C = .095" E = .100" F = .121" G = .151" H = .166" J = .119" K = .173" M = .216"		8 = 1/2" 12 = 3/4" 16 = 1" 20 = 1 1/4" 24 = 1 1/2" 32 = 2"		12 = 12" 18 = 18" 24 = 24" 36 = 36"		24 = 24" 36 = 36" 48 = 48" 60 = 60" 72 = 72" 96 = 96"
XR = Flexible		14 = 3/4" CTS 17 = 3/4" IPS 18 = 1" CTS 21 = 1" IPS 22 = 1 1/4" CTS 27 = 1 1/4" IPS 31 = 1 1/2" IPS 38 = 2" IPS								



Scan the QR Code for more information on How to Install the X-Riser.

Unmatched Durability, Effortless Installation

Introducing Anodeless Rigid-Flex Risers: Your ultimate solution for new construction and PE service line renewals. Pre-assembled with ASTM certified polyethylene (PE) tubing, these risers are designed for unparalleled durability and ease of use.

Built to Last

- **Solid Carbon Steel Casing:** Protects gas lines from above-ground damage.
- **Corrosion Resistance:** Electrostatic coating ensures long-lasting protection.
- **Heavy Wall Thread & Wrenching Hex:** Create a solid joint without exposing bare metal.

Versatile Compatibility

- **Heat Fusion Joining:** Compatible with pipe or fittings made from like or similar resin via butt fusion, socket fusion, or electrofusion methods.
- **Mechanical Fittings:** Install with stab and compression fittings as per local requirements.

Easy Installation

- **CNC Quality ANPT Threads:** Simply engage and tighten with a flat jaw wrench.
- **Flexible Conduit:** Facilitates simple field installation while safeguarding the PE tubing.

Anodeless Rigid-Flex Risers meet NFPA54 requirements, ensuring safety and reliability for your gas line projects. Upgrade to Rigid-Flex Risers for a seamless, durable, and secure gas line installation experience!

A.Y. McDonald Mfg. Co. and Chicago Fittings



CHICAGO
FITTINGS

One Family, One Solution



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Bypass Ball Valves

November 2025

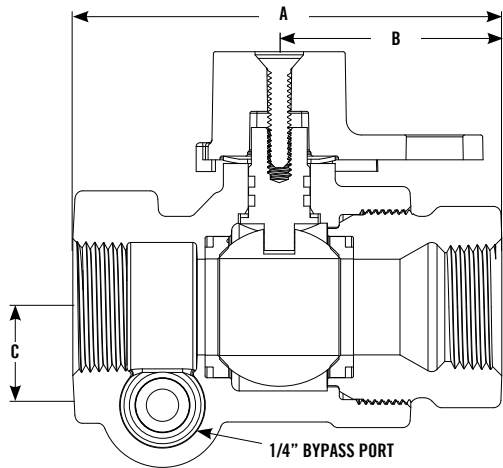


Inline Bypass Ball Valves - 861 Series

TAMPERPROOF, 175 PSI, FLAT HEAD, LOCKWING, BYPASS OPTION, FULL PORT BRASS BALL

These valves are designed for use with natural, manufactured, and LP gases only.

Bypass Ball Valves



DIMENSIONS

Size	A	B	C
3/4"	3.5"	1.8"	.8"
1"	3.6"	1.9"	1.0"
1 1/4"	5.2"	2.5"	1.4"



(Black Cast Iron Shown)

FNPT x FNPT

FINISH OPTIONS

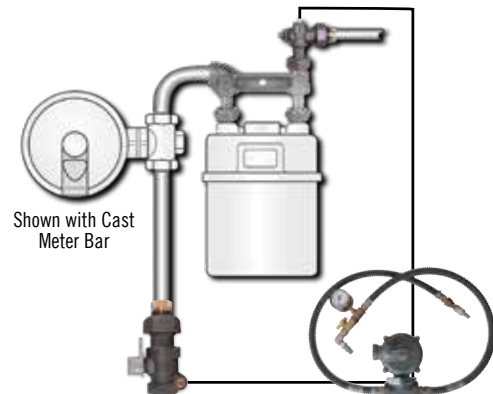
861A Thermal-Diffusion Zinc

861B Black Cast Iron

861C Thermal-Diffusion Zinc and Painted

861PNT Painted

861KEY 3/4" - 1" & 861KEY 1 1/4"
Stainless Steel Inline Bypass Ball Valve Key is required for bypass operation.



Shown with Cast Meter Bar

Regulated Hose Kit

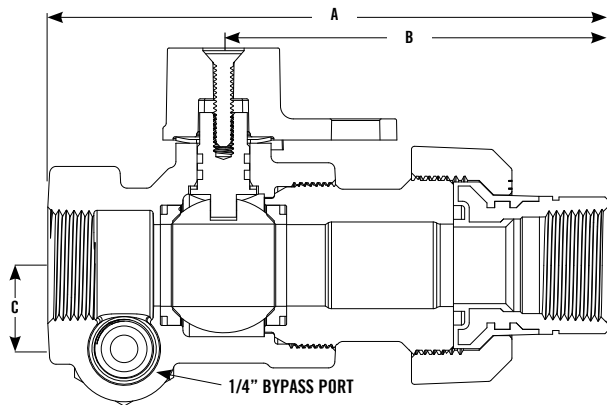


Inline Bypass Valve
Instruction Sheet

Inline Bypass Ball Valves - 8277 Series

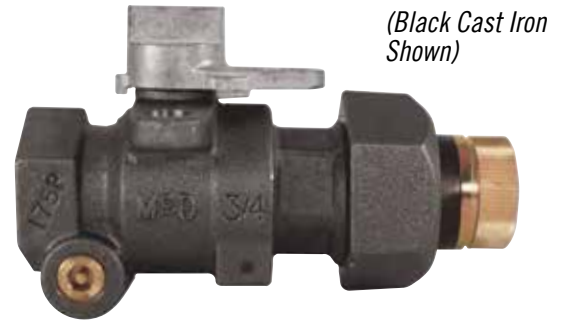
TAMPERPROOF, 175 PSI, FLAT HEAD, LOCKWING, BYPASS OPTION, FULL PORT BRASS BALL, INSULATED UNION

These valves are designed for use with natural, manufactured, and LP gases only.



DIMENSIONS

Size	A	B	C
3/4"	5.3"	3.6"	.8"
1"	5.8"	4.15"	1.0"
1 1/4"	7.6"	5.1"	1.4



FNPT x Insulated Union with FNPT Tailpiece (O-ring only)

FINISH OPTIONS

8277A Thermal-Diffusion Zinc

8277B Black Cast Iron

8277C Thermal-Diffusion Zinc and Painted

8277PNT Painted

Valve O-ring Repair Union



Valve Size	6300RB	6300RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-004	4821-052	4811-599	3134-212	4822-356	4822-474
1"	4821-056	4821-058	4822-456	3134-217	4810-987	4811-803
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end

861KEY 3/4" - 1" **861KEY 1 1/4"**
 Stainless Steel Inline Bypass Ball Valve Key is required for bypass operation.

REPLACEMENT PARTS

Petagon Pipe Plug

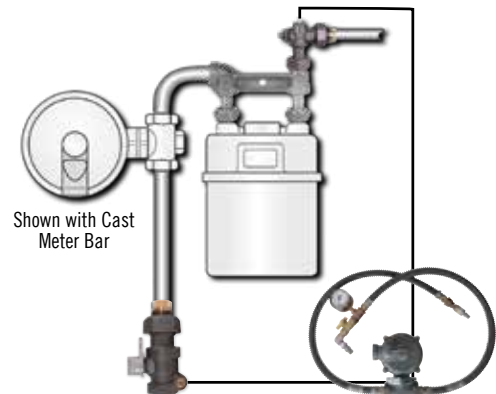
Size	Part Number
3/4" x 1"	4818-511
1 1/4"	4818-526

Dust Cap

Size	Part Number
3/4" x 1"	4818-509
1 1/4"	4818-525

O-ring for Dust Cap

Size	Part Number
3/4" x 1"	3134-017
1 1/4"	3134-028



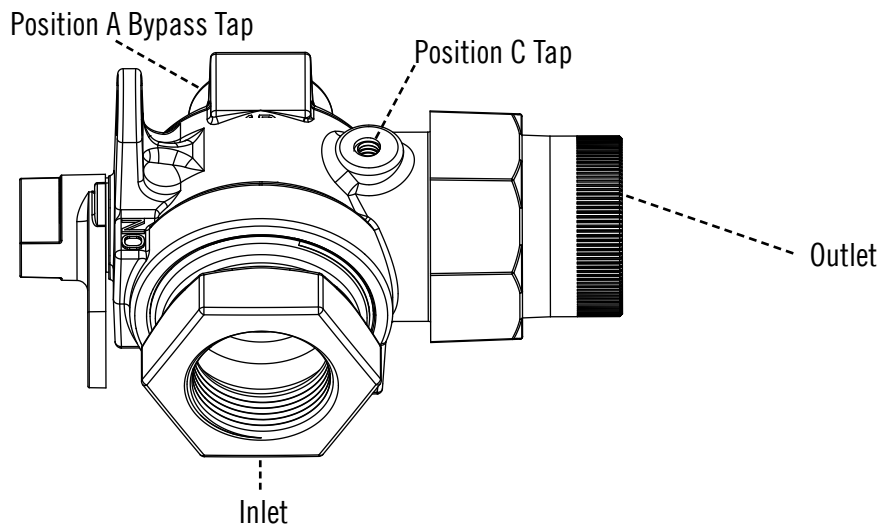
Inline Bypass Valve Instruction Sheet

Angle Bypass Ball Valves

5 PSI 3/4" AND 1", 25 PSI 1 1/4" ANGLE BALL VALVES

Precision machined and offer bubble tight leak protection both open and closed. Ball Valves offer the added feature of lower and more closely controlled operating torques for the life of the valve. The brass ball rides between two PTFE port seals that require no lubrication. The stem has a double O-ring seal and cannot be removed from the valve. The body and endpiece threads are pinned to prevent disassembly without damaging the valve. No field adjustment or maintenance of this valve is needed.

All connections with pipe threads require use of thread sealant at installation. (PTFE tape is not recommended, see instruction sheet.)



Position C is a possible pressure tap location. Please refer to Block 5 for pressure tap options.

INLET AND OUTLET CONNECTIONS

NPT inlet tapping provides a solid connection directly into the valve. Outlets are available with NPT integral or union type connections. Union connections have a flat rubber gasket or an O-ring seal.

INSULATED UNION OUTLET

The union outlet is insulated to minimize electrolysis.

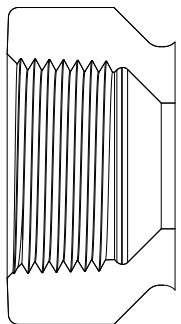
- Soft seat design does not rely on grease to prevent leakage to the atmosphere or through the valve seats. Sealing capability is maintained even after numerous cycles.
- Tamperproof design makes the A.Y. McDonald Mfg. Co. Ball Valve virtually impossible to disassemble without making the valve unusable. Pinned endpiece requires excessive force to remove and valve cannot be reassembled if forcefully disassembled. The valve utilizes an internally loaded stem and an external cap secured with a tamperproof stainless-steel screw.
- The on/off turning torques are closely controlled in excess of what can be turned by hand and yet low enough to ensure easy turning with a small wrench. Easy turning remains for normal life of valve.
- A 90° rotation from the open position places valve into bypass position.
- Traditional lockwing design easily accommodates industry-standard, separately-supplied lockwing devices such as barrel locks or padlocks.
- No field adjustment or maintenance required.
- Each valve is pressure tested electronically.
- Temperature Range: -20°F to +150°F.

Note: These valves are designed for use with natural, manufactured, and LP gases only.

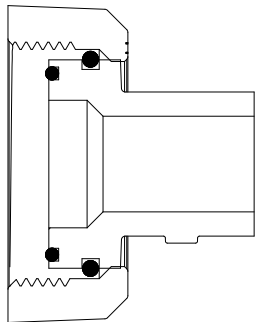


Angle Bypass Ball Valve Instruction Sheet

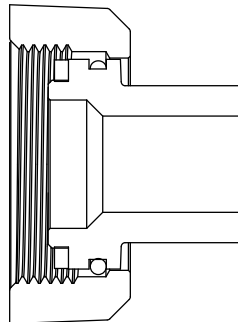
Inlet Types - Block 1



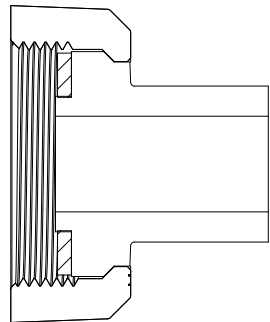
FNPT



Meter Swivel Nut O-ring Seal

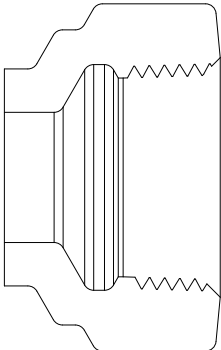


Meter Swivel Nut Flat Gasket Seal

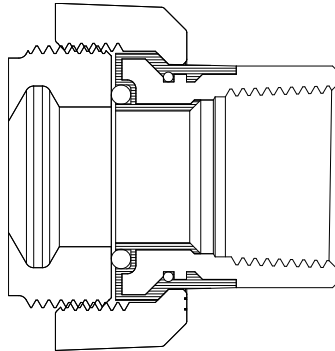


Union Swivel Nut Flat Gasket Seal

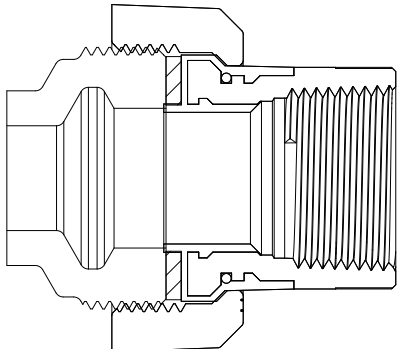
Outlet Types - Block 2



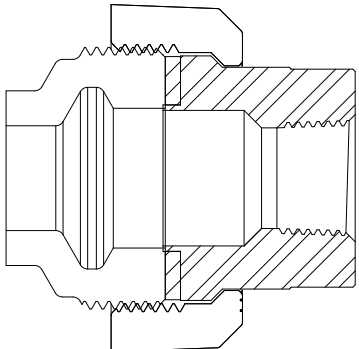
FNPT



Insulated Union with FNPT Tailpiece O-ring Seal



Insulated Union with FNPT Tailpiece Flat Gasket Seal



Non Insulated Union with FNPT Tailpiece Flat Gasket Seal

Angle Bypass Ball Valves - 835 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, FNPT X FNPT

A.Y. McDonald Mfg. Co. Angle Bypass Ball Valves can be ordered to fit your requirements. Select the features you need from the list below and build your own ordering number.

TO ORDER:

Example: Model number **835BAG 3/4x3/4x1** means:



BLOCK 1 - INLET TYPE

83 = FNPT

BLOCK 2 - OUTLET TYPE

5 = FNPT

BLOCK 3 - FINISH

A = Thermal-Diffusion Zinc
 B = Black Cast Iron
 C = Thermal-Diffusion Zinc and Painted
 P = Painted

BLOCK 4 - TAP LOCATION(S)

A = Pos. A (Bypass)
 C = Pos. C
 E = Pos. A and C (A with 3/8" recessed plug)
 F = Pos. A and C (A with 3/8" square head plug)
 G = Pos. A and C (A with 3/4" square head plug)
 H = Pos. A and C (A with 3/4" recessed plug)

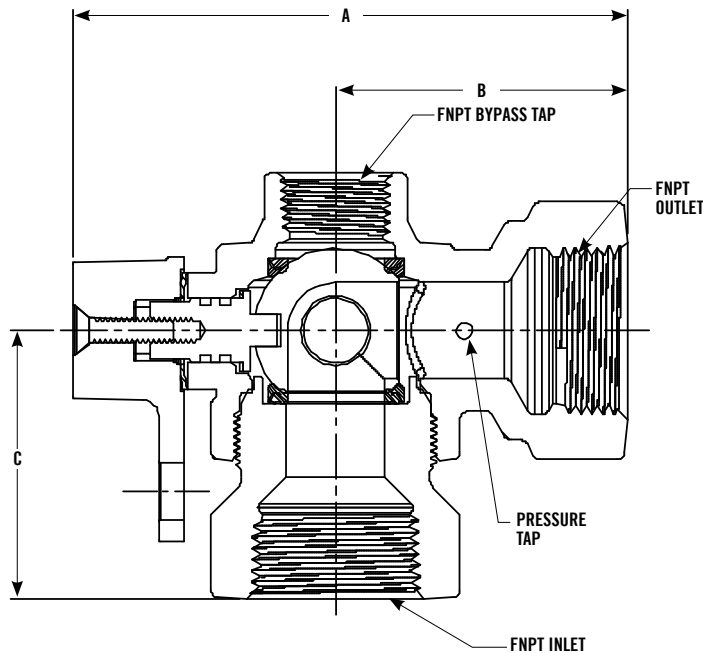
BLOCK 5 - TAP SIZE / PLUG TYPE

A = 1/8" NPT recessed hex plug
 B = 1/8" NPT square head plug
 C = 1/8" NPT no plug
 D = 1/4" NPT recessed hex plug
 E = 1/4" NPT square head plug
 F = 1/4" NPT no plug
 G = 3/8" NPT recessed hex plug
 H = 3/8" NPT square head plug
 J = 3/8" NPT no plug
 M = 1/8" NPT hex head plug
 P = 3/4" NPT recessed hex plug (1 1/4" only)
 R = 3/4" NPT square head plug (1 1/4" only)

Angle Bypass Ball Valves - 835 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, FNPT X FNPT

Can be assembled to the meter outlet, or used with a meter bar that provides a solid anchor to the meter set. These valves are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

FNPT x FNPT

FINISH OPTIONS

835A Thermal-Diffusion Zinc

835B Black Cast Iron

835C Thermal-Diffusion Zinc and Painted

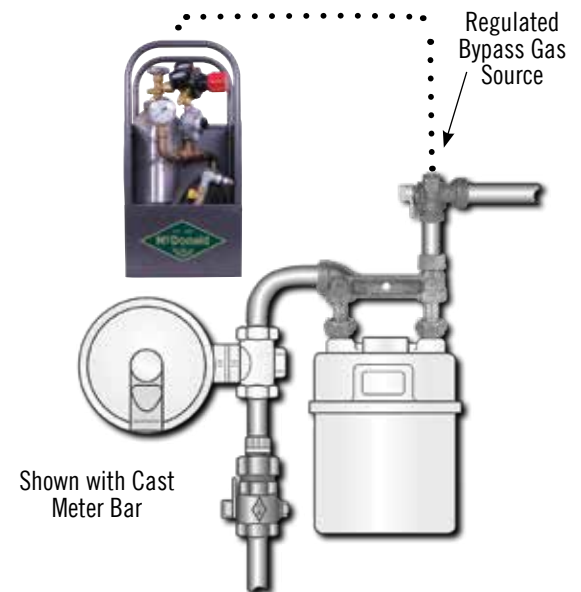
835P Painted

Taps available on all the above finish options.

DIMENSIONS

Inlet	Port	Outlet	Bypass Tap Size	A	B	C	Pressure Tap (Optional)
3/4"	3/4"	3/4" or 1"*	3/8"	4.3"	2.3"	1.8"	See Block 4 and 5
1"	3/4"	3/4" or 1"*	3/8"	4.3"	2.3"	2.1"	
1 1/4"	1 1/4"	1 1/4"	3/4"	5.1"	2.5"	2.5"	

* 1" is reducing port



NOTE:

For external source of gas, see Portable Bypass Kit on page 44

Angle Bypass Ball Valves - 837 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, FNPT X INSULATED UNION WITH FNPT TAILPIECE

A.Y. McDonald Mfg. Co. Angle Bypass Ball Valves can be ordered to fit your requirements. Select the features you need from the list below and build your own ordering number.

TO ORDER:

Example: Model number **837BAG 3/4x3/4x3/4** means:



BLOCK 1 - INLET TYPE

83 = FNPT Inlet

BLOCK 2 - OUTLET TYPE

- 7 = FNPT insulated O-ring union
- 8 = FNPT insulated flat gasket union
- 9 = FNPT non-insulated flat gasket union

BLOCK 3 - FINISH

- A = Thermal-Diffusion Zinc
- B = Black Cast Iron
- C = Thermal-Diffusion Zinc and Painted
- P = Painted

BLOCK 4 - TAP LOCATION(S)

- A = Pos. A (Bypass)
- C = Pos. C
- E = Pos. A and C (A with 3/8" recessed plug)
- F = Pos. A and C (A with 3/8" square head plug)
- G = Pos. A and C (A with 3/4" square head plug)
- H = Pos. A and C (A with 3/4" recessed plug)

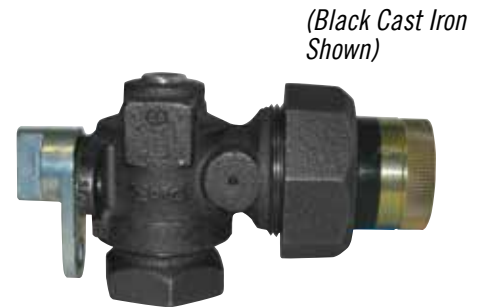
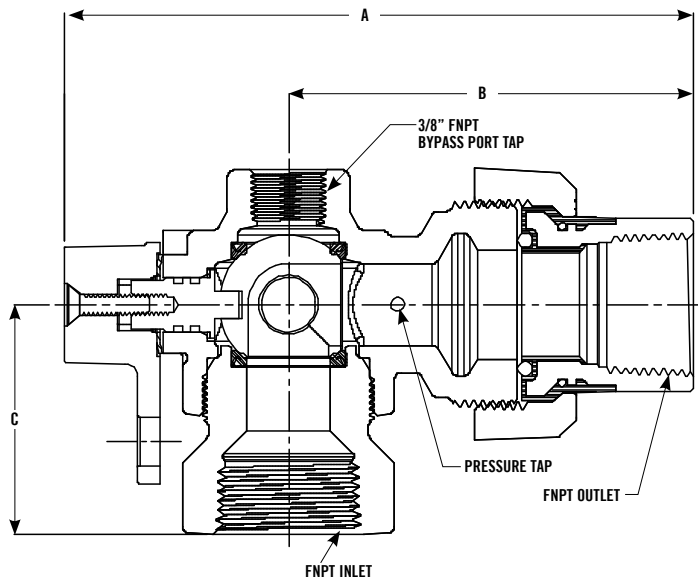
BLOCK 5 - TAP SIZE / PLUG TYPE

- A = 1/8" NPT recessed hex plug
- B = 1/8" NPT square head plug
- C = 1/8" NPT no plug
- D = 1/4" NPT recessed hex plug
- E = 1/4" NPT square head plug
- F = 1/4" NPT no plug
- G = 3/8" NPT recessed hex plug
- H = 3/8" NPT square head plug
- J = 3/8" NPT no plug
- M = 1/8" NPT hex head plug
- P = 3/4" NPT recessed hex plug (1 1/4" only)
- R = 3/4" NPT square head plug (1 1/4" only)

Angle Bypass Ball Valves - 837 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, FNPT X INSULATED UNION WITH FNPT TAILPIECE

Can be assembled to the meter outlet, or used with a meter bar that provides a solid anchor to the meter set. These valves are designed for use with natural, manufactured, and LP gases only.



FNPT x Insulated Union with FNPT Tailpiece

FINISH OPTIONS

837A Thermal-Diffusion Zinc

837B Black Cast Iron

837C Thermal-Diffusion Zinc and Painted

837P Painted

Taps available on all the above finish options.

DIMENSIONS

Inlet	Port	Outlet	Bypass Tap Size	A	B	C	Pressure Tap (Optional)
3/4"	3/4"	3/4" or 1"*	3/8"	5.5"	3.4"	1.8"	See Block 4 and 5
1"	3/4"	3/4" or 1"*	3/8"	5.8"	3.7"	2.1"	
1 1/4"	1 1/4"	1 1/4"	3/4"	6.7"	4.0"	2.5"	

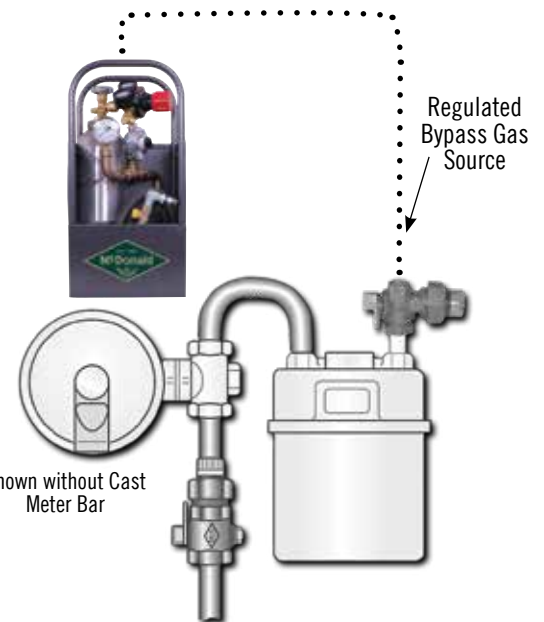
* 1" is reducing port



Valve O-ring Repair Union

Valve Size	Insulated End			Thermal-Diffusion Zinc Nut		
	6300RB	6300RA	O-ring	Black Nut		
3/4"	4821-004	4821-052	4811-599	3134-212	4822-356	4822-474
1"	4821-056	4821-058	4822-456	3134-217	4810-987	4811-803
1 1/4"	4821-059	4821-061	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end



NOTE:

For external source of gas, see Portable Bypass Kit on page 44

Angle Bypass Ball Valves - 855 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, METER SWIVEL NUT X FNPT

A.Y. McDonald Mfg. Co. Angle Bypass Ball Valves can be ordered to fit your requirements. Select the features you need from the list below and build your own ordering number. Please note the difference in numbers between valves without built-in swivels and valves with built-in swivels. Valves with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **855BAGB- 3/4x3/4 20LT** means:



BLOCK 1 - INLET TYPE

85 = Meter Swivel Nut

BLOCK 2 - OUTLET TYPE

5 = FNPT

BLOCK 3 - FINISH

A = Thermal-Diffusion Zinc
B = Black Cast Iron
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 4 - TAP LOCATION(S)

A = Pos. A (Bypass)
C = Pos. C
E = Pos. A and C (A with 3/8" recessed plug)
F = Pos. A and C (A with 3/8" square head plug)
G = Pos. A and C (A with 3/4" square head plug)
H = Pos. A and C (A with 3/4" recessed plug)

BLOCK 5 - TAP SIZE / PLUG TYPE

A = 1/8" NPT recessed hex plug
B = 1/8" NPT square head plug
C = 1/8" NPT no plug
D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
G = 3/8" NPT recessed hex plug
H = 3/8" NPT square head plug
J = 3/8" NPT no plug
M = 1/8" NPT hex head plug
P = 3/4" NPT recessed hex plug (1 1/4" only)
R = 3/4" NPT square head plug (1 1/4" only)

BLOCK 6 - SWIVEL SIZE/TYPE

A = 10LT - 10 Light swivel with flat gasket seal
B = 20LT - 20 Light swivel with flat gasket seal
C = 20LTO - 20 Light swivel with O-ring seal
D = 30LT - 30 Light swivel with flat gasket seal
E = 30LTO - 30 Light swivel with O-ring seal
F = OEM - O-Emco swivel with flat gasket seal
G = OEMO - O-Emco swivel with O-ring seal
H = 1A - 1A Sprague swivel with flat gasket seal
J = 1AO - 1A Sprague swivel with O-ring seal
K = 45LT - 45 Light swivel with flat gasket seal

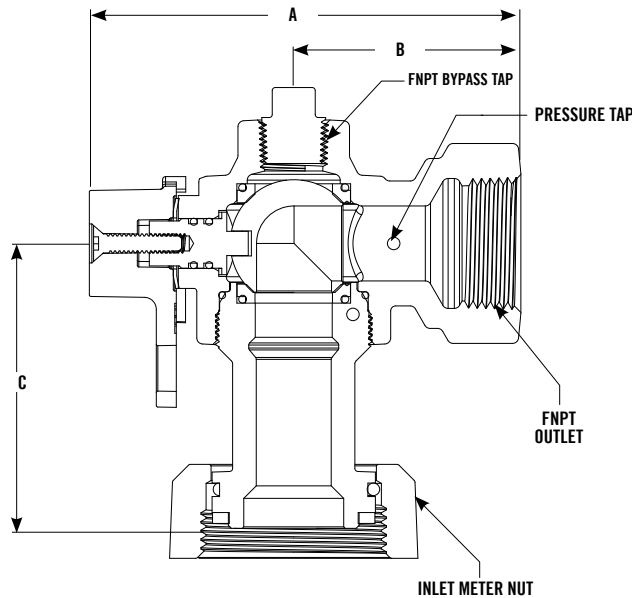
BLOCK 7 - SWIVEL SPECIAL

- = Standard swivel and nut

Angle Bypass Ball Valves - 855 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, METER SWIVEL NUT X FNPT

Can be assembled directly to the meter outlet, or assembled directly to a meter bar that provides a solid anchor to the meter set. These valves are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

Meter Swivel Nut x FNPT

FINISH OPTIONS

855A Thermal-Diffusion Zinc

855B Black Cast Iron

855C Thermal-Diffusion Zinc and Painted

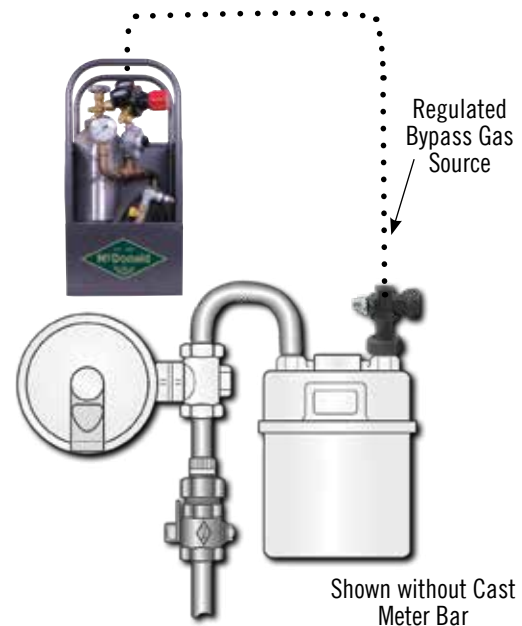
855P Painted

Taps available on all the above finish options.

DIMENSIONS

Port	FNPT Outlet	Swivel Nut Size	Bypass Tap Size	A	B	C	Pressure Tap (Optional)
3/4"	3/4" or 1"*	10LT	3/8"	4.3"	2.3"	3.5"	See Block 4 and 5
3/4"	3/4" or 1"*	1A	3/8"	4.3"	2.3"	3.5"	
3/4"	3/4" or 1"*	OEM	3/8"	4.3"	2.3"	3.5"	
3/4"	3/4" or 1"*	20LT	3/8"	4.3"	2.2"	3.5"	
1 1/4"	1 1/4"	30LT	3/4"	5.1"	2.5"	3.5"	
1 1/4"	1 1/4"	45LT	3/4"	5.1"	2.5"	3.5"	

* 1" is reducing port



NOTE:

For external source of gas, see Portable Bypass Kit on page 44

Angle Bypass Ball Valves - 857 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, METER SWIVEL NUT X INSULATED UNION WITH FNPT TAILPIECE

A.Y. McDonald Mfg. Co. Angle Bypass Ball Valves can be ordered to fit your requirements. Select the features you need from the list below and build your own ordering number. Please note the difference in numbers between valves without built-in swivels and valves with built-in swivels. Valves with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **857BAGA- 3/4X3/4 2OLT** means:



BLOCK 1 - INLET TYPE

85 = Meter Swivel Nut

BLOCK 2 - OUTLET TYPE

7 = FNPT insulated O-ring union
8 = FNPT insulated flat gasket union
9 = FNPT non-insulated flat gasket union

BLOCK 3 - FINISH

A = Thermal-Diffusion Zinc
B = Black Cast Iron
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 4 - TAP LOCATION(S)

A = Pos. A (Bypass)
C = Pos. C
E = Pos. A and C (A with 3/8" recessed plug)
F = Pos. A and C (A with 3/8" square head plug)
G = Pos. A and C (A with 3/4" square head plug)
H = Pos. A and C (A with 3/4" recessed plug)

BLOCK 5 - TAP SIZE / PLUG TYPE

A = 1/8" NPT recessed hex plug
B = 1/8" NPT square head plug
C = 1/8" NPT no plug
D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
G = 3/8" NPT recessed hex plug
H = 3/8" NPT square head plug
J = 3/8" NPT no plug
M = 1/8" NPT hex head plug
P = 3/4" NPT recessed hex plug (1 1/4" only)
R = 3/4" NPT square head plug (1 1/4" only)

BLOCK 6 - SWIVEL SIZE/TYPE

A = 10LT - 10 Light swivel with flat gasket seal
B = 20LT - 20 Light swivel with flat gasket seal
C = 20LTO - 20 Light swivel with O-ring seal
D = 30LT - 30 Light swivel with flat gasket seal
E = 30LTO - 30 Light swivel with O-ring seal
F = OEM - O-Emco swivel with flat gasket seal
G = OEMO - O-Emco swivel with O-ring seal
H = 1A - 1A Sprague swivel with flat gasket seal
J = 1AO - 1A Sprague swivel with O-ring seal
K = 45LT - 45 Light swivel with flat gasket seal

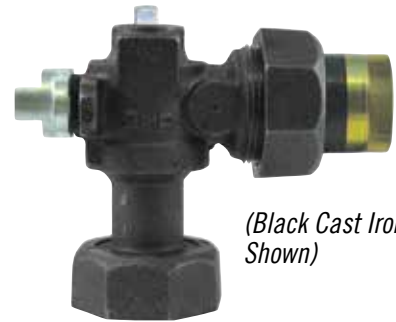
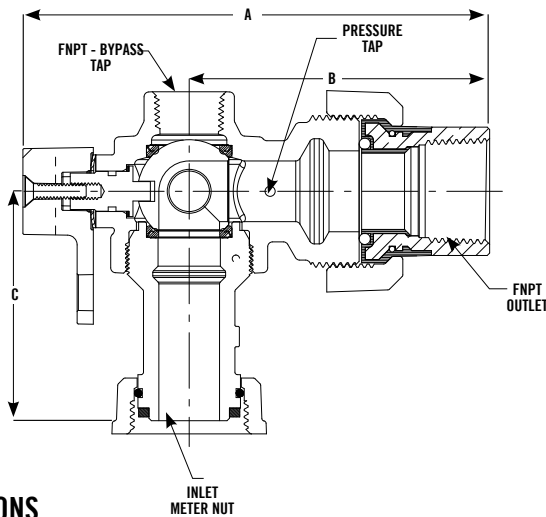
BLOCK 7 - SWIVEL SPECIAL

- = Standard swivel and nut

Angle Bypass Ball Valves - 857 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, METER SWIVEL NUT X INSULATED UNION WITH FNPT TAILPIECE

Can be assembled directly to the meter outlet, or assembled directly to a meter bar that provides a solid anchor to the meter set. These valves are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

Meter Swivel Nut x Insulated Union with FNPT Tailpiece

DIMENSIONS

Port	FNPT Outlet	Swivel Nut Size	Bypass Tap Size	A	B	C	Pressure Tap (Optional)
3/4"	3/4" or 1"*	1OLT	3/8"	5.5" or 5.8"	3.4" or 3.7"	3.5"	See Block 4 and 5
3/4"	3/4" or 1"*	1A	3/8"	5.5" or 5.8"	3.4" or 3.7"	3.5"	
3/4"	3/4" or 1"*	OEM	3/8"	5.5" or 5.8"	3.4" or 3.7"	3.5"	
3/4"	3/4" or 1"*	2OLT	3/8"	5.5" or 5.8"	3.4" or 3.7"	3.5"	
1 1/4"	1 1/4"	30LT	3/4"	6.7"	4.0"	3.5"	
1 1/4"	1 1/4"	45LT	3/4"	6.7"	4.0"	3.5"	

* 1" is reducing port



Valve O-ring Repair Union

Valve Size	6300RB	6300RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-004	4821-052	4811-599	3134-212	4822-356	4822-474
1"	4821-056	4821-058	4822-456	3134-217	4810-987	4811-803
1 1/4"	4821-059	4821-061	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end



Shown without Cast Meter Bar

NOTE:

For external source of gas, see Portable Bypass Kit on page 44

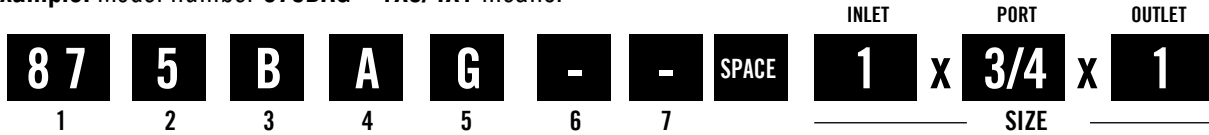
Angle Bypass Ball Valves - 875 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, FEMALE UNION X FNPT

A.Y. McDonald Mfg. Co. Angle Bypass Ball Valves can be ordered to fit your requirements. Select the features you need from the list below and build your own ordering number. Please note the difference in numbers between valves without built-in swivels and valves with built-in swivels. Valves with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 875BAG-- 1X3/4X1 means:



BLOCK 1 - INLET TYPE

87 = Female Union

BLOCK 2 - OUTLET TYPE

5 = FNPT

BLOCK 3 - FINISH

A = Thermal-Diffusion Zinc
 B = Black Cast Iron
 C = Thermal-Diffusion Zinc and Painted
 P = Painted

BLOCK 4 - TAP LOCATION(S)

A = Pos. A (Bypass)
 C = Pos. C
 E = Pos. A and C (A with 3/8" recessed plug)
 F = Pos. A and C (A with 3/8" square head plug)
 G = Pos. A and C (A with 3/4" square head plug)
 H = Pos. A and C (A with 3/4" recessed plug)

BLOCK 5 - TAP SIZE / PLUG TYPE

A = 1/8" NPT recessed hex plug
 B = 1/8" NPT square head plug
 C = 1/8" NPT no plug
 D = 1/4" NPT recessed hex plug
 E = 1/4" NPT square head plug
 F = 1/4" NPT no plug
 G = 3/8" NPT recessed hex plug
 H = 3/8" NPT square head plug
 J = 3/8" NPT no plug
 M = 1/8" NPT hex head plug
 P = 3/4" NPT recessed hex plug (1 1/4" only)
 R = 3/4" NPT square head plug (1 1/4" only)

BLOCK 6 - SWIVEL SIZE/TYPE

- = Female Union

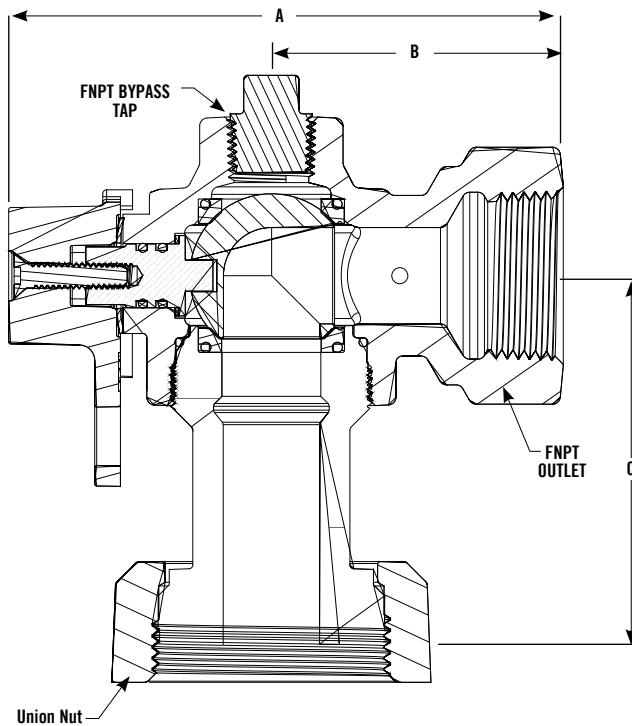
BLOCK 7 - SWIVEL SPECIAL

- = Standard swivel and nut

Angle Bypass Ball Valves - 875 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, FEMALE UNION X FNPT

Can be assembled directly to a meter bar that provides a solid anchor to the meter set. These valves are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

Female Union x FNPT

FINISH OPTIONS

875A Thermal-Diffusion Zinc

875B Black Cast Iron

875C Thermal-Diffusion Zinc and Painted

875P Painted

Taps available on all the above finish options.

DIMENSIONS

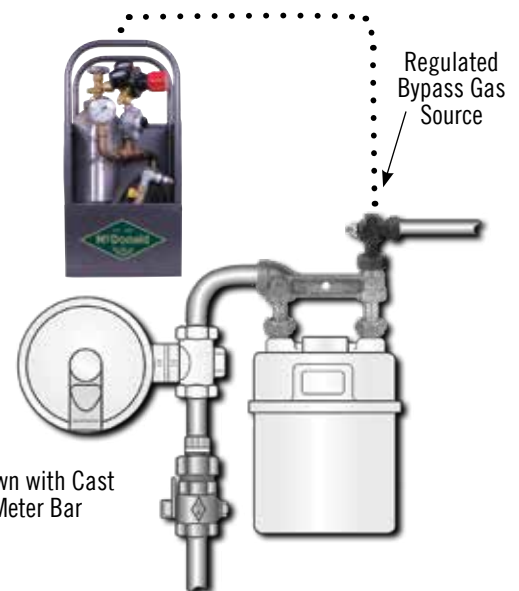
Inlet	Port	Outlet	Bypass Tap Size	A	B	C	Pressure Tap (Optional)
3/4"	3/4"	3/4" or 1"*	3/8"	4.3"	2.3"	3.5"	See Block 4 and 5
1"	3/4"	3/4" or 1"*	3/8"	4.3"	2.3"	3.5"	
1 1/4"	1 1/4"	1 1/4"	3/4"	5.1"	2.5"	3.5"	

* 1" is reducing port

Valve Swivel Seal

Valve Size	O-Ring	Flat Gasket
1"	3134-216	4822-223

Seal Not Included on 1" Inlet



Shown with Cast Meter Bar

NOTE:

For external source of gas, see Portable Bypass Kit on page 44

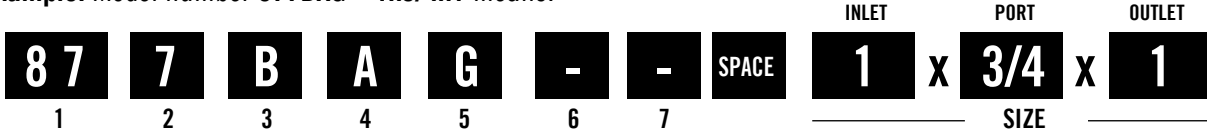
Angle Bypass Ball Valves - 877 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, FEMALE UNION X INSULATED UNION WITH FNPT TAILPIECE

A.Y. McDonald Mfg. Co. Angle Bypass Ball Valves can be ordered to fit your requirements. Select the features you need from the list below and build your own ordering number. Please note the difference in numbers between valves without built-in swivels and valves with built-in swivels. Valves with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 877BAG-- 1x3/4x1 means:



BLOCK 1 - INLET TYPE

87 = Female Union

BLOCK 2 - OUTLET TYPE

7 = FNPT insulated O-ring union
 8 = FNPT insulated flat gasket union
 9 = FNPT non-insulated flat gasket union

BLOCK 3 - FINISH

A = Thermal-Diffusion Zinc
 B = Black Cast Iron
 C = Thermal-Diffusion Zinc and Painted
 P = Painted

BLOCK 4 - TAP LOCATION(S)

A = Pos. A (Bypass)
 C = Pos. C
 E = Pos. A and C (A with 3/8" recessed plug)
 F = Pos. A and C (A with 3/8" square head plug)
 G = Pos. A and C (A with 3/4" square head plug)
 H = Pos. A and C (A with 3/4" recessed plug)

BLOCK 5 - TAP SIZE / PLUG TYPE

A = 1/8" NPT recessed hex plug
 B = 1/8" NPT square head plug
 C = 1/8" NPT no plug
 D = 1/4" NPT recessed hex plug
 E = 1/4" NPT square head plug
 F = 1/4" NPT no plug
 G = 3/8" NPT recessed hex plug
 H = 3/8" NPT square head plug
 J = 3/8" NPT no plug
 M = 1/8" NPT hex head plug
 P = 3/4" NPT recessed hex plug (1 1/4" only)
 R = 3/4" NPT square head plug (1 1/4" only)

BLOCK 6 - SWIVEL SIZE/TYPE

- = Female Union

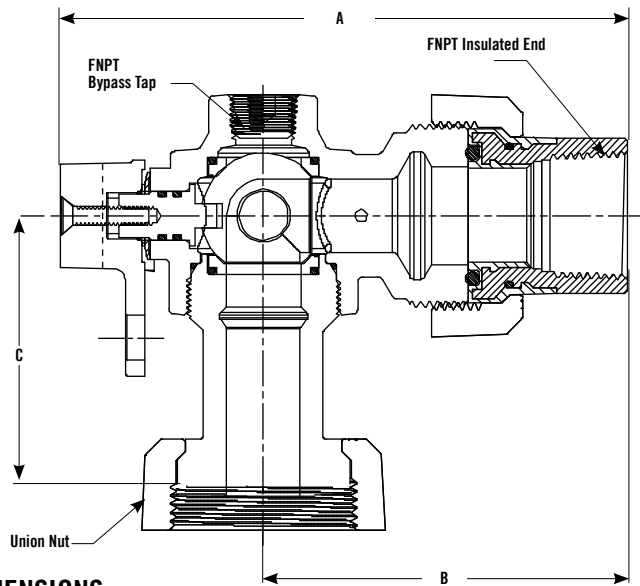
BLOCK 7 - SWIVEL SPECIAL

- = Standard swivel and nut

Angle Bypass Ball Valves - 877 Series

TAMPERPROOF, FLAT HEAD, LOCKWING, BYPASS OPTION, FEMALE UNION X INSULATED UNION WITH FNPT TAILPIECE

Can be assembled directly to the meter outlet, or assembled directly to a meter bar that provides a solid anchor to the meter set. These valves are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

Female Union x Insulated Union with FNPT Tailpiece

DIMENSIONS

Inlet	Port	Outlet	Bypass Tap Size	A	B	C	Pressure Tap (Optional)
3/4"	3/4"	3/4" or 1"*	3/8"	5.5"	3.4"	3.5"	See Block 4 and 5
1"	3/4"	3/4" or 1"*	3/8"	5.8"	3.7"	3.5"	
1 1/4"	1 1/4"	1 1/4"	3/4"	6.7"	4.0"	3.5"	

* 1" is reducing port



Valve O-ring Repair Union

Valve Size	6300RB	6300RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-004	4821-052	4811-599	3134-212	4822-356	4822-474
1"	4821-056	4821-058	4822-456	3134-217	4810-987	4811-803
1 1/4"	4821-059	4821-061	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end

Valve Swivel Seal

Valve Size	O-Ring	Flat Gasket
1"	3134-216	4822-223

Seal Not Included on 1" Inlet

FINISH OPTIONS

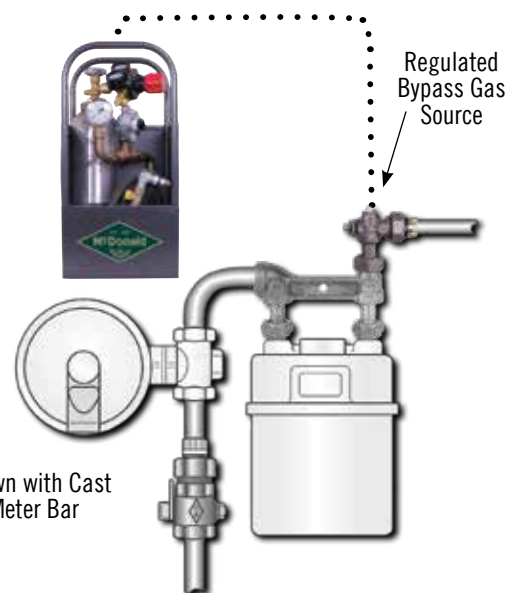
877A Thermal-Diffusion Zinc

877B Black Cast Iron

877C Thermal-Diffusion Zinc and Painted

877P Painted

Taps available on all the above finish options.



Shown with Cast Meter Bar

NOTE:

For external source of gas, see Portable Bypass Kit on page 44



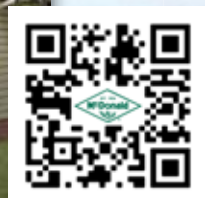
CORROSION PROTECTION JUST WENT FROM BETTER TO BEST



Thermal-Diffusion Zinc VS Zinc Plating

- Coating thickness = .00197"
- Strong bond, resistant to gouging
- Intermetallic layers
- Coating thickness = .0006"
- Thin layer of zinc can be scratched off and gouged

CHECK OUT THE VIDEO TO LEARN MORE



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**WITHOUT
YOU
THERE IS
NO US.**



Bypass Support Kits

November 2025



Portable Bypass Kit (PBK) - 891 Series

A.Y. McDonald Mfg. Co. brings both safety and convenience to the natural gas industry: the Portable Bypass Kit. This durable and lightweight kit is designed to provide technicians with a safe and easy transport option to the job site when bypassing a meter set for inspection, maintenance, or testing. Ex: meter change is maintenance. The Portable Bypass Kit can be used with our angle body valves and bypass bars, allowing continuous service to the customer. This means no reschedules, no loss of pilot lights, and no interruption of service. With adapter valve sizes of 1/4" or 3/8" and regulator pressure settings of 5"-10" WC or 2 psi, the user experiences flexibility in the meter sets they are servicing.



FEATURES / BENEFITS / SAFETY:

- All-in-one system: regulator, gauges, and cylinder
- Made of durable materials for a long-lasting product, yet lightweight for easy transportation from service truck to service location
 - Powder coated
 - Designed to protect gauges and components while easily visible to the technician
- Dimensions of 11" x 9.5" x 23" and complete weight of 28 pounds
- Gas Hose rated to 350 psi with a spring guard
- Regulator pressure settings of 5"-10" WC or 2 psi
- Optional adapter valve size of 1/4" or 3/8" adapters
- Optional Quick Thread HP Adapter for easy cylinder refill or connection to backup cylinder
- CGA 350 Aluminum Cylinder rated to 2216 psi
- Natural gas rated cylinder, hose, and adapters



Portable Bypass Kit
Instruction Sheet

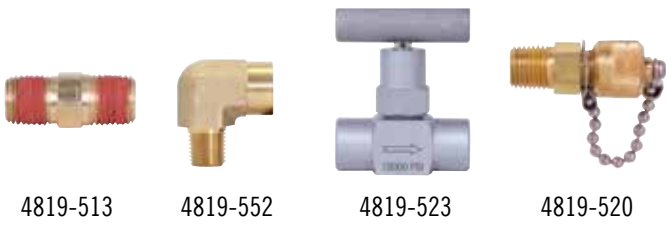
Portable Bypass Kit

Part #	Models
4819-000	891-B0AA-- PBK 5"-10" WC 1/4" Adapter Aluminum Box
4819-001	891-B2AA-- PBK 2 psi 1/4" Adapter Aluminum Box
4819-002	891-B0AB-- PBK 5"-10" WC 3/8" Adapter Aluminum Box
4819-003	891-B2AB-- PBK 2 psi 3/8" Adapter Aluminum Box



Portable Bypass Kits

Portable Bypass Kit - Add On Parts



4819-513 4819-552 4819-523 4819-520



PBK Tank Threaded HP Quick Fill Adapter

Part #	Add On Parts
4819-004	891HPNPT PBK Threaded HP Quick Fill Adapter
4819-513	Hex Nipple 1/4" Male Natural Gas Brass w/ Vibraseal
4819-520	Quick Thread Natural Gas Adapter Fitting 1/4" MNPT
4819-523	Natural Gas Needle Valve 1/4" FNPT
4819-552	Elbow 90° 1/4" MNPT x FNPT High Pressure Brass

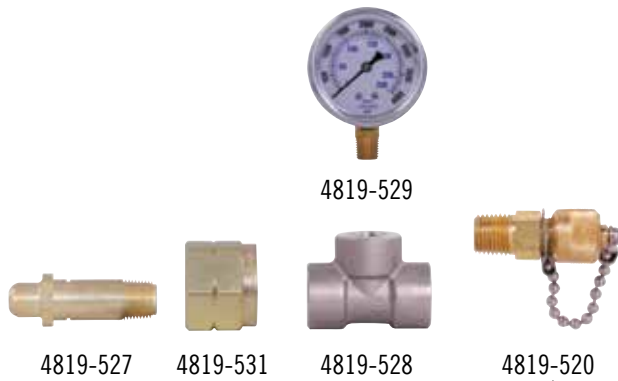


4819-524 4819-526 4819-525



Extension Adapter Connection with Valve

Part #	Add On Parts
4819-006	891 PBK 1/4" NPT Tap Extension Adapter Connection with Valve
4819-524	Hex Nipple 3/8" x 1/4" MNPT Swivel Connection Steel
4819-526	Ball Valve 1/4" - Tee Handle Brass
4819-525	Hex Nipple Long 1/4" MNPT Brass



4819-527 4819-531 4819-528 4819-520

4819-005



Charging Station Threaded HP Quick Fill Adapter

Part #	Add On Parts
4819-005	891HPCGA PBK Threaded HP Quick Fill Adapter
4819-529	Gauge Natural Gas (Makes up 4819-005)
4819-527	CGA 350 X 1/4 MNPT Adapter Nipple
4819-531	CGA 350 LH Thread Adapter Nut
4819-528	Tee 1/4" Natural Gas FNPT
4819-520	Quick Thread Natural Gas Adapter Fitting 1/4" MNPT



Quick Thread Hose
(Used to connect Quick Fill Adapters)

Part #	Add On Parts
4819-521	Quick Thread Natural Gas Hose, 5000 psi rating - 5 ft

Portable Bypass Kits

Portable Bypass Kit - Replacement Parts



4819-504



4819-505



4819-506



4819-507



4819-508



4819-511



4819-512



4819-513



4819-514



4819-515



4819-516



4819-517



4819-518



4819-520



4819-522



4819-523



4819-524



4819-525



4819-526



4819-527



4819-528



4819-529



4819-531



4819-552



5422-094



4901-161

Part #	Replacement Parts
4819-504	Aluminum Bypass Box - Complete Weld and Powder Coat
4819-505	CGA 350 Aluminum Cylinder
4819-506	Natural Gas Regulator - Methane
4819-507	Low Pressure Regulator 5" - 10" WC
4819-508	CNG 1/2" NPT Hose w/ Spring Guard
4819-511	Bypass Box Elbow 1/2" MNPT x 1/2" FNPT
4819-512	Bypass Box Elbow 1/2" MNPT x 1/4" FNPT
4819-513	Hex Nipple 1/4" Male Natural Gas Brass w/ Vibraseal
4819-514	Hex Nipple 3/8" x 1/2" MNPT Brass w/ Vibraseal
4819-515	Elbow 90° 1/2" MNPT x 3/8" NPSM Swivel Steel Plated
4819-516	Hex Nipple 3/8" MNPT Swivel Connection Steel Plated
4819-517	Low Pressure Gauge 0"-15" WC
4819-518	Low Pressure Gauge 0-5 psi

Part #	Replacement Parts
4819-520	Quick Thread Natural Gas Adapter Fitting 1/4" MNPT (Stand Alone Fitting)*
4819-522	Low Pressure Regulator .5 - 2.7 psi
4819-523	Natural Gas Needle Valve 1/4" FNPT
4819-524	Hex Nipple 3/8" x 1/4" MNPT Swivel Connection Steel (Makes up 4819-006)*
4819-525	Hex Nipple Long 1/4" MNPT Brass (Makes up 4819-006)
4819-526	Ball Valve 1/4" - Tee Handle Brass (Makes up 4819-006)
4819-527	CGA 350 X 1/4 MNPT Adapter Nipple (Makes up 4819-005)
4819-528	Tee 1/4" Natural Gas FNPT (Makes up 4819-005)
4819-529	High Pressure Gauge 4000 psi (Makes up 4819-005)
4819-531	CGA 350 LH Thread Adapter Nut (Makes up 4819-005)
4819-552	Elbow 90° 1/4" MNPT x FNPT High Pressure Brass
5422-094	72230 1/2" x 1/4" Reducing Tee - NL
4901-161	10710Y 1/2" Gas Ball Valve CSA Yellow Handle

Portable Bypass Kits

Regulated Hose Kit (RHK) - 894 Series

A.Y. McDonald Mfg. Co. is excited to announce a product that brings both safety and convenience to the natural gas industry: the Regulated Hose Kit. This durable and lightweight kit is designed to provide technicians with a safe and easy transport option without the need of an external source of gas to the job site when bypassing a meter set for inspection, maintenance, meter change out, regulator, riser valve, or sample testing. The Regulated Hose Kit can be used with our angle body valves and inline bypass ball valves, allowing continuous service to the customer. This means no reschedules, no loss of pilot lights, and no interruption of service. Having an adapter valve size of 3/8" and regulator pressure of 6"-8" WC gives the user flexibility in the meter sets they are servicing.



4819-019

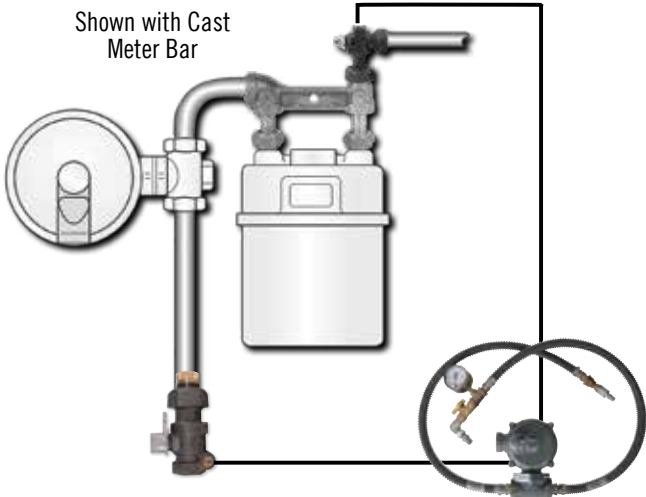
Portable Bypass Kits

FEATURES / BENEFITS / SAFETY:

- All-in-one system: regulator, gauges and hoses
- Made of durable materials for a long-lasting product - yet lightweight for easy transportation from service truck to service location
- Natural Gas Hose rated to 350 psi with a spring guard
- Regulator pressure settings 6"-8" WC
- Adapter valve size of 1/4", 3/8", or 3/4"



4819-020
Case designed to protect gauges and components



Regulated Hose Kit

Part #	Models
4819-019	894-AHAHAE- RHK 7IN WC 1/4" In x 3/8" Out 3/4" x 3/4" Reg Spring Hose
4819-020	894-AHAHAEA RHK 7IN WC 1/4" In x 3/8" Out 3/4" x 3/4" Reg Spring Hose w/Case
4819-022	894-DDDDADA RHK 8IN WC 3/4" In x 3/4" Out 3/4" x 3/4" Reg Spring Hose w/Case
4819-023	894-EDDDADA RHK 8IN WC 1/4" In x 3/4" Out 3/4" x 3/4" Reg Spring Hose w/Case

Regulated Hose Kit - Replacement Parts

Portable Bypass Kits



4042-504



4818-004



4818-025



4819-515



4819-516



4819-517



4819-547



4819-548



4819-549



4819-550



4901-161



5422-094



5429-082



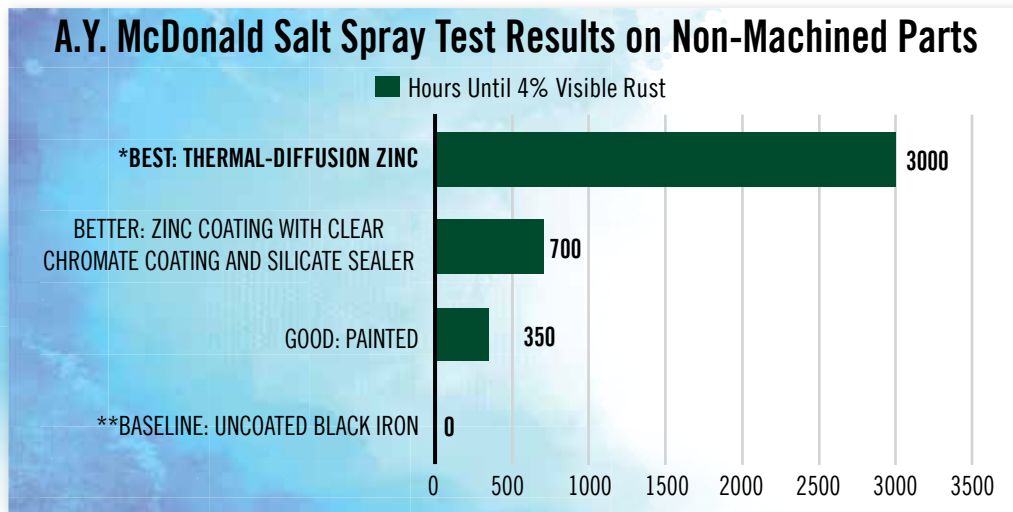
4422-338

Part #	Replacement Parts
4042-504	Case w/Foam
4818-004	861Key Inline Bypass Ball Valve Key Assembly
4818-005	861Key 1 1/4" Inline Bypass Ball Valve Key
4819-515	Elbow 90° 1/2" MNPT x 3/8" NPSM Swivel Steel Plated
4819-516	Hex Nipple 3/8" MNPT Swivel Connection Steel Plated
4819-517	Low Pressure Gauge 0"-15" WC
4819-547	Belgas P140 3/4" x 3/4" 1/8 ORF 7WC Hose Kit Regulator

Part #	Replacement Parts
4819-548	CNG 1/2" NPT 3 FT Hose 1/2" x 3/4" MNPT w/Spring Guard
4819-549	Quick Connect Body 1/4 MNPT
4819-550	Quick Connect Plug 1/4 MNPT
4901-161	10710Y 1/2" Gas Ball Valve CSA Yellow Handle
5422-094	72230 1/2" x 1/4" Reducing Tee - NL
5429-082	72210D 1/2" x 1/4" Reducing Coupling Domestic - NL
4422-338	2200 1/2" Pipe Nipple Close

CORROSION PROTECTION JUST WENT FROM BETTER TO BEST

Thermal-Diffusion Zinc



Benefits – Why Thermal-Diffusion Zinc?

- Not just a coating, it is a bond. Thermal-Diffusion Zinc is a coating that is environmentally friendly and is uniformly applied on all external and internal surfaces to create a bond with the casting.
- The Thermal-Diffusion Zinc bond provides excellent adhesion properties for paint**
- Extensive use in marine and automotive environments, as well as electrical utility applications.
- Strength of iron castings with premium corrosion protection



Check out the video!

Disclaimers:

- * = Uncoated Black Cast Iron Will Rust in 24 Hours or Less After Initial Exposure to Salt Spray Environment
- ** = Test Stopped at 3000 Hours without Failure. Paint can be applied over Thermal-Diffusion Zinc for additional corrosion benefits.



WE TAKE CARE OF CUSTOMERS BETTER THAN ANYONE ELSE.

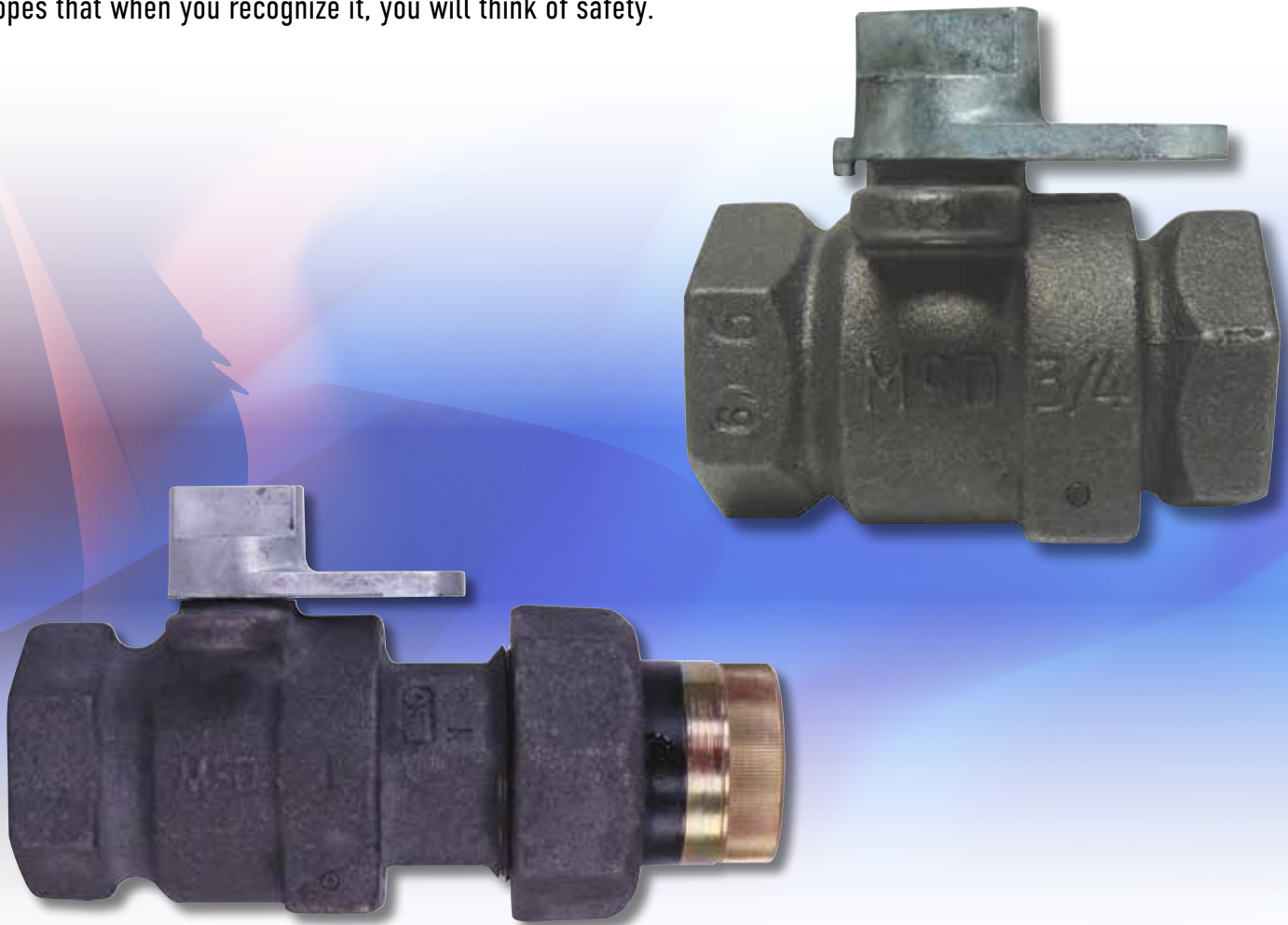
Let us make your life easier!

sales@aymcdonald.com | 800.292.2737 | aymcdonald.com

YOU CAN'T SPELL SAFETY WITHOUT A.Y.

SAFETY - NO ROOM FOR MISTAKES. BALL VALVES.

As a solution that can make life for you and your customers' that much easier, A.Y. McDonald Mfg. Co.'s Gas Ball Valve is a pretty big deal. We proudly place our name on each and every A.Y. McDonald Mfg. Co. gas valve in the hopes that when you recognize it, you will think of safety.



**WE TAKE CARE OF CUSTOMERS
BETTER THAN ANYONE ELSE.**

Let us make your life easier!

sales@aymcdonald.com | 800.292.2737 | aymcdonald.com



WITHOUT
YOU
THERE IS
NO **US.**



Cast Iron Meter Bars

November 2025



Cast Iron Meter Bars

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars are constructed from a durable one piece I-Beam construction to protect the meter from piping stresses and ensure a solid installation.

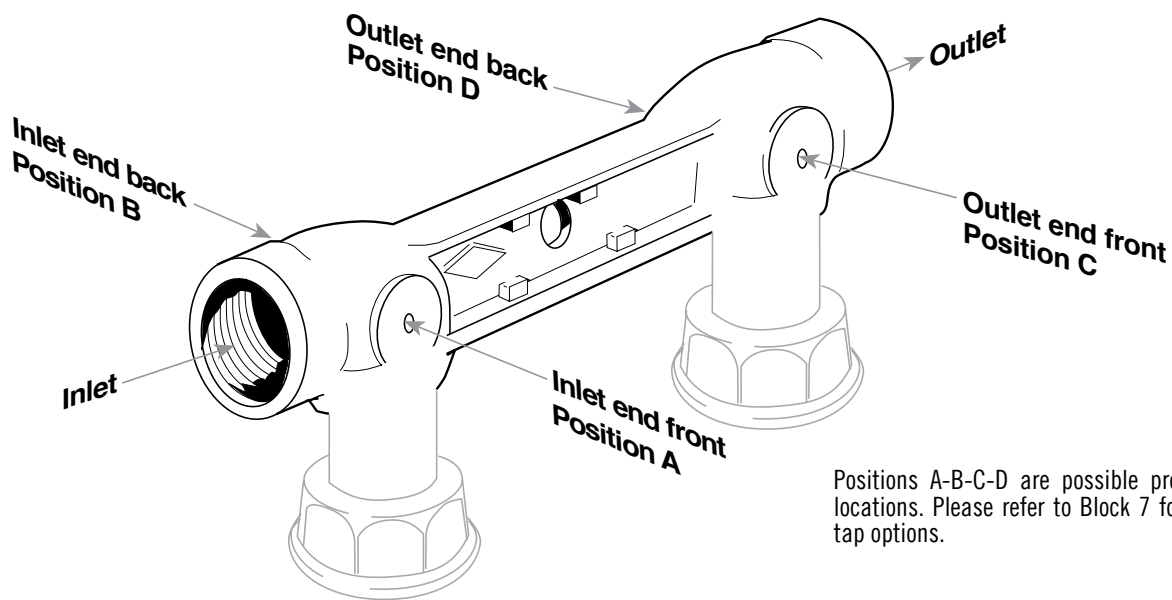
Cast Iron Meter Bars without Integral Swivels

NPT threads are provided on the inlet, outlet, and bottom swivel taps. A. Y. McDonald Mfg. Co. meter bars can fit most requirements by using them with a combination of straight or offset meter swivels.

Gas Meter Bars with Integral Swivels

NPT threads are provided on the inlet and outlet taps. Special meter swivels are integral to the meter bar, thus decreasing leakage potential and improving convenience of handling and maintenance. Swivels are provided with flat gaskets or O-rings.

All connections with pipe threads require use of thread sealant at installation. (PTFE tape is not recommended, see instruction sheet.)



Positions A-B-C-D are possible pressure tap locations. Please refer to Block 7 for pressure tap options.

INLET AND OUTLET CONNECTIONS

NPT inlet tapping provides a solid connection directly into the bar. Outlets are provided with NPT integral or union type connections. Union connections have a flat rubber gasket or an O-ring seal.

INSULATED UNION OUTLET

The union outlet can be insulated to minimize electrolysis.



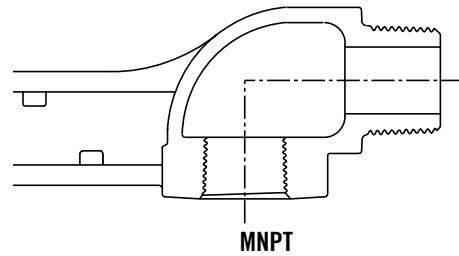
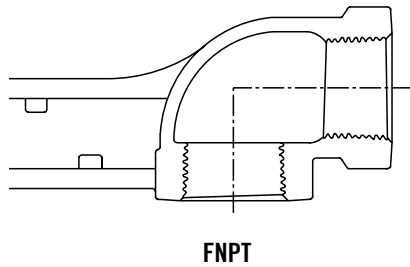
Meter Bar
Instruction Sheet

Note: Each meter bar is pressure tested electronically at a minimum of 40 psi. These bars are intended for use with natural, manufactured, and LP gases only.

Material Specifications

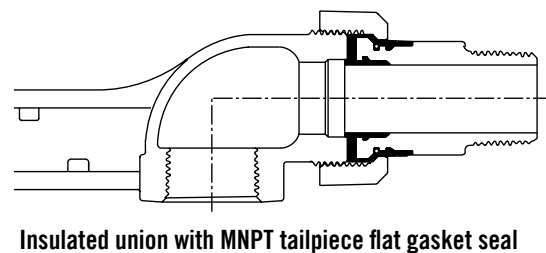
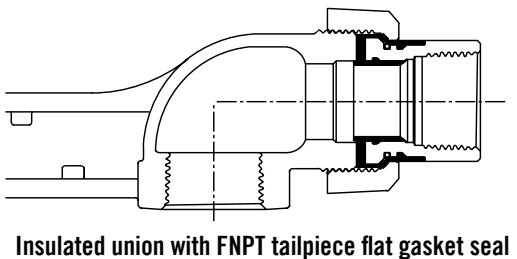
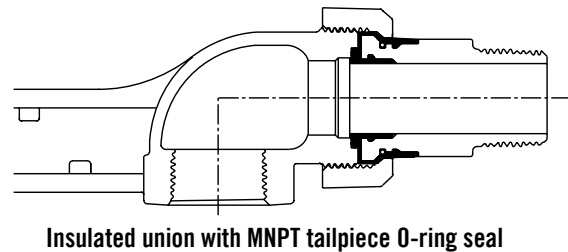
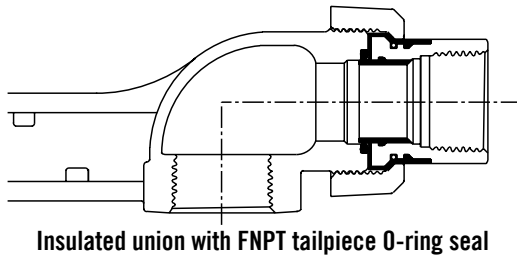
- METER BAR** - Cast iron per ASTM A126 Class B
- UNION NUT** - Malleable iron per ASTM A47 or Ductile iron per ASTM A536
- UNION TAILPIECES** - Zinc plated yellow dichromate finished steel
- INSULATED UNION TAILPIECES** - Super tough nylon 66 insulation
- FLAT GASKET/O-rings** - Buna-N suitable for use with natural, manufactured, and LP gases
- SWIVELS AND SWIVEL NUTS** - Malleable iron per ASTM A47 or Ductile iron per ASTM A536
- METER PLUGS** - Cast iron per ASTM A126 Class B

Integral Outlets - Block 6

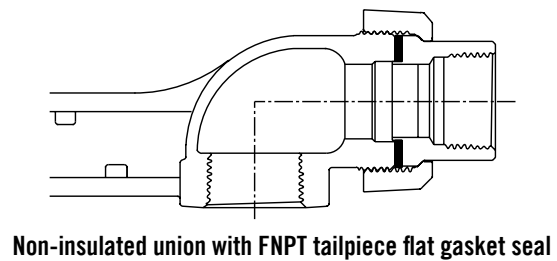
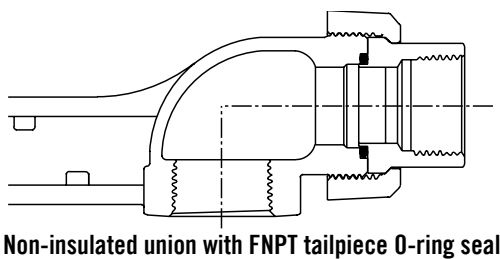


Insulated Union Outlets - Block 6

- Insulated tailpiece has second O-ring molded into the plastic to improve sealing without over-tightening the union nut.



Non-Insulated Union Outlets - Block 6



Cast Iron Meter Bars - 6600 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6600-CCE 1x1** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

0 = 6 1/2" spread

BLOCK 4 - CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

E = FNPT insulated flat gasket union (reducing NPT)

F = FNPT insulated flat gasket union

H = MNPT insulated O-ring union

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

W = FNPT non-insulated flat gasket union (reducing NPT)

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

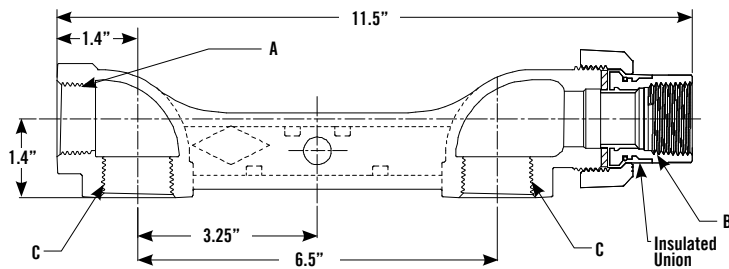
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars - 6600 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



FNPT x Insulated Union with FNPT Tailpiece (Black Cast Iron Shown)



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6 1/2"	3/4" or 1"	3/4" or 1"	3/4" or 1"

Meter Bar Gasket Repair Union

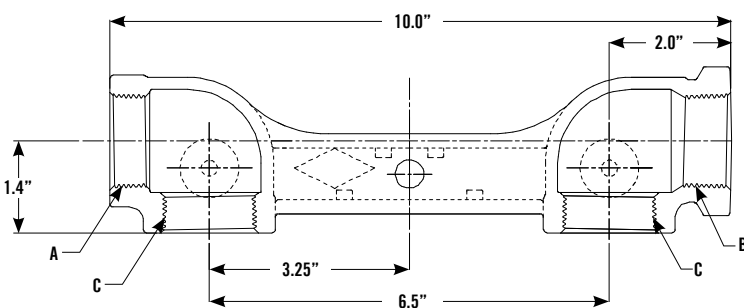
Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



FNPT x FNPT (Black Cast Iron Shown)

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6 1/2"	3/4" or 1"	3/4" or 1"	3/4" or 1"

FINISH OPTIONS

6600- Black Cast Iron

6600A Thermal-Diffusion Zinc

6600C Thermal-Diffusion Zinc and Painted

6600P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 54.

For other options, see page 54.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars - 6610 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6610-CAB 1x1 means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

1 = 6" spread

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

E = FNPT insulated flat gasket union
(reducing NPT)

F = FNPT insulated flat gasket union

H = MNPT insulated O-ring union

M = MNPT

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

W = FNPT non-insulated flat gasket union
(reducing NPT)

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

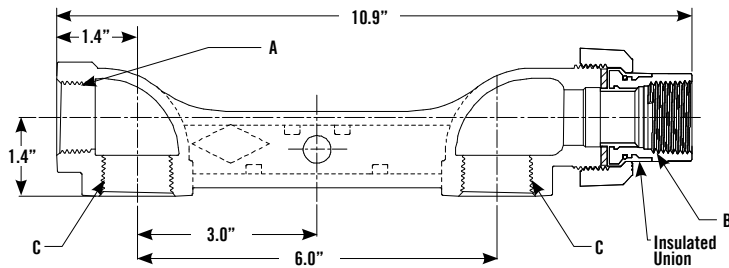
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars - 6610 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6"	3/4" or 1"	3/4" or 1"	3/4" or 1"

Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803

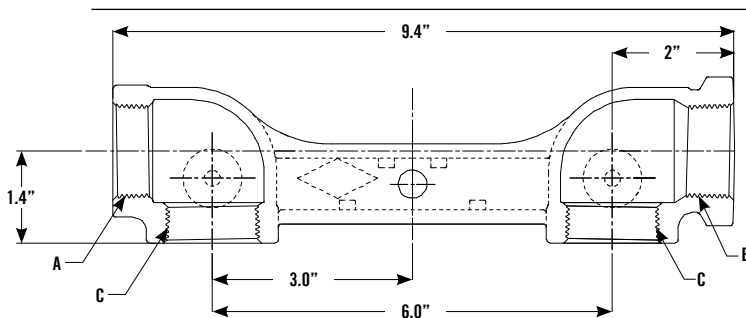


Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803



O-ring included with insulated end except 1"



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6"	3/4" or 1"	3/4" or 1"	3/4" or 1"
6"	1 1/2"	1 1/2"	1 1/2"

FINISH OPTIONS

6610- Black Cast Iron

6610A Thermal-Diffusion Zinc

6610C Thermal-Diffusion Zinc and Painted

6610P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 56.

For other options, see page 56.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

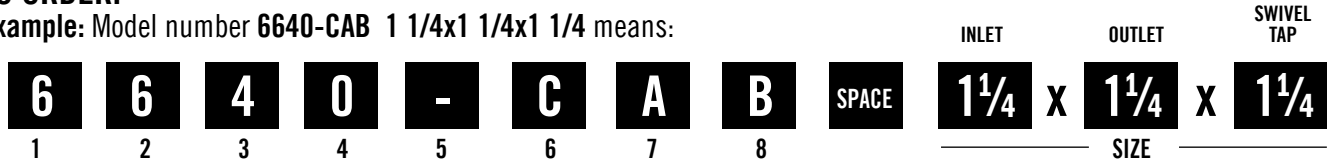
Cast Iron Meter Bars - 6640 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6640-CAB 1 1/4x1 1/4x1 1/4** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

4 = 7" spread

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron
 A = Thermal-Diffusion Zinc
 C = Thermal-Diffusion Zinc and Painted
 P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT
 C = FNPT insulated O-ring union

BLOCK 7 - TAP LOCATION(S)

- = No tap
 A = Pos. A
 B = Pos. B
 C = Pos. C
 D = Pos. D
 E = Pos. A and B
 H = Pos. A and C
 J = Pos. A and D
 K = Pos. B and C
 L = Pos. B and D
 N = Pos. C and D
 Q = Pos. A, B, and C
 R = Pos. A, B, and D
 T = Pos. A, C, and D
 W = Pos. B, C, and D
 X = Pos. A, B, C, and D

See drawing on page 52 for positions

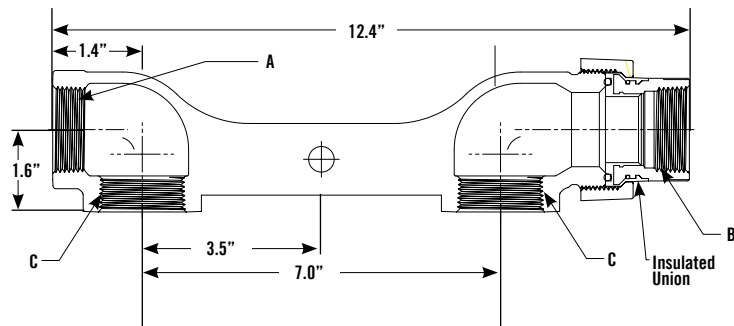
BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap
 A = 1/8" NPT recessed hex plug
 B = 1/8" NPT square head plug
 C = 1/8" NPT no plug
 D = 1/4" NPT recessed hex plug
 E = 1/4" NPT square head plug
 F = 1/4" NPT no plug
 M = 1/8" NPT hex head plug
 P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
 Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars - 6640 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



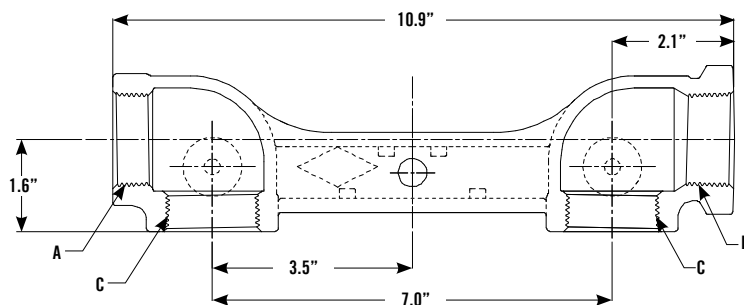
DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
7"	1 1/4"	1 1/4"	1 1/4"

Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
7"	1 1/4"	1 1/4"	1 1/4"

FINISH OPTIONS

6640- Black Cast Iron

6640A Thermal-Diffusion Zinc

6640C Thermal-Diffusion Zinc and Painted

6640P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 58.

For other options, see page 58.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars - 6604 Series

HORIZONTAL INLET AND VERTICAL OUTLET, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6604-CAB 1x1** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

0 = 6 1/2" spread

BLOCK 4 - END CONFIGURATION

4 = Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

E = FNPT insulated flat gasket union (reducing NPT)

F = FNPT insulated flat gasket union

H = MNPT insulated O-ring union

Q = Male 20LT meter thread

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

W = FNPT non-insulated flat gasket union (reducing NPT)

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

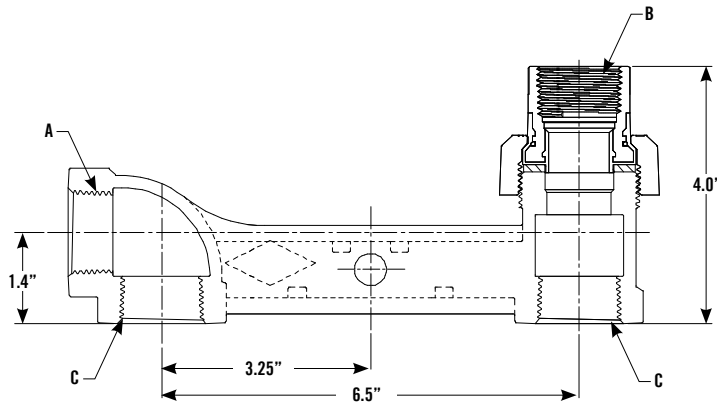
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars - 6604 Series

HORIZONTAL INLET AND VERTICAL OUTLET, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



FNPT x Insulated Union with FNPT Tailpiece

(Black Cast Iron Shown)



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6 1/2"	3/4" or 1"	3/4" or 1"	3/4" or 1"

Meter Bar Gasket Repair Union

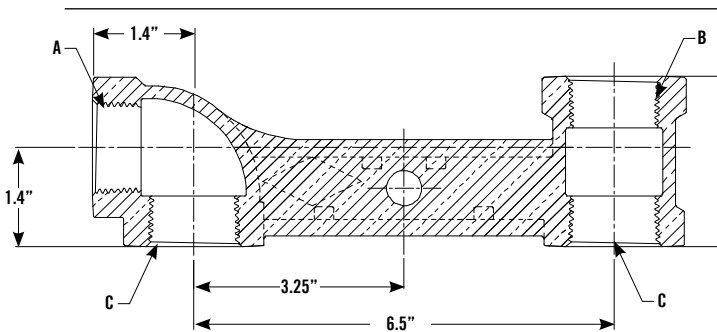
Outlet Size	Insulated End		Gasket	Black Nut	Thermal-Diffusion Zinc Nut	
	6301RB	6301RA				
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	Insulated End		O-ring	Black Nut	Thermal-Diffusion Zinc Nut	
	6302RB	6302RA				
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



FNPT x FNPT

(Black Cast Iron Shown)

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6 1/2"	3/4" or 1"	3/4" or 1"	3/4" or 1"

FINISH OPTIONS

6604- Black Cast Iron

6604A Thermal-Diffusion Zinc

6604C Thermal-Diffusion Zinc and Painted

6604P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 60.

For other options, see page 60.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars - 6614 Series

HORIZONTAL INLET AND VERTICAL OUTLET, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6614-CAB 1x1x1** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

1 = 6" spread

BLOCK 4 - END CONFIGURATION

4 = Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

E = FNPT insulated flat gasket union
(reducing NPT)

F = FNPT insulated flat gasket union

H = MNPT insulated O-ring union

Q = Male 20LT meter thread

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

W = FNPT non-insulated flat gasket union
(reducing NPT)

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

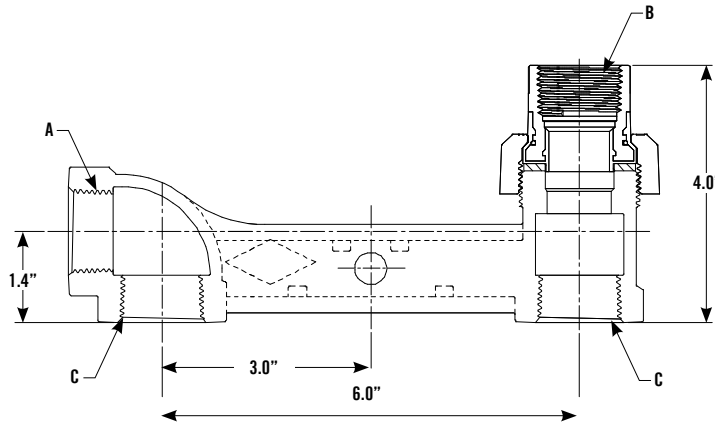
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars - 6614 Series

HORIZONTAL INLET AND VERTICAL OUTLET, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6"	3/4" or 1"	3/4" or 1"	3/4" or 1"



FNPT x Insulated Union with FNPT Tailpiece

(Black Cast Iron Shown)



Meter Bar Gasket Repair Union

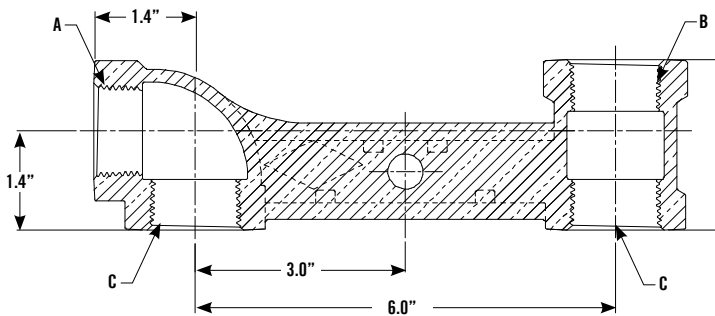
Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6"	3/4" or 1"	3/4" or 1"	3/4" or 1"



FNPT x FNPT

(Black Cast Iron Shown)

FINISH OPTIONS

- 6614- Black Cast Iron
- 6614A Thermal-Diffusion Zinc
- 6614C Thermal-Diffusion Zinc and Painted
- 6614P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 62.

For other options, see page 62.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

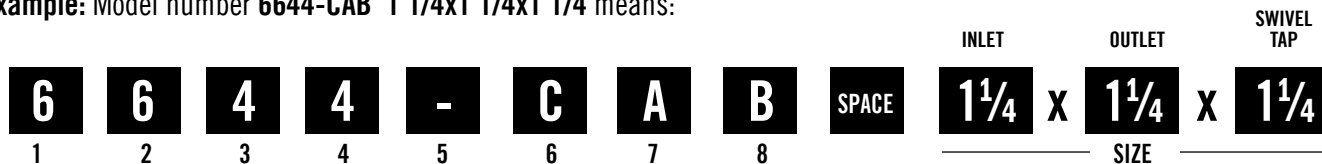
Cast Iron Meter Bars - 6644 Series

HORIZONTAL INLET AND VERTICAL OUTLET, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6644-CAB 1 1/4x1 1/4x1 1/4** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

4 = 7" spread

BLOCK 4 - END CONFIGURATION

4 = Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

C = FNPT insulated O-ring union

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

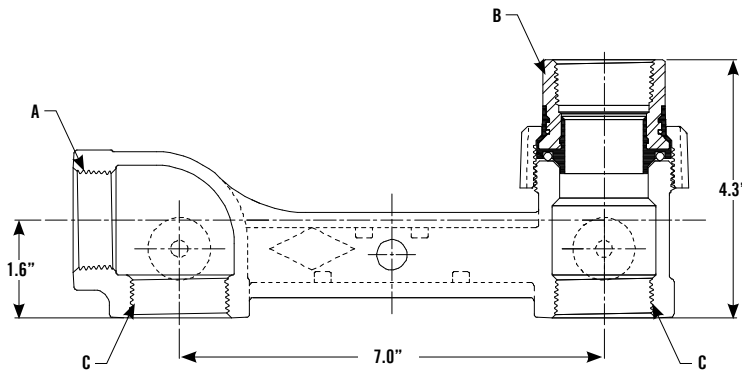
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars - 6644 Series

HORIZONTAL INLET AND VERTICAL OUTLET, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



FNPT x Insulated Union with FNPT Tailpiece

(Black Cast Iron Shown)

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
7"	1 1/4"	1 1/4"	1 1/4"

FINISH OPTIONS

6644- Black Cast Iron

6644A Thermal-Diffusion Zinc

6644C Thermal-Diffusion Zinc and Painted

6644P Painted

Taps available on all the above finish options.



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end

NOTE:

For side taps, see pages 52 and 64.

For other options, see page 64.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

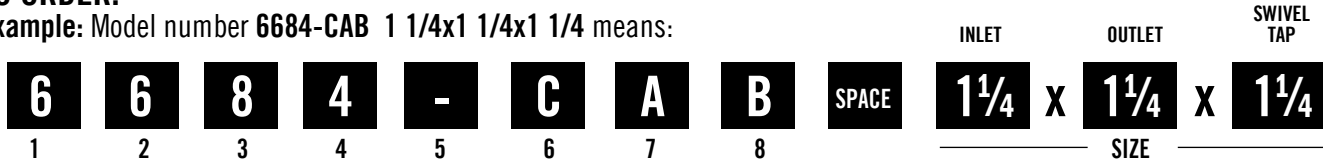
Cast Iron Meter Bars - 6684 Series

HORIZONTAL INLET AND VERTICAL OUTLET, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6684-CAB 1 1/4x1 1/4x1 1/4** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

8 = 8 1/4" spread

BLOCK 4 - END CONFIGURATION

4 = Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

X = Male 30LT meter thread

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

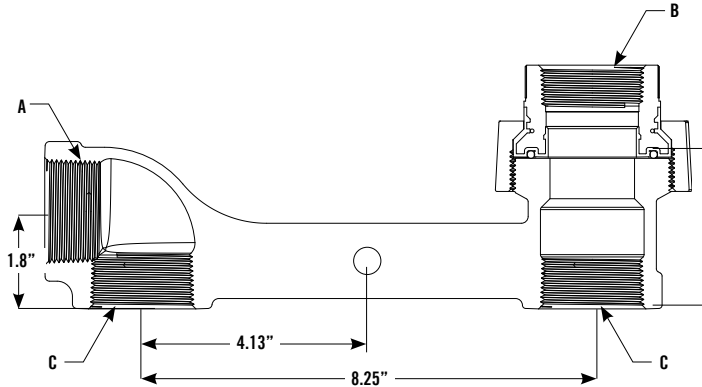
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars - 6684 Series

HORIZONTAL INLET AND VERTICAL OUTLET, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



FNPT x Insulated Union with FNPT Tailpiece (Black Cast Iron Shown)



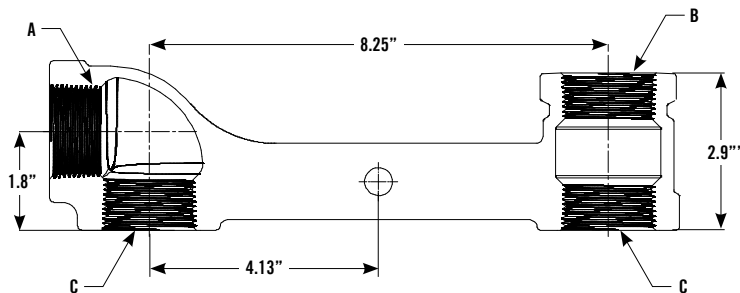
DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C FNPT Swivel Tap Size
8 1/4"	1 1/4" or 1 1/2"	1 1/4" or 1 1/2"	1 1/4" or 1 1/2"

Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844
1 1/2"	4821-068	4821-070	4811-658	3134-227	4820-262	4811-848

O-ring included with insulated end



FNPT x FNPT (Black Cast Iron Shown)

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
8 1/4"	1 1/4" or 1 1/2"	1 1/4" or 1 1/2"	1 1/4" or 1 1/2"

FINISH OPTIONS

6684- Black Cast Iron

6684A Thermal-Diffusion Zinc

6684C Thermal-Diffusion Zinc and Painted

6684P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 66.

For other options, see page 66.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

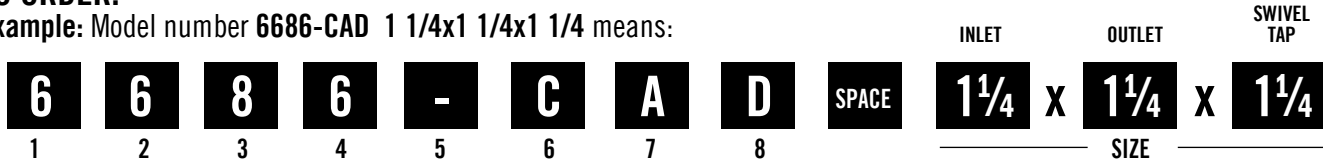
Cast Iron Meter Bars - 6686 Series

HORIZONTAL INLET AND DUAL OUTLET, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note that both outlets must be ordered as the same size.

TO ORDER:

Example: Model number 6686-CAD 1 1/4x1 1/4x1 1/4 means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

8 = 8 1/4" spread

BLOCK 4 - END CONFIGURATION

6 = Horizontal inlet by vertical and horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron
 A = Thermal-Diffusion Zinc
 C = Thermal-Diffusion Zinc and Painted
 P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT
 C = FNPT insulated O-ring union

BLOCK 7 - TAP LOCATION(S)

- = No tap
 A = Pos. A
 B = Pos. B
 C = Pos. C
 D = Pos. D
 E = Pos. A and B
 H = Pos. A and C
 J = Pos. A and D
 K = Pos. B and C
 L = Pos. B and D
 N = Pos. C and D
 Q = Pos. A, B, and C
 R = Pos. A, B, and D
 T = Pos. A, C, and D
 W = Pos. B, C, and D
 X = Pos. A, B, C, and D

See drawing on page 52 for positions

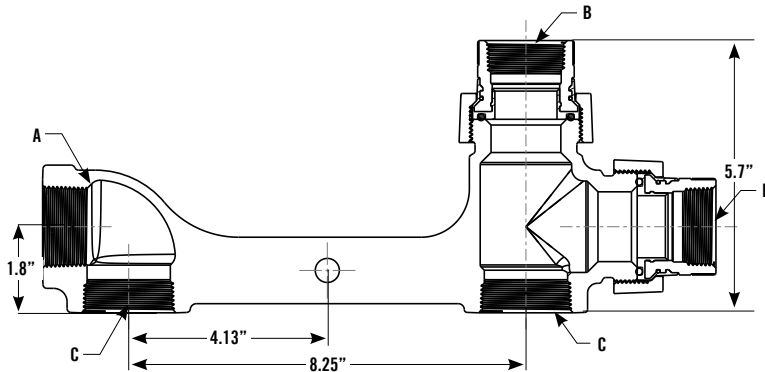
BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap
 A = 1/8" NPT recessed hex plug
 B = 1/8" NPT square head plug
 C = 1/8" NPT no plug
 D = 1/4" NPT recessed hex plug
 E = 1/4" NPT square head plug
 F = 1/4" NPT no plug
 M = 1/8" NPT hex head plug
 P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
 Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars - 6686 Series

HORIZONTAL INLET AND DUAL OUTLET, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



FNPT x Insulated Union (Black Cast Iron Shown) with FNPT Tailpiece

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C FNPT Swivel Tap Size
8 1/4"	1 1/4" or 1 1/2"	1 1/4"	1 1/4" or 1 1/2"



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end

FINISH OPTIONS

6686- Black Cast Iron

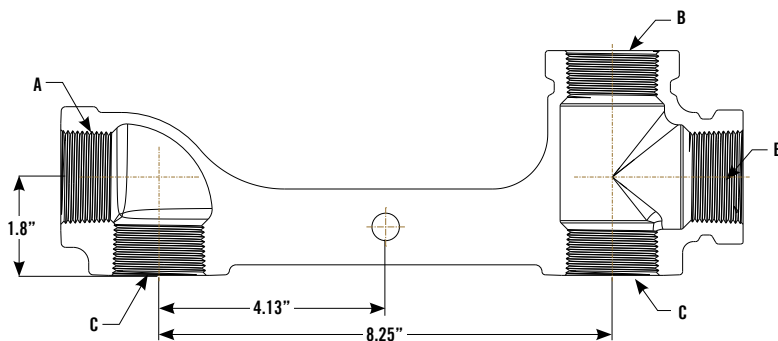
6686A Thermal-Diffusion Zinc

6686C Thermal-Diffusion Zinc and Painted

6686P Painted

Taps available on all the above finish options.

Cast Iron Meter Bars



FNPT x FNPT

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
8 1/4"	1 1/4" or 1 1/2"	1 1/4"	1 1/4" or 1 1/2"

NOTE:

For side taps, see pages 52 and 68.

For other options, see page 68.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars with Cast Integral Swivels - 6560 Series

HORIZONTAL MNPT INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6560-CAAB- 1x1 20LT means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

5 = Standard meter bar with MNPT inlet

BLOCK 3 - METER BAR SPREAD

6 = 6" spread with cast integral meter swivels

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

C = FNPT insulated O-ring union

E = FNPT insulated flat gasket union (reducing NPT)

F = FNPT insulated flat gasket union

H = MNPT insulated O-ring union

M = MNPT

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

W = FNPT non-insulated flat gasket union (reducing NPT)

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

A = 10LT - 10 Light swivel with flat gasket seal

B = 20LT - 20 Light swivel with flat gasket seal

C = 20LTO - 20 Light swivel with O-ring seal

F = OEM - O-Emco swivel with flat gasket seal

G = OEMO - O-Emco swivel with O-ring seal

H = 1A - 1A Sprague swivel with flat gasket seal

J = 1A0 - 1A Sprague swivel with O-ring seal

BLOCK 10 - SWIVEL SPECIAL

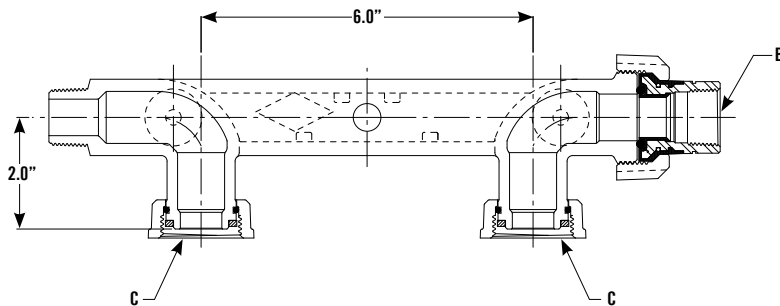
- = Standard swivel and nut

D = Brass nuts (20LT only)

Cast Iron Meter Bars with Cast Integral Swivels - 6560 Series

HORIZONTAL MNPT INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



MNPT x Insulated Union with FNPT Tailpiece



DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	10LT, 20LT, OEM, or 1A

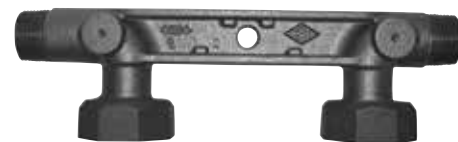
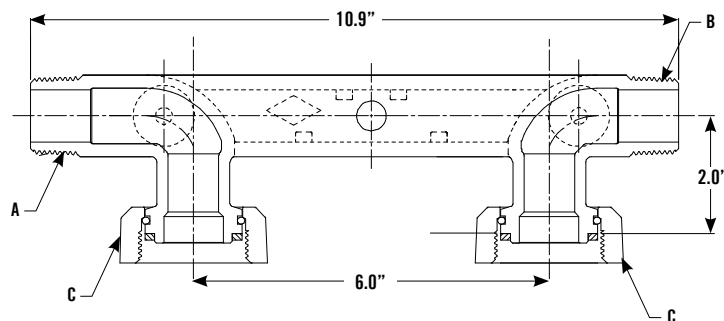
Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803

Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



MNPT x MNPT

DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B MNPT Outlet	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	10LT, 20LT, OEM, or 1A

FINISH OPTIONS

- 6560- Black Cast Iron
- 6560A Thermal-Diffusion Zinc
- 6560C Thermal-Diffusion Zinc and Painted
- 6560P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 70.

For other options, see page 70.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars with Integral Swivels - 6564 Series

HORIZONTAL MNPT INLET AND VERTICAL OUTLET, CAST INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6564-CCEB- 1x1 20LT** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

5 = Standard meter bar with MNPT inlet

BLOCK 3 - METER BAR SPREAD

6 = 6" spread with cast integral meter swivels

BLOCK 4 - END CONFIGURATION

4 = Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

F = FNPT insulated flat gasket union

Q = Male 20LT meter thread

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

A = 10LT - 10 Light swivel with flat gasket seal

B = 20LT - 20 Light swivel with flat gasket seal

C = 20LTO - 20 Light swivel with O-ring seal

F = OEM - O-Emco swivel with flat gasket seal

G = OEMO - O-Emco swivel with O-ring seal

H = 1A - 1A Sprague swivel with flat gasket seal

J = 1AO - 1A Sprague swivel with O-ring seal

BLOCK 10 - SWIVEL SPECIAL

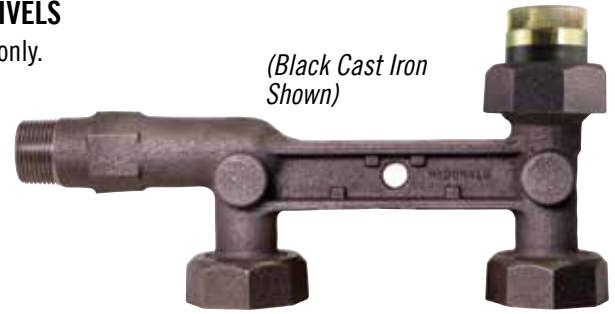
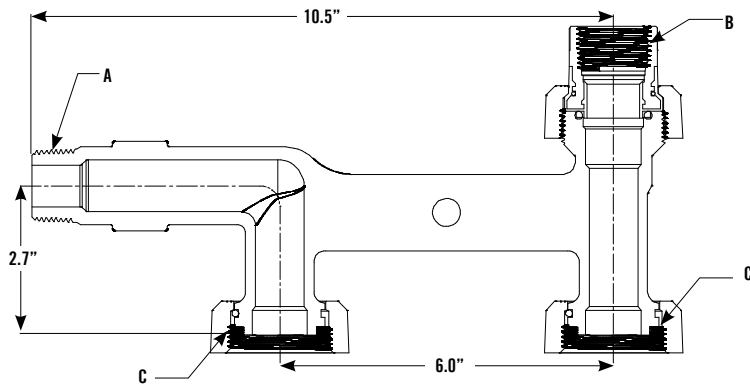
- = Standard swivel and nuts

D = Brass nuts (20LT only)

Cast Iron Meter Bars with Integral Swivels - 6564 Series

HORIZONTAL MNPT INLET AND VERTICAL OUTLET, CAST INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

MNPT x Insulated Union with FNPT Tailpiece



DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	1"	3/4" or 1"	10LT, 20LT, OEM, or 1A

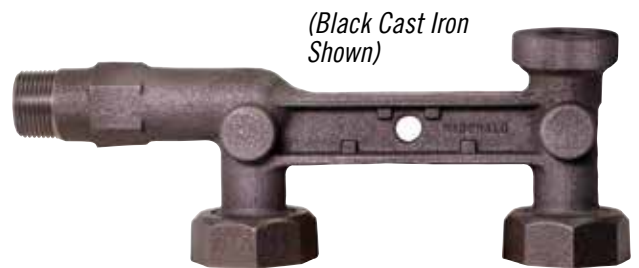
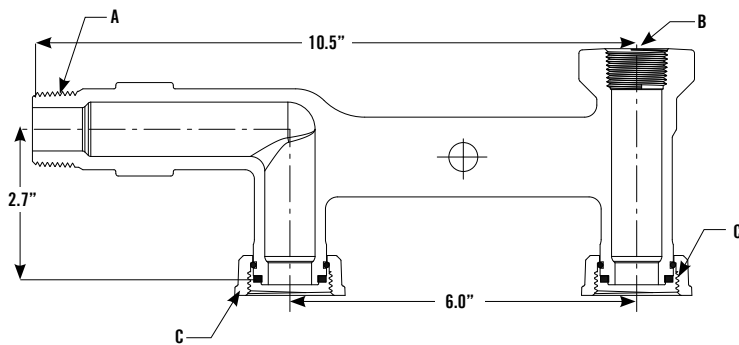
Meter Bar Gasket Repair Union

Outlet Size	Insulated End			Thermal-Diffusion	
	6301RB	6301RA	Gasket	Black Nut	Zinc Nut
3/4"	4821-005	4821-073	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-223	4810-987	4811-803

Meter Bar O-ring Repair Union

Outlet Size	Insulated End			Thermal-Diffusion	
	6302RB	6302RA	O-ring	Black Nut	Zinc Nut
3/4"	4821-080	4821-082	3134-212	4822-356	4822-474
1"	4821-065	4821-067	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



(Black Cast Iron Shown)

MNPT x FNPT

DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B FNPT Outlet	C Swivel Nut Size
6"	1"	3/4"	10LT, 20LT, OEM, or 1A

FINISH OPTIONS

6564- Black Cast Iron

6564A Thermal-Diffusion Zinc

6564C Thermal-Diffusion Zinc and Painted

6564P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 70.

For other options, see page 70.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars with Cast Integral Swivels - 6568 Series

VERTICAL MNPT INLET AND VERTICAL OUTLET, CAST INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6568-CAAB- 1x1 20LTX3 means:

6	5	6	8	-	C	A	A	B	-	SPACE	INLET 1	X	OUTLET 1	SPACE	SWIVEL 20LT	INLET HEIGHT X3
1	2	3	4	5	6	7	8	9	10							11

BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

5 = Standard meter bar with MNPT inlet

BLOCK 3 - METER BAR SPREAD

6 = 6" spread with cast integral meter swivels

BLOCK 4 - END CONFIGURATION

8 = Vertical elbow inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

C = FNPT insulated O-ring union

E = FNPT insulated flat gasket union (reducing NPT)

F = FNPT insulated flat gasket union

H = MNPT insulated O-ring union

Q = Male 20LT meter thread

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

B = 20LT - 20 Light swivel with flat gasket seal

C = 20LTO - 20 Light swivel with O-ring seal

F = OEM - O-Emco swivel with flat gasket seal

G = OEMO - O-Emco swivel with O-ring seal

H = 1A - 1A Sprague swivel with flat gasket seal

J = 1AO - 1A Sprague swivel with O-ring seal

BLOCK 10 - SWIVEL SPECIAL

- = Standard swivel and nut

D = Brass nuts (20LT only)

BLOCK 11 - INLET HEIGHT

X3 = 3.3" height from inlet to swivel

X6 = 5.7" height from inlet to swivel

Typical Installation

FEATURES:

- **Strength** - Solid One Piece Cast Iron Construction
- **Accuracy** - Correct Meter Alignment Every Time
- **Time** - Ready to Install From Factory
- **Safety** - Fewer Leak Paths Connect Directly to Regulator
- **Space** - Compact Meter Sets



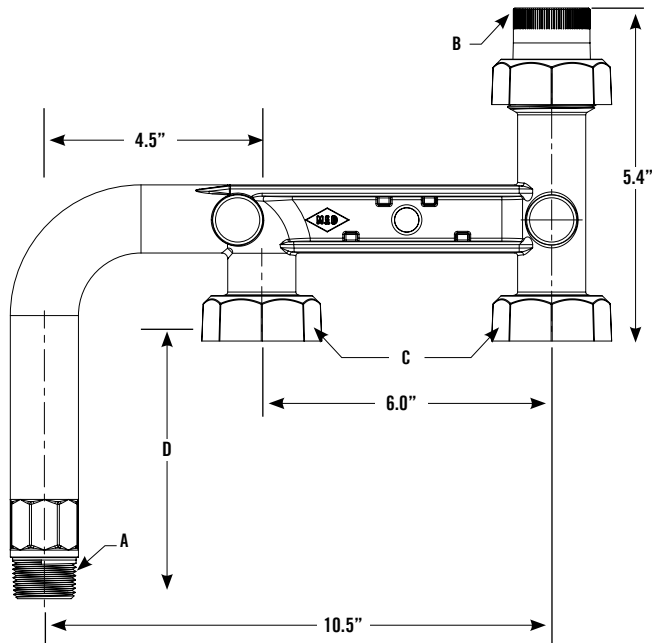
WARNING

Over torquing may occur when the regulator is tightened on with the correct orientation and another turn is attempted to get the regulator positioned all the way around, which can cause the casting to crack. Therefore, when attaching the regulator to the cast inlet connection, please use caution not to over tighten. Use a wrench on the meter bar hexagon for assembly.

Cast Iron Meter Bars with Cast Integral Swivels - 6568 Series

VERTICAL MNPT INLET AND VERTICAL OUTLET, CAST INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



(Thermal-Diffusion Zinc Finish Shown)



MNPT x Insulated Union with FNPT Tailpiece

FINISH OPTIONS

- 6568-** Black Cast Iron
 - 6568A** Thermal-Diffusion Zinc
 - 6568C** Thermal-Diffusion Zinc and Painted
 - 6568P** Painted
- Taps available on all the above finish options.

DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size	D Inlet Height
6"	1"	3/4" or 1"	20LT, OEM, or 1A	3.3" or 5.7"



Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"

NOTE:

For side taps, see pages 52 and 74.
For other options, see page 74.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars with Cast Integral Swivels - 6569 Series

VERTICAL MNPT INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6569-CAAB- 1x1 20LT means:

										INLET	X	OUTLET	SPACE	SWIVEL
6	5	6	9	-	C	A	A	B	-	SPACE	1	1	SPACE	20LT
1	2	3	4	5	6	7	8	9	10	SIZE				
BLOCK 1 - METER BAR					BLOCK 6 - OUTLET TYPE					BLOCK 8 - TAP SIZE/PLUG TYPE				
6 = All meter bars					C = FNPT insulated O-ring union					- = No tap				
BLOCK 2 - METER BAR TYPE					E = FNPT insulated flat gasket union (reducing NPT)					A = 1/8" NPT recessed hex plug				
5 = Standard meter bar with MNPT inlet					F = FNPT insulated flat gasket union					B = 1/8" NPT square head plug				
BLOCK 3 - METER BAR SPREAD					H = MNPT insulated O-ring union					C = 1/8" NPT no plug				
6 = 6" spread with cast integral meter swivels					M = MNPT					D = 1/4" NPT recessed hex plug				
BLOCK 4 - END CONFIGURATION					S = FNPT non-insulated O-ring union					E = 1/4" NPT square head plug				
9 = Vertical elbow inlet by horizontal outlet					U = FNPT non-insulated flat gasket union					F = 1/4" NPT no plug				
BLOCK 5 - FINISH					W = FNPT non-insulated flat gasket union (reducing NPT)					M = 1/8" NPT hex head plug				
- = Black Cast Iron					BLOCK 7 - TAP LOCATION(S)					P = 1/4" NPT temperature/pressure plug (Texas Fairfax)				
A = Thermal-Diffusion Zinc					- = No tap					Q = 1/4" NPT temperature/pressure plug (Pete's Plug)				
C = Thermal-Diffusion Zinc and Painted					A = Pos. A					BLOCK 9 - SWIVEL SIZE/TYPE				
P = Painted					B = Pos. B					A = 10LT - 10 Light swivel with flat gasket seal				
					C = Pos. C					B = 20LT - 20 Light swivel with flat gasket seal				
					D = Pos. D					C = 20LTO - 20 Light swivel with O-ring seal				
					E = Pos. A and B					F = OEM - O-Emco swivel with flat gasket seal				
					H = Pos. A and C					G = OEMO - O-Emco swivel with O-ring seal				
					J = Pos. A and D					H = 1A - 1A Sprague swivel with flat gasket seal				
					K = Pos. B and C					J = 1AO - 1A Sprague swivel with O-ring seal				
					L = Pos. B and D					BLOCK 10 - SWIVEL SPECIAL				
					N = Pos. C and D					- = Standard swivel and nuts				
					Q = Pos. A, B, and C					D = Brass nuts (20LT only)				
					R = Pos. A, B, and D									
					T = Pos. A, C, and D									
					W = Pos. B, C, and D									
					X = Pos. A, B, C, and D									
See drawing on page 52 for positions														

Cast Iron Meter Bars

Typical Installation

FEATURES:

- **Strength** - Solid One Piece Cast Iron Construction
- **Accuracy** - Correct Meter Alignment Every Time
- **Time** - Ready to Install From Factory
- **Safety** - Fewer Leak Paths Connect Directly to Regulator
- **Space** - Compact Meter Sets



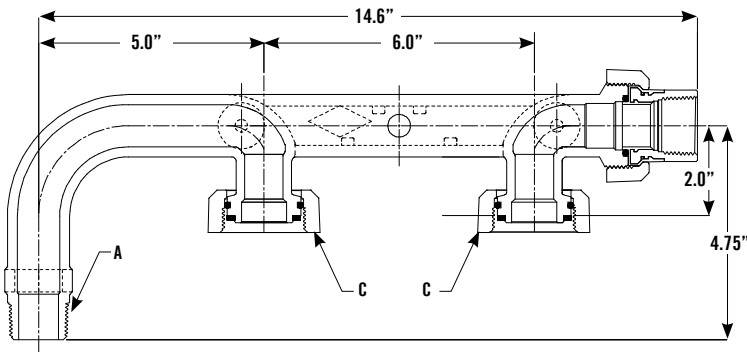
WARNING

Over torquing may occur when the regulator is tightened on with the correct orientation and another turn is attempted to get the regulator positioned all the way around, which can cause the casting to crack. Therefore, when attaching the regulator to the cast inlet connection, please use caution not to over tighten. Use a wrench on the meter bar hexagon for assembly.

Cast Iron Meter Bars with Cast Integral Swivels - 6569 Series

VERTICAL MNPT INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



MNPT x Insulated Union with FNPT Tailpiece

(Black Cast Iron Shown)



DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	10LT, 20LT, OEM, or 1A

Meter Bar Gasket Repair Union

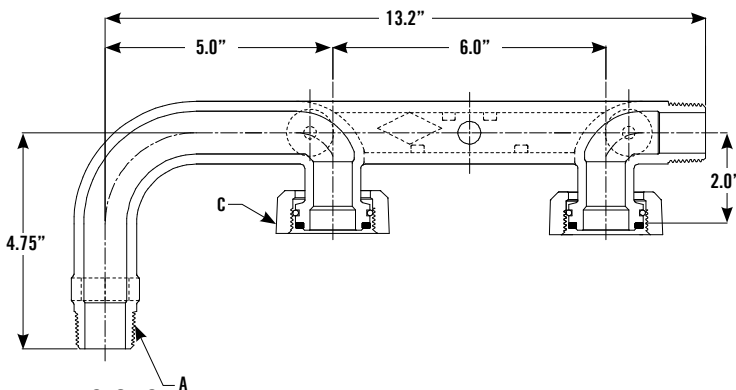
Outlet Size	Insulated End			Thermal-Diffusion	
	6301RB	6301RA	Gasket	Black Nut	Zinc Nut
3/4"	4821-005	4821-073	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	Insulated End			Thermal-Diffusion	
	6302RB	6302RA	O-ring	Black Nut	Zinc Nut
3/4"	4821-080	4821-082	3134-212	4822-356	4822-474
1"	4821-065	4821-067	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



MNPT x MNPT

(Black Cast Iron Shown)

DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B MNPT Outlet	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	10LT, 20LT, OEM, or 1A

FINISH OPTIONS

6569- Black Cast Iron

6569A Thermal-Diffusion Zinc

6569C Thermal-Diffusion Zinc and Painted

6569P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 76.

For other options, see page 76.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars with Cast Integral Swivels - 6570 Series

HORIZONTAL MNPT INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6570-CAAB- 1x1 20LT** means:

										INLET		OUTLET		SWIVEL	
6	5	7	0	-	C	A	A	B	-	SPACE	1	X	1	SPACE	20LT
1	2	3	4	5	6	7	8	9	10						SIZE

BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

5 = Standard meter bar with MNPT inlet

BLOCK 3 - METER BAR SPREAD

7 = 8 1/4" spread with cast integral meter swivels

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

E = FNPT insulated flat gasket union (reducing NPT)

F = FNPT insulated flat gasket union

H = MNPT insulated O-ring union

M = MNPT

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

W = FNPT non-insulated flat gasket union (reducing NPT)

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP PLUG SIZE/TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

B = 20LT - 20 Light swivel with flat gasket seal

D = 30LT - 30 Light swivel with flat gasket seal

BLOCK 10 - SWIVELS SPECIAL

- = Standard swivel and nuts

D = Brass nuts (20LT only)

Typical Installation

FEATURES:

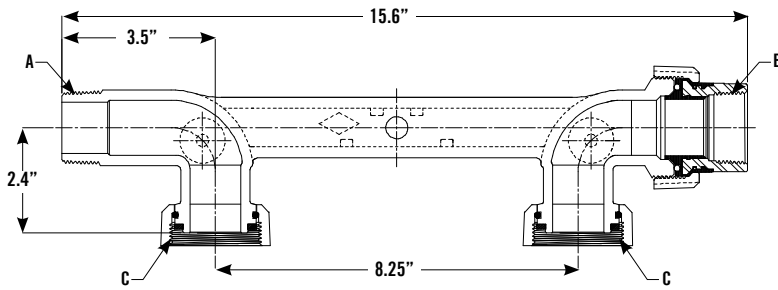
- **Strength** - Solid One Piece Cast Iron Construction
- **Accuracy** - Correct Meter Alignment Every Time
- **Time** - Ready to Install From Factory
- **Safety** - Fewer Leak Paths Connect Directly to Regulator
- **Space** - Compact Meter Sets



Cast Iron Meter Bars with Cast Integral Swivels - 6570 Series

HORIZONTAL MNPT INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

MNPT x Insulated Union with FNPT Tailpiece



DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
8 1/4"	1"	1"	20LT
8 1/4"	1 1/4"	1 1/4"	30LT

Meter Bar Gasket Repair Union

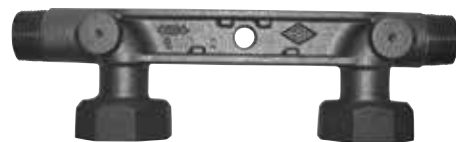
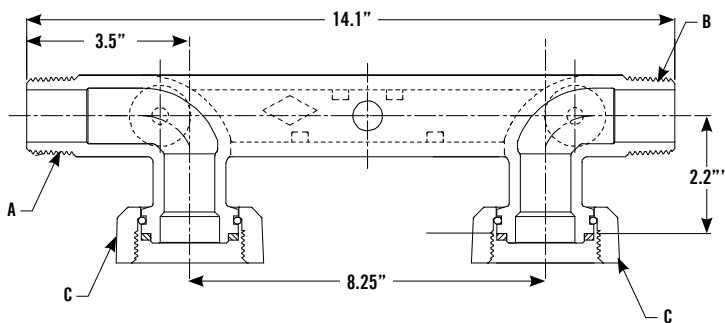
Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end except 1"



(Black Cast Iron Shown)

MNPT x MNPT

DIMENSIONS

Meter Bar Spread	A MNPT Inlet	B MNPT Outlet	C Swivel Nut Size
8 1/4"	1"	1"	20LT
8 1/4"	1 1/4"	1 1/4"	30LT

FINISH OPTIONS

6570- Black Cast Iron

6570A Thermal-Diffusion Zinc

6570C Thermal-Diffusion Zinc and Painted

6570P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 78.

For other options, see page 78.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars with Integral Swivels - 6620 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6620-BAAB- 1x1 20LT means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

2 = 6" spread with integral meter swivels

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

F = FNPT insulated flat gasket union

M = MNPT

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP PLUG SIZE/TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

A = 10LT - 10 Light swivel with flat gasket seal

B = 20LT - 20 Light swivel with flat gasket seal

C = 20LTO - 20 Light swivel with O-ring seal

F = OEM - O-Emco swivel with flat gasket seal

G = OEMO - O-Emco swivel with O-ring seal

H = 1A - 1A Sprague swivel with flat gasket seal

J = 1AO - 1A Sprague swivel with O-ring seal

BLOCK 10 - SWIVEL SPECIAL

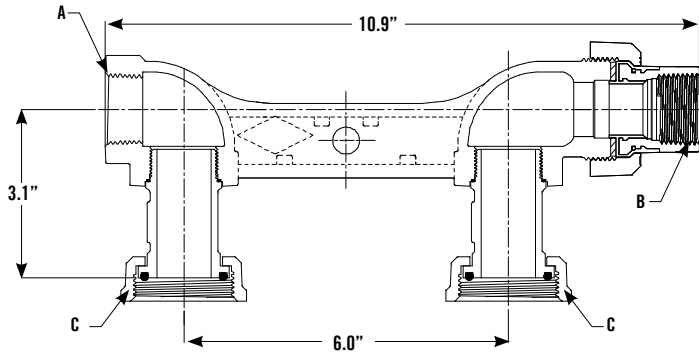
- = Standard swivel and nut

D = Brass nuts and standard swivels (20LT only)

Cast Iron Meter Bars with Integral Swivels - 6620 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	10LT, 20LT, OEM, or 1A



(Black Cast Iron Shown)

FNPT x Insulated Union with FNPT Tailpiece



Meter Bar Gasket Repair Union

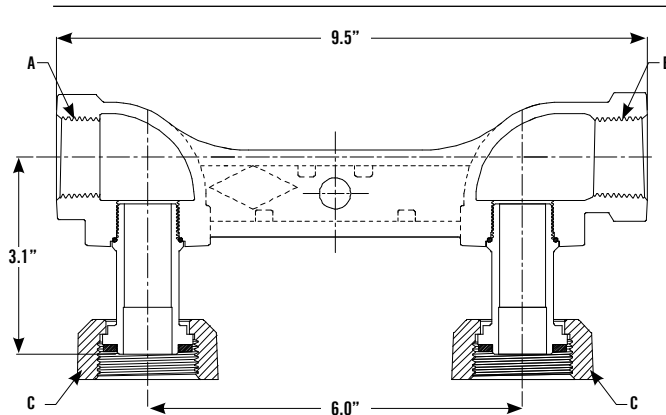
Outlet Size	Insulated End		Gasket	Black Nut	Thermal-Diffusion Zinc Nut	
	6301RB	6301RA				
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	Insulated End		O-ring	Black Nut	Thermal-Diffusion Zinc Nut	
	6302RB	6302RA				
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	10LT, 20LT, OEM, or 1A



(Black Cast Iron Shown)

FNPT x FNPT

FINISH OPTIONS

6620- Black Cast Iron

6620A Thermal-Diffusion Zinc

6620C Thermal-Diffusion Zinc and Painted

6620P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 80.

For other options, see page 80.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Integral swivels are NOT replaceable, they are factory installed with an O-ring and threadlocker.

Cast Iron Meter Bars with Integral Swivels - 6624 Series

HORIZONTAL INLET AND VERTICAL OUTLET, INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6624-CCEB- 3/4x3/4 20LT means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

2 = 6" spread with integral meter swivels

BLOCK 4 - END CONFIGURATION

4 = Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

F = FNPT insulated flat gasket union

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP PLUG SIZE/TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

A = 10LT - 10 Light swivel with flat gasket seal

B = 20LT - 20 Light swivel with flat gasket seal

C = 20LTO - 20 Light swivel with O-ring seal

F = OEM - O-Emco swivel with flat gasket seal

G = OEMO - O-Emco swivel with O-ring seal

H = 1A - 1A Sprague swivel with flat gasket seal

J = 1AO - 1A Sprague swivel with O-ring seal

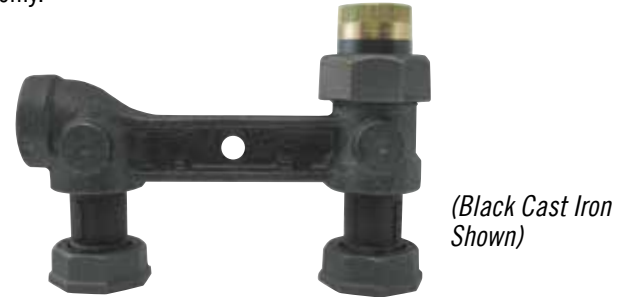
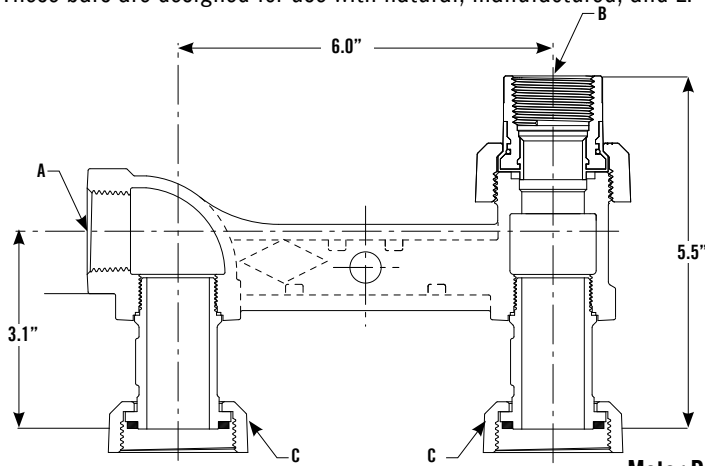
BLOCK 10 - SWIVEL SPECIAL

- = Standard swivel and nuts

Cast Iron Meter Bars with Integral Swivels - 6624 Series

HORIZONTAL INLET AND VERTICAL OUTLET, INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



(Black Cast Iron Shown)

FNPT x Insulated Union with FNPT Tailpiece



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	10LT, 20LT, OEM, or 1A

Meter Bar Gasket Repair Union

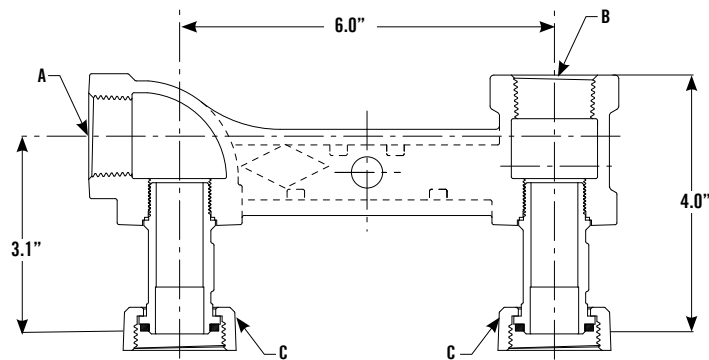
Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



(Black Cast Iron Shown)

FNPT x FNPT

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	10LT, 20LT, OEM, or 1A

FINISH OPTIONS

6624- Black Cast Iron

6624A Thermal-Diffusion Zinc

6624C Thermal-Diffusion Zinc and Painted

6624P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 82.

For other options, see page 82.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Integral swivels are NOT replaceable, they are factory installed with an O-ring and threadlocker.

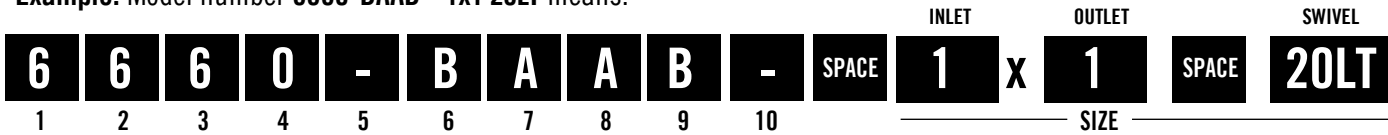
Cast Iron Meter Bars with Cast Integral Swivels - 6660 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6660-BAAB- 1x1 20LT means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

6 = 6" spread with cast integral meter swivels

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron

A = Thermal-Diffusion Zinc

C = Thermal-Diffusion Zinc and Painted

P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT

C = FNPT insulated O-ring union

F = FNPT insulated flat gasket union

H = MNPT insulated O-ring union

S = FNPT non-insulated O-ring union

U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap

A = Pos. A

B = Pos. B

C = Pos. C

D = Pos. D

E = Pos. A and B

H = Pos. A and C

J = Pos. A and D

K = Pos. B and C

L = Pos. B and D

N = Pos. C and D

Q = Pos. A, B, and C

R = Pos. A, B, and D

T = Pos. A, C, and D

W = Pos. B, C, and D

X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap

A = 1/8" NPT recessed hex plug

B = 1/8" NPT square head plug

C = 1/8" NPT no plug

D = 1/4" NPT recessed hex plug

E = 1/4" NPT square head plug

F = 1/4" NPT no plug

M = 1/8" NPT hex head plug

P = 1/4" NPT temperature/pressure plug (Texas Fairfax)

Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

B = 20LT - 20 Light swivel with flat gasket seal

C = 20LTO - 20 Light swivel with O-ring seal

D = 30LT - 30 Light swivel with flat gasket seal

E = 30LTO - 30 Light swivel with O-ring seal

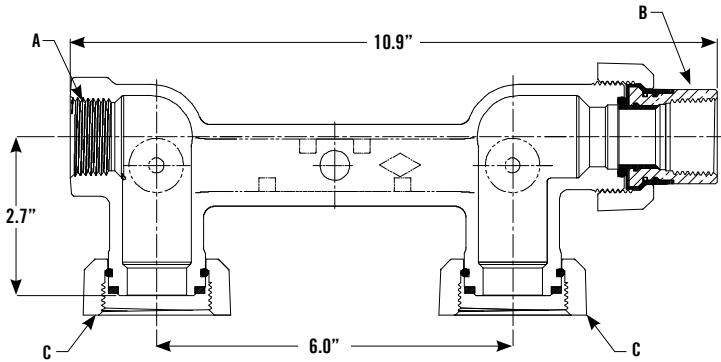
BLOCK 10 - SWIVEL SPECIAL

- = Standard swivel and nuts

Cast Iron Meter Bars with Cast Integral Swivels - 6660 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	20LT or 30LT



(Black Cast Iron Shown)

FNPT x Insulated Union with FNPT Tailpiece



Meter Bar Gasket Repair Union

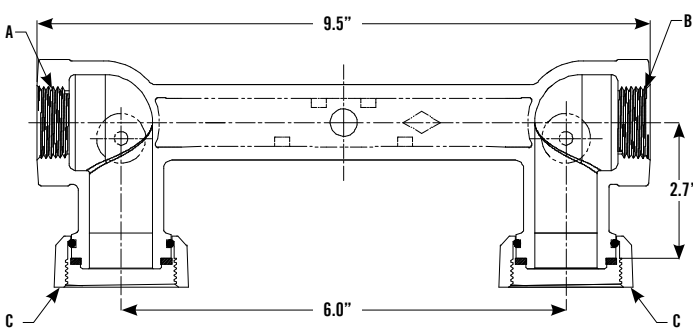
Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

O-ring included with insulated end except 1"



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	20LT or 30LT



(Black Cast Iron Shown)

FNPT x FNPT

FINISH OPTIONS

6660- Black Cast Iron

6660A Thermal-Diffusion Zinc

6660C Thermal-Diffusion Zinc and Painted

6660P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 84.

For other options, see page 84.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars with Cast Integral Swivels - 6670 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6670-BAAB- 1x1 20LT means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

6 = Standard meter bar

BLOCK 3 - METER BAR SPREAD

7 = 8 1/4" spread with cast integral meter swivels

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 6 - OUTLET END TYPE

B = FNPT integral
C = FNPT insulated O-ring union
F = FNPT insulated flat gasket union
H = MNPT insulated O-ring union
S = FNPT non-insulated O-ring union

BLOCK 7 - TAP LOCATION(S)

- = No tap
A = Pos. A
B = Pos. B
C = Pos. C
D = Pos. D
E = Pos. A and B
H = Pos. A and C
J = Pos. A and D
K = Pos. B and C
L = Pos. B and D
N = Pos. C and D
Q = Pos. A, B, and C
R = Pos. A, B, and D
T = Pos. A, C, and D
W = Pos. B, C, and D
X = Pos. A, B, C, and D

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap
A = 1/8" NPT recessed hex plug
B = 1/8" NPT square head plug
C = 1/8" NPT no plug
D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
M = 1/8" NPT hex head plug
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

B = 20LT - 20 Light swivel with flat gasket seal
C = 20LTO - 20 Light swivel with O-ring seal
D = 30LT - 30 Light swivel with flat gasket seal
E = 30LTO - 30 Light swivel with O-ring seal

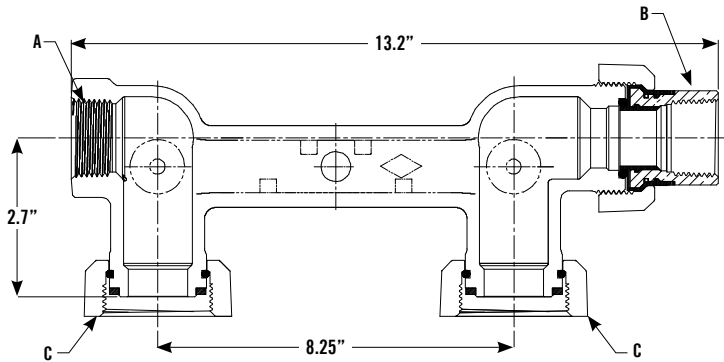
BLOCK 10 - SWIVEL SPECIAL

- = Standard swivel and nuts
D = Brass nuts (20LT only)

Cast Iron Meter Bars with Cast Integral Swivels - 6670 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, CAST INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
8 1/4"	1" or 1 1/4"	1 1/4"	20LT or 30LT



(Thermal-Diffusion Zinc Shown)

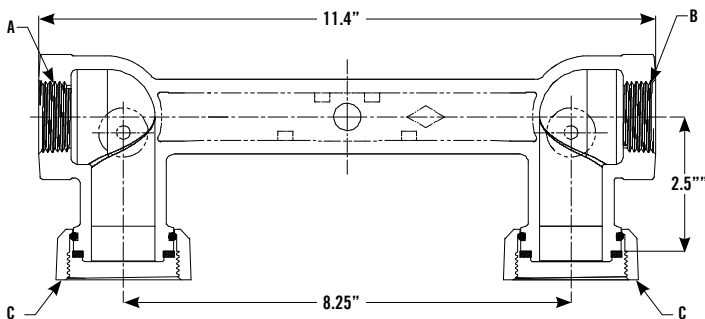
FNPT x Insulated Union with FNPT Tailpiece



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844

O-ring included with insulated end



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C Swivel Nut Size
8 1/4"	1" or 1 1/4"	1" or 1 1/4"	20LT or 30LT



(Black Cast Iron Shown)

FNPT x FNPT

FINISH OPTIONS

- 6670- Black Cast Iron
- 6670A Thermal-Diffusion Zinc
- 6670C Thermal-Diffusion Zinc and Painted
- 6670P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 86.

For other options, see page 86.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

Cast Iron Meter Bars with Integral Valve - 6712 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, 2 PSI, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6712-CCB 1x1x1 means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

7 = Meter bar w/valve
(Integral 3/4" valve - relube)

BLOCK 3 - METER BAR SPREAD

1 = 6" spread

BLOCK 4 - END CONFIGURATION

2 = Rear center horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron
- A = Thermal-Diffusion Zinc
- C = Thermal-Diffusion Zinc and Painted
- P = Painted
- L = Lockwing Black Cast Iron
- D = Lockwing Thermal-Diffusion Zinc
- E = Lockwing Thermal-Diffusion Zinc and Painted
- R = Lockwing Painted

BLOCK 6 - OUTLET END TYPE

- C = FNPT insulated O-ring union
- D = FNPT insulated O-ring union (reducing NPT)
- E = FNPT insulated flat gasket union (reducing NPT)
- F = FNPT insulated flat gasket union
- S = FNPT non-insulated O-ring union
- U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap
- A = Pos. A
- C = Pos. C
- H = Pos. A and C

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap
- A = 1/8" NPT recessed hex plug
- B = 1/8" NPT square head plug
- C = 1/8" NPT no plug
- D = 1/4" NPT recessed hex plug
- E = 1/4" NPT square head plug
- F = 1/4" NPT no plug
- M = 1/8" NPT hex head plug
- P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
- Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars



Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

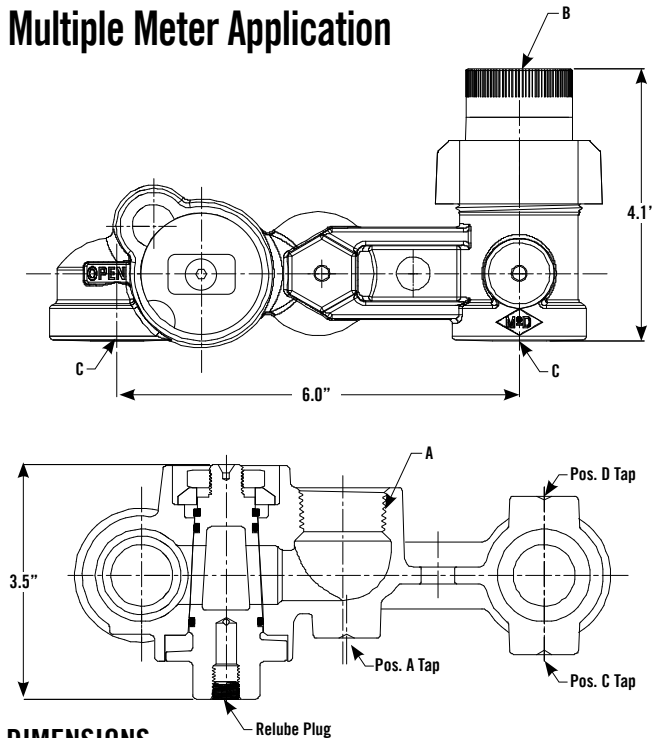
Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

Cast Iron Meter Bars with Integral Valve - 6712 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, 2 PSI, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only. For CMMC multiple meter manifold applications.

Multiple Meter Application



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Tap Size
6"	3/4" or 1"	*3/4" or 1"	3/4" or 1"

*3/4" outlet obtained with reducing endpiece



(Black Cast Iron Shown)

FNPT x Insulated Union
with FNPT Tailpiece

FINISH OPTIONS

- 6712- Black Cast Iron
 - 6712A Thermal-Diffusion Zinc
 - 6712C Thermal-Diffusion Zinc and Painted
 - 6712P Painted
- Taps available on all the above finish options.

High security lock design integral valve

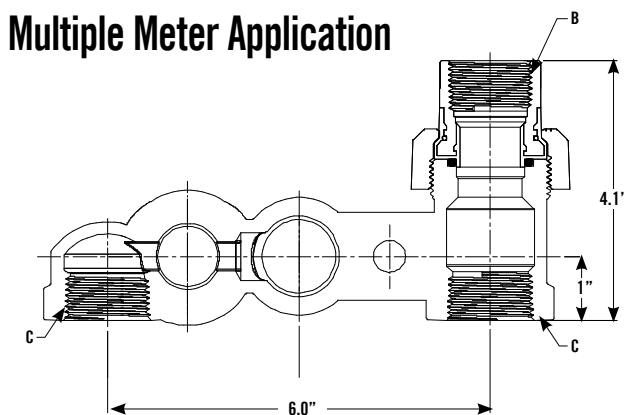
With Relube Valve - This A.Y. McDonald Mfg. Co. Gas Valve may be re-lubricated in the full open or full closed position when the valve is pressurized or unpressurized. See page 12.

Cast Iron Meter Bars with Integral Valve - 6712L Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, LOCKWING, 2 PSI, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only. For CMMC multiple meter manifold applications

Multiple Meter Application



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Tap Size
6"	3/4" or 1"	*3/4" or 1"	3/4" or 1"

*3/4" outlet obtained with reducing endpiece



(Black Cast Iron Shown)

FNPT x Insulated Union
with FNPT Tailpiece

FINISH OPTIONS

- 6712L Lockwing Black Cast Iron
- 6712D Lockwing Thermal-Diffusion Zinc
- 6712E Lockwing Thermal-Diffusion Zinc and Painted
- 6712R Lockwing Painted

Taps available on all the above finish options.

*Lockwing can be turned in both directions.

Cast Iron Meter Bars

Cast Iron Meter Bars with Integral Valve - 6722 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, 2 PSI, INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6722-ECEC-1x1-SPACE-1x1-SPACE-20LTO means:

6	7	2	2	-	E	C	E	C	-	SPACE	INLET 1	x	OUTLET 1	SPACE	SWIVEL 20LTO
1	2	3	4	5	6	7	8	9	10						SIZE

BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

7 = Meter bar w/valve
(Integral 3/4" valve - relube)

BLOCK 3 - METER BAR SPREAD

2 = 6" spread with integral meter swivels

BLOCK 4 - END CONFIGURATION

2 = Rear center horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
D = Lockwing Thermal-Diffusion Zinc
E = Lockwing Thermal-Diffusion Zinc and Painted
P = Painted
L = Lockwing Black Cast Iron
R = Lockwing Painted

BLOCK 6 - OUTLET TYPE

B = FNPT integral
C = FNPT insulated O-ring union
D = FNPT insulated O-ring union (reducing NPT)
E = FNPT insulated flat gasket union (reducing NPT)
F = FNPT insulated flat gasket union
Q = Male 20LT meter thread
S = FNPT non-insulated O-ring union
U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap
A = Pos. A
C = Pos. C
H = Pos. A and C

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap
A = 1/8" NPT recessed hex plug
B = 1/8" NPT square head plug
C = 1/8" NPT no plug
D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
M = 1/8" NPT hex head plug
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE and TYPE

A = 10LT - 10 Light swivel with flat gasket seal
B = 20LT - 20 Light swivel with flat gasket seal
C = 20LTO - 20 Light swivel with O-ring seal
F = OEM - O-Emco swivel with flat gasket seal
G = OEMO - O-Emco swivel with O-ring seal
H = 1A - 1A Sprague swivel with flat gasket seal
J = 1AO - 1A Sprague swivel with O-ring seal

BLOCK 10 - SWIVEL SPECIAL

- = Standard swivel and nuts
D = Brass nuts (20LT only)

Cast Iron Meter Bars

Typical Installation

MULTIPLE METER MANIFOLDS



Meter Bar Gasket Repair Union

Outlet Size	Insulated End		Gasket	Black Nut	Thermal-Diffusion Zinc Nut	
	6301RB	6301RA				
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

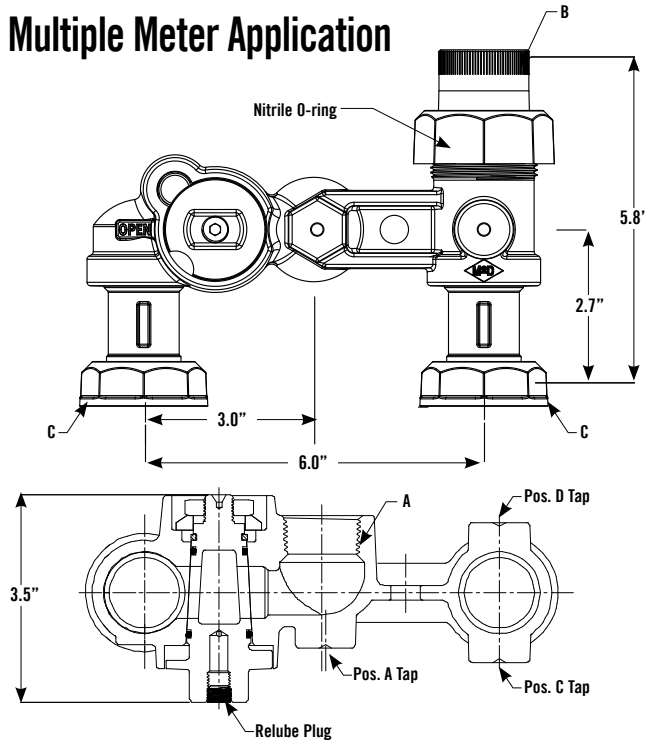
Outlet Size	Insulated End		O-ring	Black Nut	Thermal-Diffusion Zinc Nut	
	6302RB	6302RA				
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

Cast Iron Meter Bars with Integral Valve - 6722 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, 2 PSI, INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only. For CMMC multiple meter manifold applications.

Multiple Meter Application



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	*3/4" or 1"	10LT, 20LT, OEM, or 1A

*3/4" outlet obtained with reducing endpiece



FNPT x Insulated Union
with FNPT Tailpiece

(Black Cast Iron
Shown)

FINISH OPTIONS

- 6722- Black Cast Iron
 - 6722A Thermal-Diffusion Zinc
 - 6722C Thermal-Diffusion Zinc and Painted
 - 6722P Painted
- Taps available on all the above finish options.

High security lock design integral valve

With Relube Valve - This A.Y. McDonald Mfg. Co. Gas Valve may be re-lubricated in the full open or full closed position when the valve is pressurized or unpressurized. See page 12.

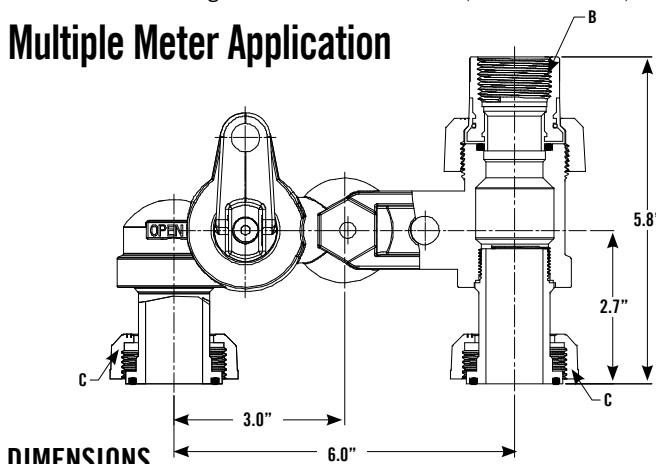
Integral swivels are NOT replaceable, they are factory installed with an O-ring and threadlocker.

Cast Iron Meter Bars with Integral Valve - 6722L Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, LOCKWING, 2 PSI, INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only. For CMMC multiple meter manifold applications

Multiple Meter Application



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	*3/4" or 1"	10LT, 20LT, OEM, or 1A

*3/4" outlet obtained with reducing endpiece



FNPT x Union

(Black Cast Iron
Shown)

FINISH OPTIONS

- 6722L Lockwing Black Cast Iron
 - 6722D Lockwing Thermal-Diffusion Zinc
 - 6722E Lockwing Thermal-Diffusion Zinc and Painted
 - 6722R Lockwing Painted
- Taps available on all the above finish options.
*Lockwing can be turned in both directions.

Cast Iron Meter Bars with Integral Valve - 6762 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, 2 PSI, CAST INTEGRAL SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6762-CCEB- 1x1 20LT means:

6	7	6	2	-	C	C	E	B	-	SPACE	1	X	1	SPACE	20LT
1	2	3	4	5	6	7	8	9	10		INLET		OUTLET		SWIVEL

BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

7 = Meter bar w/valve
(Integral 3/4" valve - relube)

BLOCK 3 - METER BAR SPREAD

6 = 6" spread with cast integral meter swivels

BLOCK 4 - END CONFIGURATION

2 = Rear center horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 6 - OUTLET TYPE

C = FNPT insulated O-ring union
D = FNPT insulated O-ring union (reducing NPT)
E = FNPT insulated flat gasket union (reducing NPT)
F = FNPT insulated flat gasket union
S = FNPT non-insulated O-ring union
U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap
A = Pos. A
C = Pos. C
H = Pos. A and C

See drawing on page 52 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap
A = 1/8" NPT recessed hex plug
B = 1/8" NPT square head plug
C = 1/8" NPT no plug
D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
M = 1/8" NPT hex head plug
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

BLOCK 9 - SWIVEL SIZE/TYPE

B = 20LT - 20 Light swivel with flat gasket seal
C = 20LTO - 20 Light swivel with O-ring seal
H = 1A - 1A Sprague swivel with flat gasket seal
J = 1AO - 1A Sprague swivel with O-ring seal

BLOCK 10 - SWIVEL SPECIAL

- = Standard swivel and nut
D = Brass nuts (20LT only)

Cast Iron Meter Bars



Meter Bar Gasket Repair Union

Outlet Size	Insulated		Thermal-Diffusion			
	6301RB	6301RA	End	Gasket	Black Nut	Zinc Nut
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

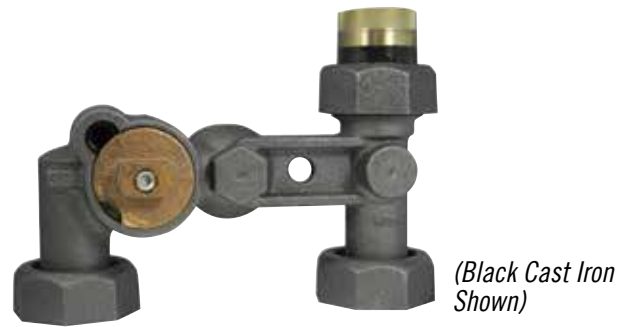
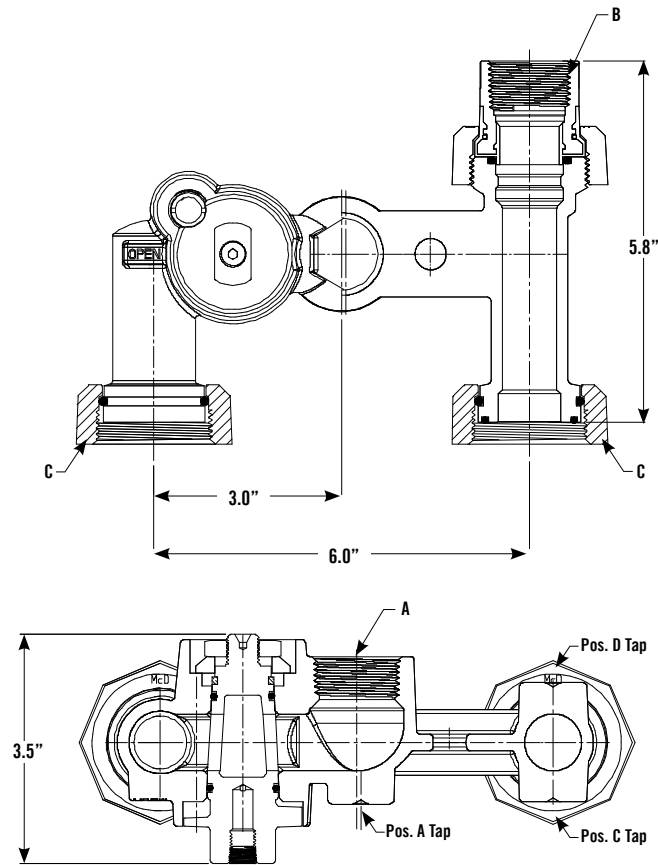
Outlet Size	Insulated		Thermal-Diffusion			
	6302RB	6302RA	End	O-ring	Black Nut	Zinc Nut
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

Cast Iron Meter Bars with Integral Valve - 6762 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, 2 PSI, CAST INTEGRAL SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only. For CMMC multiple meter manifold applications.

Multiple Meter Application



FNPT x Insulated Union with FNPT Tailpiece

FINISH OPTIONS

6762- Black Cast Iron

6762A Thermal-Diffusion Zinc

6762C Thermal-Diffusion Zinc and Painted

6762P Painted

Taps available on all the above finish options.

High security lock design integral valve

With Relube Valve - This A.Y. McDonald Mfg. Co. Gas Valve may be re-lubricated in the full open or full closed position when the valve is pressurized or unpressurized. See page 12.

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	*3/4" or 1"	1A or 20LT

*3/4" outlet obtained with reducing endpiece

Cast Iron Meter Bars with Integral Valve - 6814 Series

HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, LOCKWING, 2 PSI, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6814-FAB 1x1x1 means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

8 = Meter bar w/valve
(Integral 1" valve - no relube)

BLOCK 3 - METER BAR SPREAD

1 = 6" spread

BLOCK 4 - END CONFIGURATION

4 = Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT
C = FNPT insulated O-ring union
E = FNPT insulated flat gasket union (reducing NPT)
F = FNPT insulated flat gasket union
S = FNPT non-insulated O-ring union
U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap
A = Pos. A
B = Pos. B
C = Pos. C
D = Pos. D
E = Pos. A and B
H = Pos. A and C
J = Pos. A and D
K = Pos. B and C
L = Pos. B and D
N = Pos. C and D
Q = Pos. A, B, and C
R = Pos. A, B, and D
T = Pos. A, C, and D
W = Pos. B, C, and D
X = Pos. A, B, C, and D

See drawing on page 52 for positions

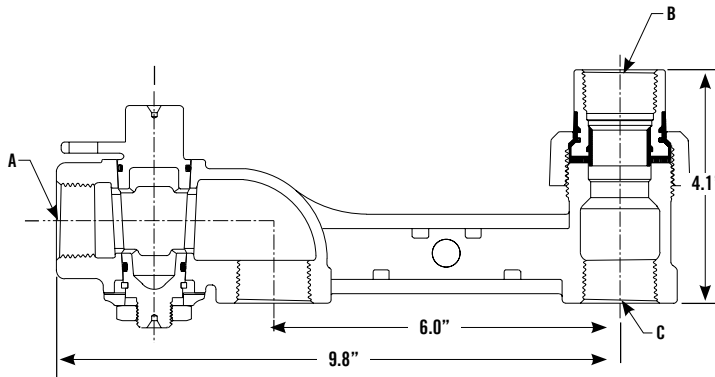
BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap
A = 1/8" NPT recessed hex plug
B = 1/8" NPT square head plug
C = 1/8" NPT no plug
D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
M = 1/8" NPT hex head plug
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars with Integral Valve - 6814 Series

HORIZONTAL INLET AND VERTICAL OUTLET, FLAT HEAD, LOCKWING, 2 PSI, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.



FNPT x Insulated Union with FNPT Tailpiece
(Black Cast Iron Shown)

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	3/4" or 1"

*3/4" outlet obtained with reducing endpiece

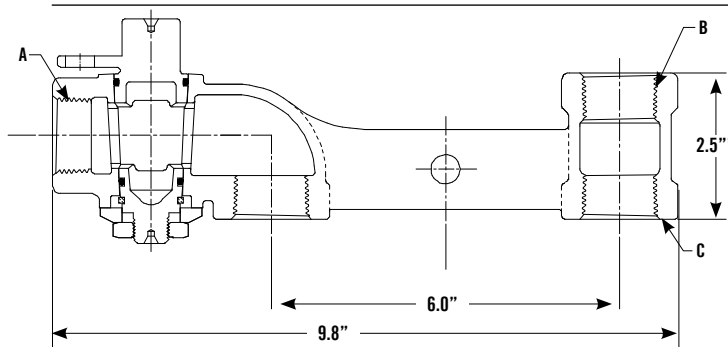
Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803



FNPT x FNPT
(Black Cast Iron Shown)

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C Swivel Nut Size
6"	3/4" or 1"	3/4" or 1"	3/4" or 1"

FINISH OPTIONS

6814- Black Cast Iron

6814A Thermal-Diffusion Zinc

6814C Thermal-Diffusion Zinc and Painted

6814P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 94.

For other options, see page 94.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

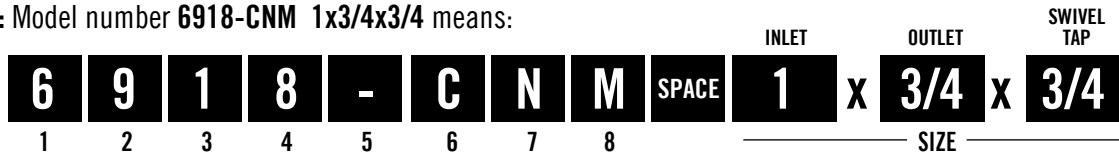
Cast Iron Meter Bars with Integral Valve - 6918 Series

VERTICAL INLET AND VERTICAL OUTLET, FLAT HEAD, LOCKWING, 2 PSI, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Cast Iron Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between meter bars without built-in swivels, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6918-CNM 1x3/4x3/4 means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

9 = Meter bar w/valve
(3/4" union valve)

BLOCK 3 - METER BAR SPREAD

1 = 6" spread

BLOCK 4 - END CONFIGURATION

8 = Vertical inlet x vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 6 - OUTLET TYPE

B = FNPT
C = FNPT insulated O-ring union
F = FNPT insulated flat gasket union
S = FNPT non-insulated O-ring union
U = FNPT non-insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

- = No tap
C = Pos. C
D = Pos. D
N = Pos. C and D

See drawing on page 52 for positions

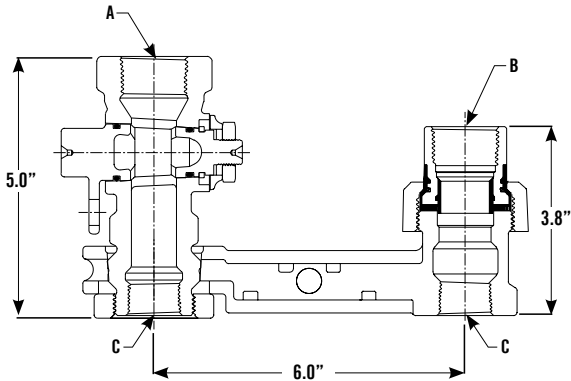
BLOCK 8 - TAP SIZE/PLUG TYPE

- = No tap
A = 1/8" NPT recessed hex plug
B = 1/8" NPT square head plug
C = 1/8" NPT no plug
D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
M = 1/8" NPT hex head plug
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
Q = 1/4" NPT temperature/pressure plug (Pete's Plug)

Cast Iron Meter Bars with Integral Valve - 6918 Series

VERTICAL INLET AND VERTICAL OUTLET, FLAT HEAD, LOCKWING, 2 PSI, NO ATTACHED SWIVELS

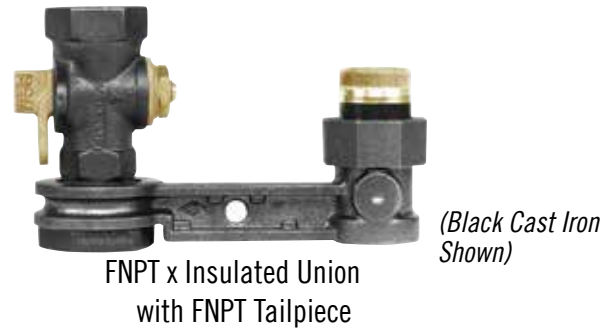
These bars are designed for use with natural, manufactured, and LP gases only.



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6"	1"	*3/4" or 1"	3/4"

*3/4" outlet obtained with reducing endpiece



(Black Cast Iron Shown)



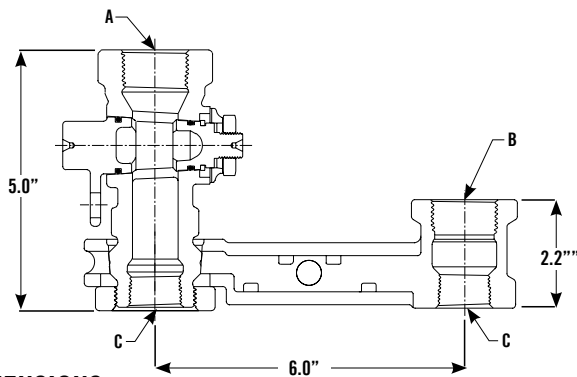
Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



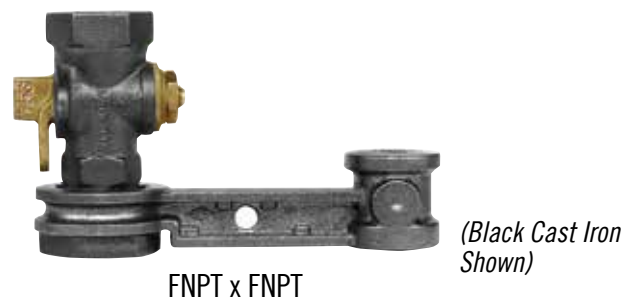
Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803



DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B FNPT Outlet	C FNPT Swivel Tap Size
6"	1"	1"	3/4"



(Black Cast Iron Shown)

FINISH OPTIONS

6918- Black Cast Iron

6918A Thermal-Diffusion Zinc

6918C Thermal-Diffusion Zinc and Painted

6918P Painted

Taps available on all the above finish options.

NOTE:

For side taps, see pages 52 and 96.

For other options, see page 96.

All dimensions shown are for reference only. Contact factory if specific dimensional values or tolerances are required.

BYPASS THE TROUBLES DON'T INTERRUPT YOUR CUSTOMERS.

RESIDENTIAL AND COMMERCIAL BYPASS OPTIONS

When it comes to bypass technology, A.Y. McDonald Mfg. Co. is ahead of the game. Gone are the days of scheduling and rescheduling appointments, relighting pilot lights, and all the other pains that come with gas meter change-outs. Make you and your customer's lives easier with A.Y. McDonald Mfg. Co.'s many residential and commercial bypass solutions!



**WE TAKE CARE OF CUSTOMERS
BETTER THAN ANYONE ELSE.**

Let us make your life easier!

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WITHOUT
YOU
THERE IS
NO **US.**



Bypass Meter Bars

November 2025



Bypass Meter Bars - 6410 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, 2 INTEGRAL PLUG VALVES, FLAT HEAD, 5 PSI, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Bypass Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between regular meter bars, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6410-EFD 3/4x3/4 1 means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

4 = Bypass Meter bar w/valve
(Two integral 3-Port valves - relube)

BLOCK 3 - METER BAR SPREAD

1 = 6" spread

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 6 - OUTLET END TYPE

C = FNPT insulated O-ring union
D = FNPT insulated O-ring union (reducing NPT)
E = FNPT insulated flat gasket union (reducing NPT)
F = FNPT insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

F = Pos. E Standard

See drawing on page 101 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
Q = 1/4" NPT temperature/pressure plug (Pete's Plug)



6410 Series
Instruction Sheet



Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

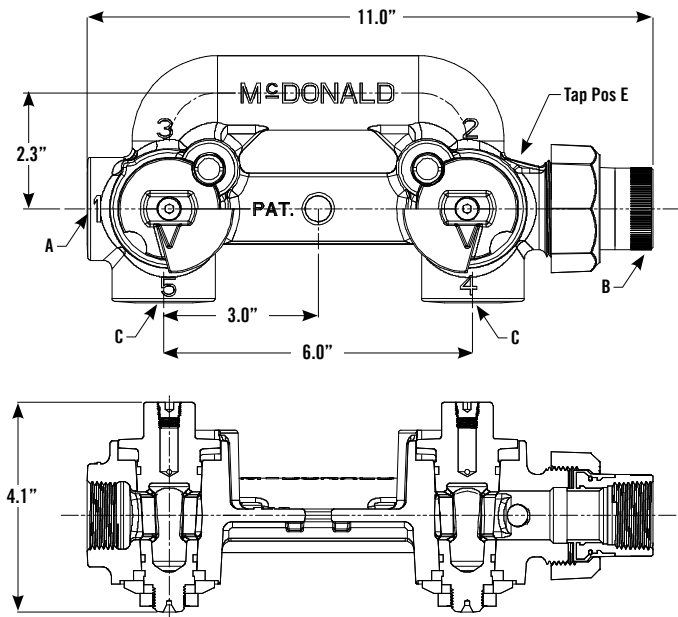
Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

Bypass Meter Bars - 6410 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, 2 INTEGRAL PLUG VALVES, FLAT HEAD, 5 PSI, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.

Residential Meter Application



FNPT x Insulated Union with FNPT Tailpiece

(Black Cast Iron Shown)

FINISH OPTIONS

6410- Black Cast Iron

6410A Thermal-Diffusion Zinc

6410C Thermal-Diffusion Zinc and Painted

6410P Painted

Taps available on all the above finish options.

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivel Tap Size
6"	3/4" or 1"	*3/4" or 1"	3/4" or 1"

*3/4" outlet obtained with reducing endpiece

High security lock design integral valve

With Relube Valve - This A.Y. McDonald Mfg. Co. Gas Valve may be re-lubricated in the full open or full closed position when the valve is pressurized or unpressurized. See page 12.

For other bypass valve options see pages 26-41.

IT'S ABOUT TIME!

Bypass Systems That Make Sense.

Full Flow Even in Bypass Mode

- No interruption in service or reduction in flow capacity.
- No loss of pilot lights.
- Scheduling, re-lights, and associated cost are a thing of the past.
- Meter change-outs can be performed anytime, 12 months a year.

Safe - Fast - Secure

- No need for additional hoses, regulators, bottles, or any special tools.
- Your gas supply is always ready and regulated to the correct pressure.
- A few turns of the valve and your bypass is complete.
- Industry proven locking design for theft protection.
- Performance testing proven at **gti**.



See our video on website for operation of the Bypass meter bar.

6410 Residential Meter Bar



Check Out The Video

It is about time, and time is money. If you want a real return on your investment \$\$, call us today for more information.

Bypass Meter Bars

Bypass Meter Bars - 6480 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, 2 INTEGRAL BALL VALVES, FLAT HEAD, 25 PSI, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Bypass Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between regular meter bars, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6480-CCD 1 1/2x1 1/2x1 1/2** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

4 = Bypass meter bar w/valve
(Two integral 3-Port valves)

BLOCK 3 - METER BAR SPREAD

8 = 8 1/4" spread

BLOCK 4 - END CONFIGURATION

0 = Horizontal inlet by horizontal outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 6 - OUTLET END TYPE

C = FNPT insulated O-ring union

BLOCK 7 - TAP LOCATION(S)

C = Pos. C Standard

See drawing on page 103 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

B = 1/8" NPT Square head plug
D = 1/4" NPT recessed hex plug
F = 1/4" NPT no plug
P = 1/4" NPT temperature/pressure plug (Texas Fairfax)
Q = 1/4" NPT temperature/pressure plug (Pete's Plug)



6480 Series
Instruction Sheet



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844
1 1/2"	4821-068	4821-070	4811-658	3134-227	4820-262	4811-848

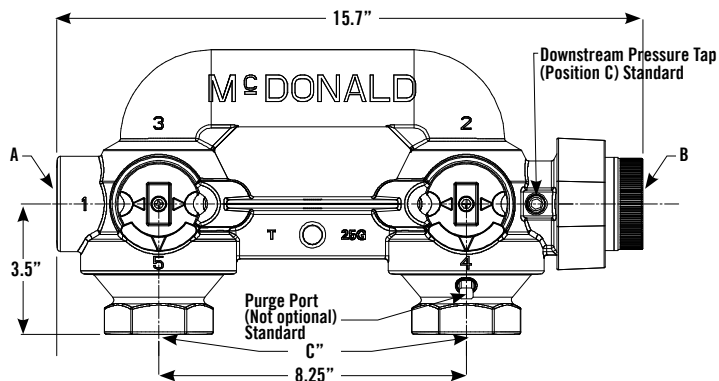
O-ring included with insulated end

Bypass Meter Bars - 6480 Series

HORIZONTAL INLET AND HORIZONTAL OUTLET, 2 INTEGRAL BALL VALVES, FLAT HEAD, 25 PSI, NO ATTACHED SWIVELS

These bars are designed for use with natural, manufactured, and LP gases only.

Commercial Bypass Meter Bar



FNPT x Insulated Union with FNPT Tailpiece

FINISH OPTIONS

- 6480-** Black Cast Iron
 - 6480A** Thermal-Diffusion Zinc
 - 6480C** Thermal-Diffusion Zinc and Painted
 - 6480P** Painted
- Taps available on all the above finish options.

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivels Tap Size
8.25"	1 1/4" or 1 1/2"	1 1/4" or 1 1/2"	1 1/4" or 1 1/2"

High security lock design integral valve

For other bypass valve options see pages 26-41.

6480 Commercial Bypass Meter Bar

IT'S ABOUT TIME!
Bypass Systems That Make Sense.

Full Flow Even in Bypass Mode

- No interruption in service or reduction in flow capacity.
- No loss of pilot lights.
- Scheduling, re-lights, and associated cost are a thing of the past.
- Meter change-outs can be performed anytime, 12 months a year.

Safe - Fast - Secure

- No need for additional hoses, regulators, bottles, or any special tools.
- Your gas supply is always ready and regulated to the correct pressure.
- A few turns of the valve and your bypass is complete.
- Industry proven locking design for theft protection.
- Performance testing proven at **gti**.



See our video on website for operation of the Bypass meter bar.



Check Out The Video

It is about time, and time is money. If you want a real return on your investment \$\$, call us today for more information.

Bypass Meter Bars - 6312 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, 2 INTEGRAL PLUG VALVES, FLAT HEAD, 5 PSI, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Bypass Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between regular meter bars, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number 6312-FFD 1x1 1 means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

3 = Bypass meter bar w/valve
(one 1" 2 Port and one Integral 3 Port Valves - Relube)

BLOCK 3 - METER BAR SPREAD

1 = 6" spread

BLOCK 4 - END CONFIGURATION

2 = Rear center Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 6 - OUTLET END TYPE

C = FNPT insulated O-ring union
D = FNPT insulated O-ring union (reducing NPT)
E = FNPT insulated flat gasket union (reducing NPT)
F = FNPT insulated flat gasket union

BLOCK 7 - TAP LOCATION(S)

F = Pos. E Standard
G = Pos. A and E

See drawing on page 105 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug
M = 1/8" NPT hex head plug



6312 Series
Instruction Sheet



Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



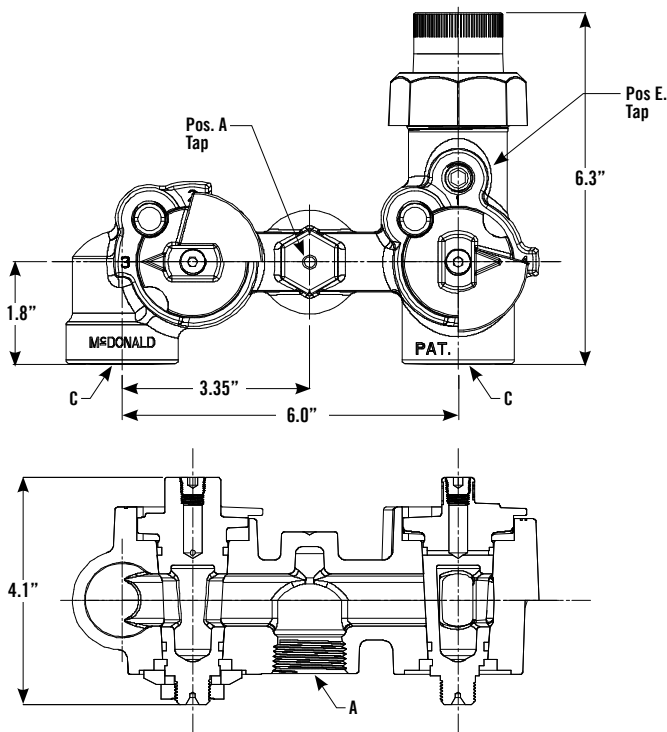
Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803

Bypass Meter Bars - 6312 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, 2 INTEGRAL PLUG VALVES, FLAT HEAD, 5 PSI, NO ATTACHED SWIVELS
 These bars are designed for use with natural, manufactured, and LP gases only. For CMMC multiple meter manifold applications.

Multiple Meter Application



(Black Cast Iron Shown)

FNPT x Insulated Union with FNPT Tailpiece

FINISH OPTIONS

- 6312- Black Cast Iron
 - 6312A Thermal-Diffusion Zinc
 - 6312C Thermal-Diffusion Zinc and Painted
 - 6312P Painted
- Taps available on all the above finish options.

High security lock design integral valve
With Relube Valve - This A.Y. McDonald Mfg. Co. Gas Valve may be re-lubricated in the full open or full closed position when the valve is pressurized or unpressurized. See page 12.
 For other bypass valve options see pages 26-41.

DIMENSIONS

Meter Bar Spread	A FNPT Inlet	B Insulated Union with FNPT Tailpiece	C Swivels Tap Size
6"	3/4" or 1"	*3/4" or 1"	3/4" or 1"

*3/4" outlet obtained with reducing endpiece

IT'S ABOUT TIME! Bypass Systems That Make Sense.

Full Flow Even in Bypass Mode

- No interruption in service or reduction in flow capacity.
- No loss of pilot lights.
- Scheduling, re-lights, and associated cost are a thing of the past.
- Meter change-outs can be performed anytime, 12 months a year.

Safe - Fast - Secure

- No need for additional hoses, regulators, bottles, or any special tools.
- Your gas supply is always ready and regulated to the correct pressure.
- A few turns of the valve and your bypass is complete.
- Industry proven locking design for theft protection.
- Performance testing proven at **gti**.

6312 Multiple Meter Manifold Bypass Bar



See our video on website for operation of the Bypass meter bar.



Check Out The Video

It is about time, and time is money. If you want a real return on your investment \$\$, call us today for more information.

Bypass Meter Bars - 6282 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, 2 INTEGRAL BALL VALVES, FLAT HEAD, 25 PSI, NO ATTACHED SWIVELS

A.Y. McDonald Mfg. Co. Bypass Meter Bars can be ordered to fit your requirements. Select the features you need from list below and build your own ordering number. Please note the difference in numbers between regular meter bars, and meter bars with built-in swivels. Meter bars with swivels have two extra blocks before the size to select the size and type of swivels.

TO ORDER:

Example: Model number **6282-CCD 1 1/4x 1 1/4 1 1/4** means:



BLOCK 1 - METER BAR

6 = All meter bars

BLOCK 2 - METER BAR TYPE

2 = Bypass meter bar w/valve
(Two integral 2 port valves)

BLOCK 3 - METER BAR SPREAD

8 = 8 1/4" spread

BLOCK 4 - END CONFIGURATION

2 = Rear center Horizontal inlet by vertical outlet

BLOCK 5 - FINISH

- = Black Cast Iron
A = Thermal-Diffusion Zinc
C = Thermal-Diffusion Zinc and Painted
P = Painted

BLOCK 6 - OUTLET END TYPE

C = FNPT insulated O-ring union

BLOCK 7 - TAP LOCATION(S)

C = Pos. C Standard

See drawing on page 107 for positions

BLOCK 8 - TAP SIZE/PLUG TYPE

D = 1/4" NPT recessed hex plug
E = 1/4" NPT square head plug
F = 1/4" NPT no plug



6282 Series
Instruction Sheet



Meter Bar O-ring Repair Union

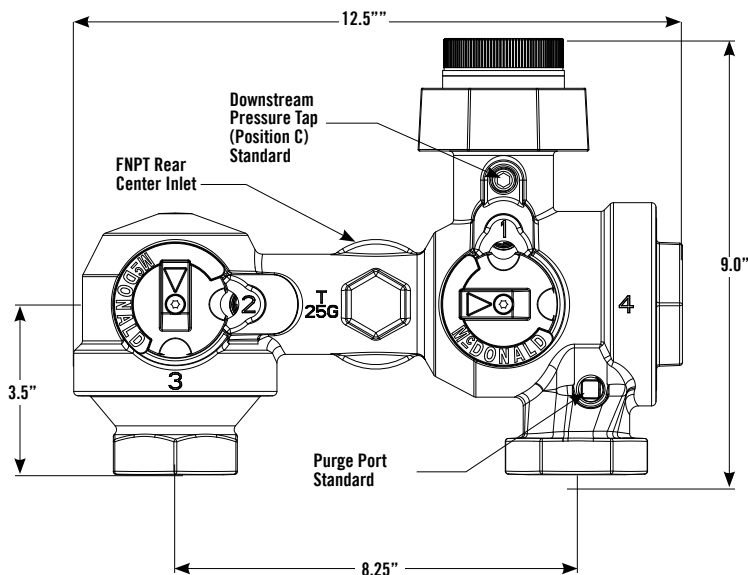
Outlet Size	Insulated		Thermal-Diffusion	
	6302RB	6302RA	End O-ring	Black Nut Zinc Nut
1 1/4"	4821-083	4821-085	4811-807	3134-224 4810-989 4811-844
1 1/2"	4821-068	4821-070	4811-658	3134-227 4820-262 4811-848

O-ring included with insulated end

Bypass Meter Bars - 6282 Series

REAR CENTER HORIZONTAL INLET AND VERTICAL OUTLET, 2 INTEGRAL BALL VALVES, FLAT HEAD, 25 PSI, NO ATTACHED SWIVELS
 These bars are designed for use with natural, manufactured, and LP gases only.

Multiple Meter Application



FNPT x Insulated Union with FNPT Tailpiece

FINISH OPTIONS

- 6282- Black Cast Iron
 - 6282A Thermal-Diffusion Zinc
 - 6282C Thermal-Diffusion Zinc and Painted
 - 6282P Painted
- Taps available on all the above finish options.

DIMENSIONS

Meter Bar Spread	FNPT Inlet	Insulated Union with FNPT Tailpiece	Swivels Tap Size
8 1/4"	1 1/4" or 1 1/2"	1 1/4" or 1 1/2"	1 1/4" or 1 1/2"

High security lock design integral valve

*For other bypass valve options see pages 26-41.

IT'S ABOUT TIME! Bypass Systems That Make Sense.

Full Flow Even in Bypass Mode

- No interruption in service or reduction in flow capacity.
- No loss of pilot lights.
- Scheduling, re-lights, and associated cost are a thing of the past.
- Meter change-outs can be performed anytime, 12 months a year.

Safe - Fast - Secure

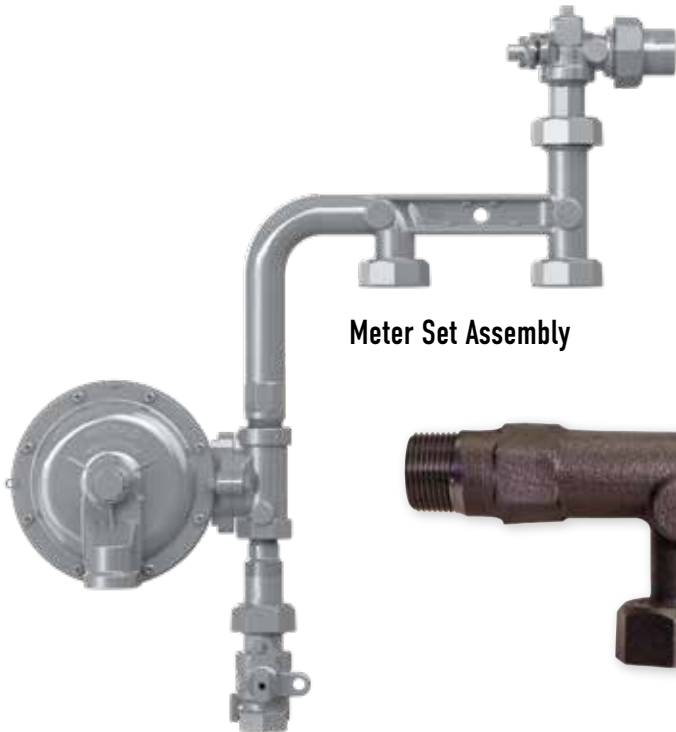
- No need for additional hoses, regulators, bottles, or any special tools.
- Your gas supply is always ready and regulated to the correct pressure.
- A few turns of the valve and your bypass is complete.
- Industry proven locking design for theft protection.
- Performance testing proven at **gti**

**It is about time, and time is money.
 If you want a real return on your investment \$\$, call us today for more information.**

MAKE YOUR JOB EASIER WITH A.Y.

NATURAL GAS PRODUCTS BUILT TO LAST

As a natural gas leader, A.Y. McDonald Mfg. Co. is known throughout the industry for our wide variety of meter bars, valves, accessories, bypass solutions, and – most of all – meter set assemblies. With a product line that just keeps growing, consider us your go-to provider for all natural gas distribution products!



Meter Set Assembly



Ball Valve



MNPT Inlet Meter Bar



Angle Ball Valve



Commercial Bypass Meter Bar - Rear Center



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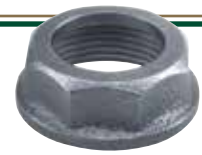
WITHOUT
YOU
THERE IS
NO **US.**



Accessories

November 2025





Accessories

METER NUTS

Meter Nuts are used to connect straight and/or offset swivel gas fittings to the gas meter. Manufactured per ANSI B109.1.

Black Part #	Galvanized Part #	Meter Size	Threads Per Inch	I.D. DIM. In Inches	Carton PCS/WT	Black Part #	Galvanized Part #	Meter Size	Threads Per Inch	I.D. DIM. In Inches	Carton PCS/WT
4815-671	4815-673	5LT	12	0.88"	100/13	4815-566	4815-576	45LT	11 1/2	1.90"	100/42
4815-501	4815-517	10LT	11 1/2	1.16"	100/18	4815-624	4815-626	#3 / #4	11 1/2	2.00"	50/37
4815-507	4815-523	20LT	11 1/2	1.42"	100/22	4815-830	4815-832	60LT	11 1/2	1.90"	50/24
4815-543	4815-557	30LT	11 1/2	1.69"	100/30	4815-806	4815-808	5A	8	2.90"	20/36
4815-513	4815-529	1A	12	1.34"	100/24	4815-700		100LT	11 1/2	2.40"	20/26
4815-564	4815-574	OEM Pittsburgh	11 1/2	1.34"	100/24						

METER PLUGS

Meter Plugs are used to prevent the unintentional flow of gas from meter sets without meters attached. They also prevent insects and other foreign material from entering the gas piping. They are available as shown or can be supplied with 1/8" or 1/4" pipe taps in the center of the hex, with or without standard pipe plugs.



Not Tapped	1/8" Tap* Part #	1/4" Tap* Part #	1/4" Tap Part #	Meter Size	Threads Per Inch	Carton PCS/WT
4820-181	4820-000	4820-010	4820-195	10LT	11 1/2	100/21
4820-180	4820-002	4820-198		1A	12	100/26
4820-182	4820-001	4820-009	4820-196	20LT	11 1/2	100/30
4815-663	4815-750	4815-749	4820-014	30LT	11 1/2	100/41
4815-665	4815-769	4820-199		45LT	11 1/2	100/48

*Without standard pipe plugs.

REPLACEMENT PIPE PLUGS



Part #	Replacement Plug Description
4810-232	RELUBE PLUG 1/8 NPT PLUG VALVE HEX SOCKET DRYSEAL
4810-909	PIPE PLUG 1/8 NPT RECESSED HEX PLATED W/VIBRASEAL
3126-114	PIPE PLUG 1/8 NPT SQUARE HEAD PLATED W/VIBRASEAL
4822-250	PIPE PLUG 1/4 NPT RECESSED HEX PLATED W/VIBRASEAL
3126-126	PIPE PLUG 1/4 NPT SQUARE HEAD PLATED W/VIBRASEAL

Part #	Replacement Plug Description
4823-284	PIPE PLUG 3/8 NPT RECESSED HEX PLATED W/VIBRASEAL
3126-862	PIPE PLUG 3/8 NPT SQUARE HEAD PLATED W/VIBRASEAL
3126-865	PIPE PLUG 3/4 NPT RECESSED HEX PLATED W/VIBRASEAL
3126-108	PIPE PLUG 3/4 NPT SQUARE HEAD PLATED W/VIBRASEAL

Pipe plugs are used to seal pressure ports on valves and meter bars. The following list can be used for replacing lost or damaged plugs in the field. The relube screw is used for the grease port in the plug valves.

GASKETS FOR SWIVELS

Gaskets are used to seal malleable iron offset or straight swivel gas fittings on the face of the gas meter when tightening the swivel nut on meter thread or meter nut plug. These rubber gaskets, made of Buna-N or neoprene, are resistant to the action of natural, manufactured, and LP gases. The inside diameter is intended to lightly grip the pilot O.D. of the fitting to minimize problems during assembly of the swivel nut to the meter.



Part #	Size	I.D. DIM. In Inches	O.D. DIM. In Inches	Thickness	Carton PCS/WT
4820-197	5LT	.72"	.94"	.109"	100/10
4820-184	10LT	.97"	1.25"	.109"	100/30
4820-185	1A and OEM	.97"	1.41"	.109"	100/40
4820-186	20LT	1.29"	1.60"	.109"	100/40
4820-187	30LT	1.47"	1.88"	.109"	50/25

Part #	Size	I.D. DIM. In Inches	O.D. DIM. In Inches	Thickness	Carton PCS/WT
4820-188	45LT	1.60"	2.00"	.109"	50/30
4820-190	#3/#4	1.47"	2.13"	.109"	50/40
4820-191	5A	2.20"	3.23"	.109"	50/40
4820-192	60LT	1.88"	2.20"	.109"	50/30

METER ADAPTERS

The McDonald Meter Adapters are used to efficiently convert from one meter size to another. Each adapter comes with a flat gasket seal on the Female end. In addition, each fitting is zinc plated for corrosion protection. The zinc is applied after machining so the threads are protected. If you are converting meter sizes in your system, consider these fittings for a cost effective approach. Manufactured per ANSI B109.1.



Part #	Male Meter Thread (converting from)	Female Meter Thread (converting to)	Carton PCS/WT
4820-007	10LT	20LT	50/30
4820-008	1A	10LT	50/18
4820-013	10LT	1A	50/17

LT SERIES - METER ADAPTERS

LT series Meter Adapters are used to efficiently convert from one meter size to another. Each adapter comes with a flat gasket seal on the female end. Each adapter is zinc plated and E-Coated grey for corrosion protection.



CF Part #	Male	Female	CF Part #	Male	Female
LT-1A-10-HEX	1A	10LT	LT-20-1A-HEX	20LT	1A
LT-1A-20-HEX	1A	20LT	LT-20-10-HEX	20LT	10LT
LT-1A-30-HEX	1A	30LT	LT-20-30-HEX	20LT	30LT
LT-10-1A-HEX	10LT	1A	LT-30-1A-HEX	30LT	1A
LT-10-20-HEX	10LT	20LT	LT-30-10-HEX	30LT	10LT
LT-10-30-HEX	10LT	30LT	LT-30-20-HEX	30LT	20LT

Accessories

NON-INSULATED SWIVELS, 25 PSI

Used with meter nuts to connect to gas meter. Manufactured per ANSI B109.1.

	Description	Black	Galvanized	Length	Thread Size	Carton PCS/WT
5LT	5LT 3/8" Offset	4815-667		2 1/8"	1/2" MNPT	100/17
	10LT Straight	4815-503	4815-519	2 5/16"	3/4" MNPT	100/29
10LT	10LT 1" Offset	4815-505	4815-521	3 1/8"	3/4" MNPT	100/39
	10LT 1 1/4" Offset	4815-675		3 1/4"	3/4" MNPT	100/44
	10-5LT 3" Offset	4815-679	4815-681	4"	1/2" MNPT	50/30
1A	10LT Elbow	4815-738	4815-740		3/4" MNPT	100/42
	1A Straight	4815-537	4815-551	2 1/8"	3/4" MNPT	100/33
	1A Straight	4815-539	4815-553	2 13/32"	1" MNPT	100/37
	1A 1" Offset	4815-515	4815-531	2 11/16"	3/4" MNPT	100/39
20LT	1A Spud		4815-549	1 1/8"	3/4" FNPT	200/36
	20LT Straight	4815-509	4815-525	2 3/4"	1" MNPT	100/47
	20LT Straight		4815-864	4"	1" MNPT	
	20LT 1" Offset	4815-511	4815-527	3 1/2"	1" MNPT	100/57
	20LT 1 1/4" Offset	4815-584		3 25/32"	1" MNPT	50/34
	20-10LT 1 5/8" Offset	4815-683		3 3/4"	3/4" MNPT	50/31
30LT	20-5LT 3" Offset	4815-541		3 1/2"	1/2" MNPT	50/34
	20-10LT 3 5/8" Offset	4815-712		3 1/2"	3/4" MNPT	50/44
	20-10LT Straight	4815-730	4815-732	2 3/8"	3/4" MNPT	100/42
	20LT Elbow		4815-693		1" MNPT	50/33
45LT	30LT Straight	4815-545	4815-559	2 29/32"	1 1/4" MNPT	50/30
	30LT 1" Offset	4815-547	4815-561	3 3/4"	1 1/4" MNPT	50/42
	30LT 1 1/2" Offset	4815-871	4815-872	3 3/4"	1 1/4" MNPT	50/37
	30-20LT Straight	4815-687	4815-689	2 27/32"	1" MNPT	100/50
	30-20LT 1 1/4" Offset	4815-616	4815-618	3 25/32"	1" MNPT	50/39
#3 / #4	30LT-10LT 3" Offset	4815-840	4815-842	4"	3/4" MNPT	40/28
	45LT Straight	4815-568	4815-578	2 15/16"	1 1/2" MNPT	50/38
	45LT 1" Offset	4815-570	4815-580	4"	1 1/2" MNPT	50/53
	45LT 1 5/8" Offset	4815-911	4815-912	3 3/4"	1 1/2" MNPT	25/29
	45LT 2 1/2" Offset	4815-572	4815-582	5 1/2"	1 1/2" MNPT	25/38
60LT	45-30LT Straight	4815-734	4815-736	3 7/8"	1 1/4" MNPT	50/51
	45-30LT 1 5/8" Offset	4815-852	4815-854	4"	1 1/4" MNPT	30/26
5A	#3/#4 Straight	4815-856	4815-857	3 1/8"	1 1/2" MNPT	50/40
	#3/#4 4 1/2" Offset		4815-908	8 9/16"	1 1/2" MNPT	
100LT	60LT 1" Offset	4815-879	4815-880	5 3/8"	1 1/2" MNPT	25/30
	60LT 4 1/2" Offset	4815-884	4815-886	8 3/4"	1 1/2" MNPT	12/32
	5A Straight Spud	4815-810		2 1/8"	2" FNPT	25/30
	100LT Straight	4815-696	4815-698	3 3/4"	2" MNPT	40/60



Straight



Offset



Spud



Elbow



Straight



Spud

Accessories

INSULATED SWIVELS, 25 PSI

Used with meter nuts to connect to gas meter. Manufactured per ANSI B109.1.

All insulated swivels are zinc plated for corrosion protection. The zinc is applied after machining so the threads are also protected.

	Description	Zinc	Length	Thread Size	Carton PCS/WT
1A	1A Spud	4815-723	1"	3/4" FNPT	72/17
	1A Straight	4815-755	2 3/8"	3/4" MNPT	72/22
	1A Straight	4815-760	2 3/8"	1" MNPT	144/
	1A 1" Offset	4815-765	2 3/4"	3/4" MNPT	72/
20LT	20LT Straight	4815-746	2 3/4"	1" MNPT	72/
	20LT 1 1/4" Offset	4815-748	3 11/16"	1" MNPT	30/
	20-10LT Spud	4815-779	1 1/4"	3/4" FNPT	144/
30LT	30LT Straight	4815-796	3"	1 1/4" MNPT	50/
	30-20LT Straight	4815-786	2 7/8"	1" MNPT	72/
45LT	45LT Straight	4815-882	2 15/16"	1 1/2" MNPT	50/

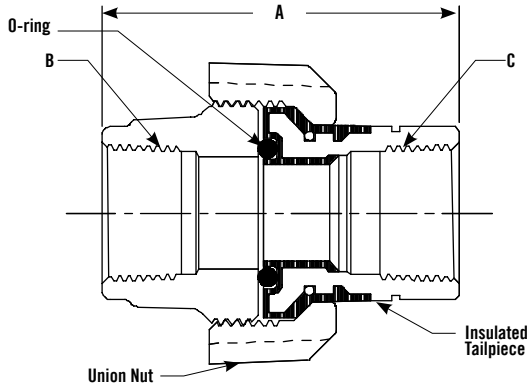
Accessories

3 Part Unions - 6300 Series

FNPT OR MNPT INSULATED UNION, 300 PSI

Designed to prevent electrolysis or other corrosive effects in 3/4" through 2" gas service lines. They are resistant to most chemical substances, including gas, water, and petroleum oils at normal temperatures. Meets ANSI B1.20.1 standards.

FNPT



(Black Cast Iron Shown)

6300 - DIMENSIONS

Insulated O-ring Union Outlet

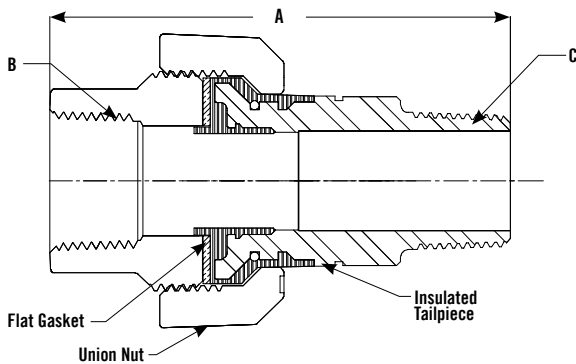
6300B Part #	6300A Part #	Size	A Length	B FNPT	C FNPT
4821-000	4821-087	3/4"	2.7	3/4"	3/4"
4821-008	4821-088	1"	2.9	1"	1"
4821-031	4821-089	1 1/4"	3.1	1 1/4"	1 1/4"
4821-038	4821-090	1 1/2"	3.3	1 1/2"	1 1/2"
4821-032	4821-091	2"	3.3	2"	2"

6301 - DIMENSIONS

Insulated Flat Gasket Union Outlet - Black

Part #	Size	A Length	B FNPT	C FNPT
4821-001	3/4"	2.7	3/4"	3/4"
4821-009	1"	2.9	1"	1"

Male



(Black Cast Iron Shown)

6310 - DIMENSIONS

Insulated O-ring Union Outlet - Black

Part #	Size	A Length	B FNPT	C MNPT
4821-002	3/4"	3.5	3/4"	3/4"
4821-010	1"	3.9	1"	1"

6311 - DIMENSIONS

Insulated Flat Gasket Union Outlet - Black

Part #	Size	A Length	B FNPT	C MNPT
4821-003	3/4"	3.5	3/4"	3/4"
4821-011	1"	3.9	1"	1"

Accessories

Repair Unions - 6300R Series
FNPT INSULATED TAILPIECE, 150 PSI

Union Nut - FNPT



Valve O-ring Repair Union

Valve Size	6300RB	6300RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-004	4821-052	4811-599	3134-212	4822-356	4822-474
1"	4821-056	4821-058	4822-456	3134-217	4810-987	4811-803
1 1/4"	4821-059	4821-061	4811-807	3134-224	4810-989	4811-844
2"	4821-062	4821-064	4811-592	3134-231	4811-581	4811-846

O-ring included with insulated end



Meter Bar Gasket Repair Union

Outlet Size	6301RB	6301RA	Insulated End	Gasket	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-005	4821-073	4811-623	4822-222	4822-356	4822-474
1"	4821-013	4821-076	4822-404	4822-223	4810-987	4811-803
1" x 3/4"	4821-077	4821-079	4822-325	4822-223	4810-987	4811-803



Meter Bar O-ring Repair Union

Outlet Size	6302RB	6302RA	Insulated End	O-ring	Black Nut	Thermal-Diffusion Zinc Nut
3/4"	4821-080	4821-082	4811-599	3134-212	4822-356	4822-474
1"	4821-065	4821-067	4822-404	3134-216	4810-987	4811-803
1 1/4"	4821-083	4821-085	4811-807	3134-224	4810-989	4811-844
1 1/2"	4821-068	4821-070	4811-658	3134-227	4820-262	4811-848

O-ring included with insulated end except 1"

Meter Bar Brackets

Meter Bar Brackets need to be durable and withstand the elements of environmental conditions for many years into the future. They are manufactured from heavy 9 gauge, hot rolled steel for durability and feature a gray, polyester powder-coated surface for superior corrosion resistance.



Part No.	Model	Description	Size	WT.
4826-218	649-T-44-	Bracket Standard Meter Bar 2.0 Wide	Standard Meter Bar	1.5
4826-219	649-T-44D	Bracket 6480 Meter Bar 2.9 Wide	6480	2.3

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A.Y. McDonald American Meter Regulators

November 2025



SR100 Series Residential Regulator

Brief Information

Application: The compact, high capacity SR113 service regulator is designed for residential or light commercial/industrial applications using various hydrocarbon or other non-corrosive gases.

Control: A comprehensive range of springs is available. The outlet pressure can be easily and accurately adjusted by turning the spring adjustment unit located under the top cap. The wide capacity range provides the ability to standardize on varying applications. Full lockup capability provides assurance that downstream pressure will not build up during no-flow situations. Full capacity relief provides safety during abnormal overpressure occurrences.



Technical Data:

Inlet Pressures up to 125 PSIG
 Outlet Pressures: 6" w.c. to 2 PSIG.

Features & Benefits

Main Features

- Outlet pressure ranges available 6" w.c. up to 2 PSIG
- Temperature range: -20°F to +150°F (-30°C to +65°C)
- Variety of interchangeable orifices
- Cast Iron Valve Body Sizes 3/4" and 1"; available in 90 degree (right angle), 180 degree (straight) and offset configurations.
- Threaded connections meet ANSI/ASME B1.20.1 or BS 21/EN 10226.
- Capacities through 2500 SCFH
- Full capacity internal relief valve

- 3/4" or 1" NPT threaded vents
- Molded Diaphragm provides more precise outlet pressure control
- All models conform to ANSI Code B109.4 and CGA Service-type Regulator Specification CAN/CGA 6.18-M22.

Options

- Vent Elbow
- Splashguard
- Pressure Taps
- Offset Valve Body

Maximum Allowable Inlet Pressure to ensure complete lock-up

Orifice	Inlet Pressure (PSIG)
5/16"	60
1/4"	80
3/16"	100
1/8" x 3/16"	125
1/8"	125

Regulator Pressure Rating

MAOP = Maximum Allowable Operating Pressure = Consult capacity charts for MAOP of different regulator series, models, set points and sizes.

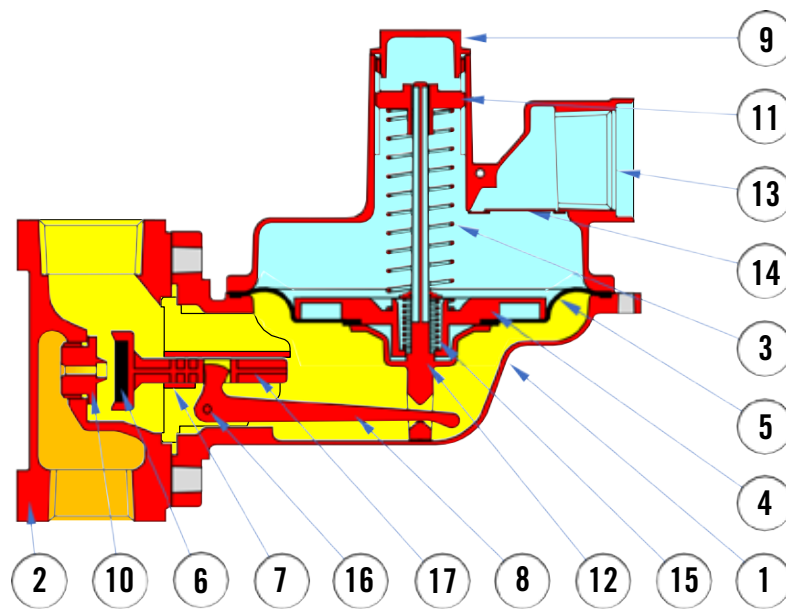
175 PSIG (12 bar) = Maximum inlet pressure for abnormal or emergency service, without causing damage to regulator case.

2 PSIG (138 mbar) = Maximum outlet pressure for normal service.

10 PSIG (689 mbar) = Maximum outlet pressure which can be contained by pressure carrying components (no flange leakage to atmosphere except for normal relief action). **If regulator is subjected to these conditions, it should be removed from service.**

50 PSIG (3.5 bar) = Maximum outlet pressure for abnormal service without damage to internal components. **If regulator is subjected to these conditions, it should be removed from service.**

SR100 Series Residential Regulator



Regulators

1805PFM Series (7" W.C.-2 PSIG Outlet Pressure)

Item No.	Description	Material	Notes
1	Diaphragm Case	Diecast Aluminum	With unique seven-step advanced conversion coating. Single coat polyester primer and high solid polyurethane topcoat.
2	Valve Body	Gray Cast Iron	Undercoated, single coat polyester primer and high solid polyurethane topcoat.
3	Loading Spring	Spring Steel	Zinc plated and chromate. Color coded for identification.
4	Diaphragm Plate	Reinforced Nylon	
5	Diaphragm	Buna N	
6	Seat Disc	Buna N	60, 70 (std) or 80 durometer rating
7	Plunger Guide	Reinforced Nylon	
8	Lever	Stamped Aluminum	
9	Seal Plug	Reinforced Nylon	
10	Orifice	Aluminum	High strength, corrosion resistant
11	Pressure Adjustment Screw	Reinforced Nylon	
12	Relief Valve	Reinforced Nylon	
13	Vent Screen	Stainless Steel	Fitted with removable weather and bug-proof stainless-steel screen to resist freeze-ups and to exclude foreign matter. The vent is threaded 3/4" or 1" NPT.
14	Vent Valve	Stainless Steel	with Electrogalvanized steel retainer
15	Relief Valve Spring	Spring Steel	Zinc plated and yellow chromate. Non-adjustable. Color coded for identification. Standard set point of 9" w.c. above outlet set pressure of 7" w.c. Standard set point of 1.1 psig above outlet set pressure of 2 psig.
16	Lever Pin	Carbon Steel	Zinc Plated
17	Plunger	Reinforced Nylon	

SR100 Series Residential Regulator

Capacity Data

**Capacity (SCFH) 3/4" Outlet Valve Body
Set Pressure of 7" W.C., 1" Droop**

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
1	—	—	175	225	225
2	—	—	200	275	275
5	225	275	350	425	450
10	350	350	550	750	750
15	425	450	850	1100	1000
20	500	475	950	1200	1200
30	650	650	1400	1500	1600
40	800	800	1500	1700	1800
60	1100	1100	1700	1900	
80	1400	1400	1900	1900	
100	1700	1700	1800		
125	1800	1800			

**Capacity (SCFH) 3/4" Outlet Valve Body
Set Pressure of 11" W.C., 1" Droop**

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
1	—	—	175	225	225
2	—	—	250	325	300
5	250	250	425	500	500
10	350	350	700	800	800
15	450	425	900	1000	980
20	500	500	1100	1200	1000
30	650	650	1200	1500	1300
40	800	800	1400	1600	1400
60	1100	1100	1200	1600	
80	1400	1300	1200	1400	
100	1700	1400	1100		
125	1900	1300			

**Capacity (SCFH) 3/4" Outlet Valve Body
Set Pressure of 14" W.C., 1" Droop**

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
1	—	—	150	150	175
2	—	—	200	225	225
5	200	250	325	375	400
10	300	350	475	600	600
15	400	425	650	800	800
20	500	500	750	900	950
30	650	650	1100	1300	1200
40	800	800	1200	1500	1300
60	1100	1100	1300	1400	1300
80	1400	1300	1200	1300	1400
100	1600	1300	1100		
125	1600	1300			

**Capacity (SCFH) 3/4" Outlet Valve Body
Set Pressure of 2# Set, ±10 Droop**

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
3	150	125	125	200	200
5	200	175	175	275	225
10	325	275	300	425	425
15	425	375	350	550	550
20	500	450	475	650	700
30	650	550	650	850	900
40	800	750	750	1100	1200
60	1100	950	1200	1600	1500
80	1400	1300	1600	1800	
100	1600	1500	1900		
125	1900	1800			

SR100 Series Residential Regulator

Capacity Data

Capacity (SCFH) 3/4" Outlet Valve Body
Set Pressure of 5# Set, ± 10 Droop

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
10	275	325	375	475	500
15	350	400	500	600	650
20	400	500	650	750	900
30	550	600	900	1100	1100
40	650	800	1100	1300	1500
60	900	1100	1500	1900	2000
80	1200	1400	1900	2300	2400
100	1300	1700	2200		
125	1700	2000			

SR100 Series Residential Regulator

Capacity Data

Capacity 1" Outlet Valve Body
Set Pressure of 7" W.C. @ 50 SCFH

Inlet Pressure PSIG (bar)	Orifice Size			
	1/8" x 3/16"	3/16"	1/4"	5/16"
5 (0.34)	250 (7.08)	400 (11.33)	550 (15.57)	475 (13.45)
10 (0.69)	350 (9.91)	700 (19.82)	1100 (31.15)	1500 (42.48)
15 (1.03)	450 (12.74)	900 (25.49)	1700 (48.14)	2100 (59.47)
20 (1.38)	500 (14.16)	1100 (31.15)	2000 (56.63)	2500 (70.79)
30 (2.07)	650 (18.41)	1500 (42.48)	2500 (70.79)	2500 (70.79)
40 (2.76)	800 (22.65)	1800 (50.97)	2500 (70.79)	2500 (70.79)
60 (4.14)	1100 (31.15)	2400 (67.96)	2500 (70.79)	2500 (70.79)

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
Outlet pressure variance not to exceed +2/-1" W.C. from set pressure

Capacity 1" Outlet Valve Body
Set Pressure of 2" PSIG @ 50 SCFH

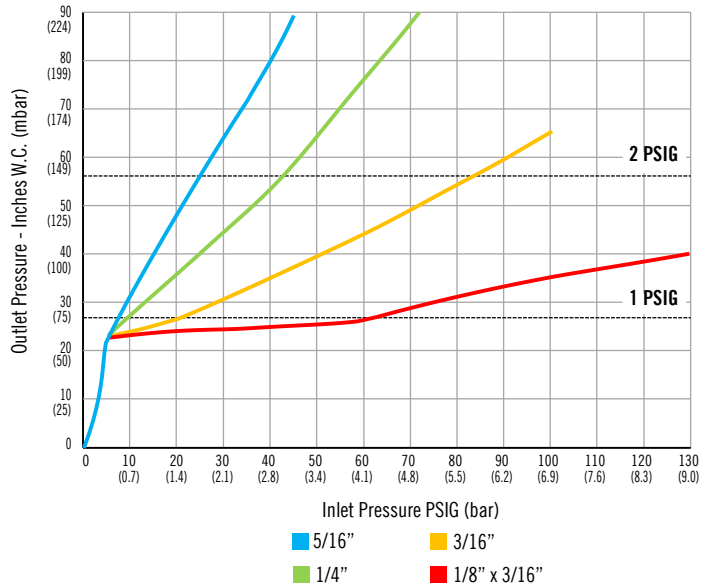
Inlet Pressure PSIG (bar)	Orifice Size			
	1/8" x 3/16"	3/16"	1/4"	5/16"
5 (0.34)	175 (4.96)	150 (4.25)	300 (8.50)	250 (7.08)
10 (0.69)	300 (8.50)	275 (7.79)	400 (11.33)	425 (12.03)
15 (1.03)	375 (10.62)	350 (9.91)	600 (16.99)	550 (15.57)
20 (1.38)	450 (12.74)	450 (12.74)	700 (19.82)	750 (21.24)
30 (2.07)	550 (15.57)	600 (16.99)	950 (26.90)	1000 (28.32)
40 (2.76)	750 (21.24)	800 (22.65)	1300 (36.81)	1400 (39.64)
60 (4.14)	1000 (28.32)	1300 (36.81)	1900 (53.80)	2100 (59.47)

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
Outlet pressure variance not to exceed +2/-1" W.C. from set pressure

Regulator Relief Valve Performance Outlet Pressure Relative to Inlet Pressure

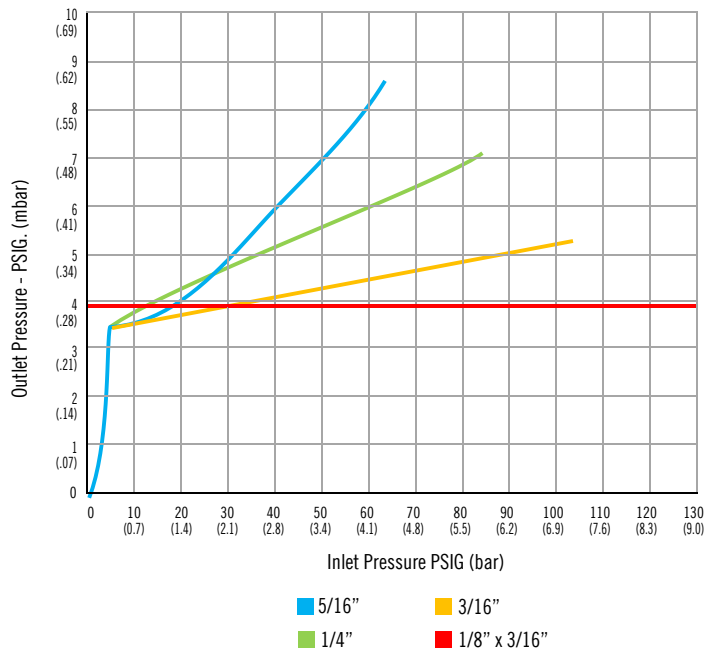
Screen Vent – No Vent Pipe
Set Pressure 7" W.C.

Failure by disconnecting linkage between diaphragm and valve mechanism.



Screen Vent - No Vent Pipe Set Pressure 2 PSIG

Failure by disconnecting linkage between diaphragm and valve mechanism.



Regulators

SR100 Series Residential Regulator

Capacity Data

Capacity 1 1/4" Outlet Valve Body Set Pressure of 7" W.C. @ 50 SCFH

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
1	—	—	175	225	250
2	—	—	225	350	375
5	200	275	425	650	700
10	325	350	750	1300	1700
15	425	425	1000	1700	2300
20	500	500	1200	2100	2500
30	650	650	1500	2200	2500
40	800	800	1900	2200	2500
60	1100	1100	2300		
80	1400	1500			
100	1700	1800			
125	2100	2100			

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
Outlet pressure variance not to exceed +2/-1" W.C. from set pressure

Capacity 1 1/4" Outlet Valve Body Set Pressure of 11" W.C. @ 50 SCFH

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
1	—	100	125	175	200
2	175	175	250	325	375
5	225	250	425	700	850
10	325	350	700	1100	1500
15	425	425	900	1500	1900
20	500	500	1100	1900	2400
30	650	650	1400	1900	2500
40	800	800	1700	2000	2500
60	1100	1100	2500	2000	2500
80	1400	1500	2500	2500	
100	1700	1800	2500		
125	2000	2100			

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
Outlet pressure variance not to exceed +2/-1" W.C. from set pressure

SR100 Series Residential Regulator

Capacity Data

Capacity 1 1/4" Outlet Valve Body
Set Pressure of 14" W.C. @ 50 SCFH

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
1	—	75	100	150	150
2	150	150	150	225	250
5	175	225	325	425	450
10	250	325	475	700	850
15	325	425	750	1300	1500
20	450	500	1000	1700	2200
30	600	650	1400	2500	2500
40	750	800	1700	2500	2500
60	1100	1100	2400	2500	2500
80	1400	1500	2500	2500	
100	1700	1800	2500		
125	2000	2200			

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
 Outlet pressure variance not to exceed +2/-1" W.C. from set pressure

Capacity 1 1/4" Outlet Valve Body
Set Pressure of 1# Set @ 50 SCFH

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
3	150	175	275	325	325
5	200	225	325	375	450
10	300	300	500	600	750
15	375	400	700	1000	850
20	450	500	900	1000	1500
30	600	650	1000	1900	2100
40	750	800	1700	2300	2500
60	1100	1100	2400	2500	2500
80	1400	1400	2500	2500	2500
100	1700	1700	2500	2500	
125	2000	1700			

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
 Outlet pressure variance not to exceed ±10% from set pressure

SR100 Series Residential Regulator

Capacity Data

Capacity 1 1/4" Outlet Valve Body Set Pressure of 2# Set @ 50 SCFH

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
3	125	150	150	175	200
5	150	200	200	300	325
10	200	275	325	425	425
15	250	375	425	550	650
20	325	425	475	650	750
30	450	550	700	1000	1100
40	550	700	800	1300	1400
60	800	950	1300	1800	2200
80	950	1300	1800	2500	
100	1200	1600	2000		
125	1600	2000			

0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
Outlet pressure variance not to exceed $\pm 10\%$ from set pressure

Capacity 1 1/4" Outlet Valve Body Set Pressure of 5# Set @ 50 SCFH

Inlet Pressure PSIG	Orifice Size				
	1/8"	1/8" x 3/16"	3/16"	1/4"	5/16"
10	275	300	375	475	500
15	350	425	500	600	700
20	400	475	650	800	900
34	550	650	850	1100	1200
40	700	800	1100	1400	1700
60	950	1100	1500	2100	2500
80	1200	1300	2100	2600	3700
100	1400	1600	2400		
125	1700	2000			

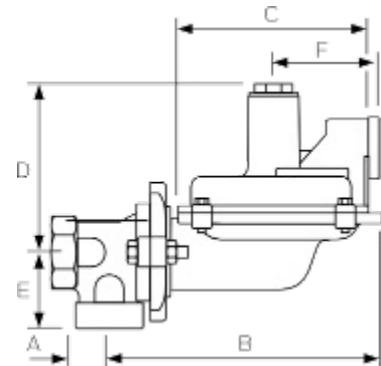
0.60 Specific Gravity Gas at 60°F and 14.7 PSIA (15.6 °C and 1.01 bar)
Outlet pressure variance not to exceed $\pm 10\%$ from set pressure

SR100 Series Residential Regulator

Dimensions

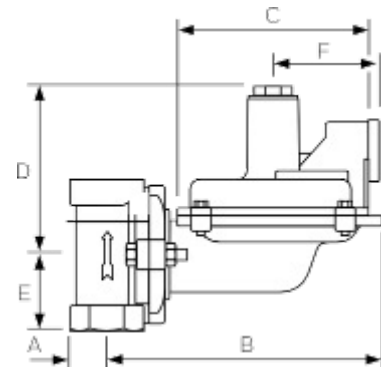
Model SR113 - 90°

Inlet	Outlet	A	B	C	D	E	F
3/4"	3/4"	1 1/2" 38.1mm	7 1/8" 181mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm
3/4"	1"	1 1/2" 38.1mm	7 1/8" 181mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm
1"	1"	1 1/2" 38.1mm	7 1/8" 181mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm



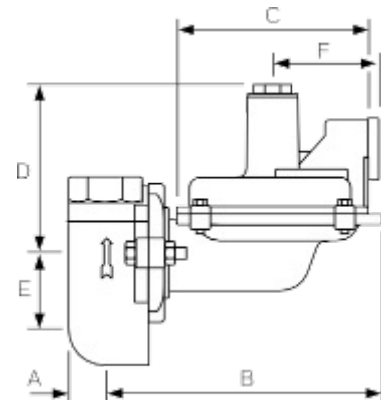
Model SR113 - 180°

Inlet	Outlet	A	B	C	D	E	F
3/4"	3/4"	1" 25.4mm	7 1/8" 181mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm
3/4"	1"	1" 25.4mm	7 1/8" 181mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm
1"	1"	1" 25.4mm	7 1/8" 181mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm



Model SR113 - Offset

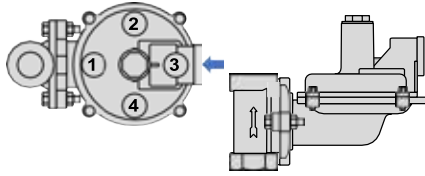
Inlet	Outlet	A	B	C	D	E	F
3/4"	3/4"	1" 25.4mm	8 9/16" 217.5mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm
3/4"	1"	1" 25.4mm	8 9/16" 217.5mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm
1"	1"	1" 25.4mm	8 9/16" 217.5mm	5 3/8" 136.5mm	4 7/16" 112.7mm	2" 50.8mm	2 13/16" 71.5mm



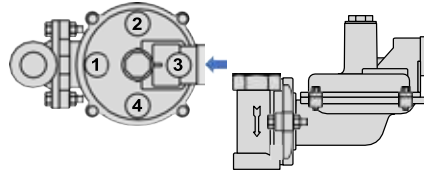
SR100 Series Residential Regulator

Assembly Positions

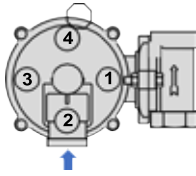
Valve Head Position 'A'



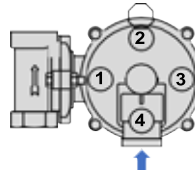
Valve Head Position 'B'



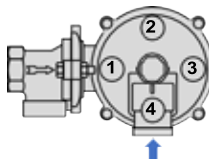
Valve Head Position 'C'



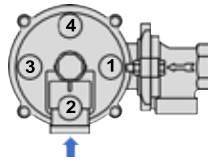
Valve Head Position 'D'



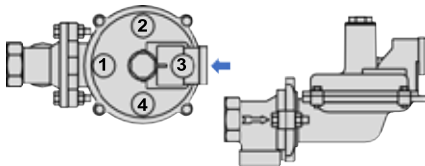
Valve Head Position 'A'



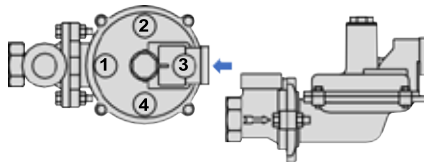
Valve Head Position 'B'



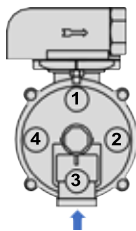
Valve Head Position 'C'



Valve Head Position 'D'



Valve Head Position 'D'



↑! = Standard Vent Position



Example of Regulator Assembly Position

In the photo above the SR113 Regulator shown has a 180 degree valve head in Position "C" (Flow upward) with the vent in position 2 (Looking down). This would be assembly position C2.

Ordering Information

1. Model number
2. Size of inlet and outlet
3. Valve Head type
4. Inlet pressure, PSIG (bar)
5. Outlet pressure, inches W.C. (mbar) or PSIG (bar)
6. Spring Range
7. Flow, SCFH (m3/h)
8. Kind and specific gravity of gas
9. Orifice size
10. Regulator assembly position number

Shipping Weight

12.8 lbs/carton of four regulators

SR100 Series Residential Regulator

Service Regulator

Other Gas Capacities

To determine the capacity of these regulators for gases other than natural gas, multiply the values within the capacity tables by a Specific Gravity Conversion Factor (Fg). The table below lists this factor for some of the more common gases.

Gas Type	Specific Gravity	Conversion Factor (Fg)
Air	1.00	0.77
Butane	2.01	0.55
Carbon Dioxide	1.52	0.63
Nitrogen	0.97	0.79
Propane	1.53	0.63

To calculate the Conversion Factor for other gases:

$$\sqrt{\frac{\text{Specific gravity of natural gas (0.6)}}{\text{Specific gravity of gas being used}}}$$

Orifice Sizes

Orifice Size	Part Number
5/16"	72494P022
1/4"	72494P021
3/16"	72494P020
1/8" x 3/16"	72494P030

Loading Springs

Outlet Pressure	Color Code	Part Number
6" - 8" w.c.	Blue/Yellow	70017P138
7" - 12" w.c.	Blue/Red	70017P139
13" - 16" w.c.	Blue/White	70017P140
21" - 35" w.c.	Blue/Orange	70017P141
1.8 - 2 PSIG	White	70017P060

1800C Series Residential Regulator

Application:

The 1800C Series pressure regulators are designed to control natural gas, air, nitrogen, carbon dioxide, propane vapor, and other noncorrosive gases in residential, light commercial, and small industrial applications. The 1800C and C-HC can be installed in both horizontal and vertical pipelines.

Control:

A comprehensive range of springs is available. The outlet pressure can be easily and accurately adjusted by turning the spring adjustment unit located under the top cap.

The design of this mechanism provides virtually frictionless adjustment and eliminates “spring wind up”. The complete spring adjustment mechanism can be removed easily for maintenance and spring changes.

Technical Data:

Inlet Pressures up to 125 PSIG

Outlet Pressures: 3.5” W.C. to 2 PSIG.

All models conform to ANSI Code B109.4-2021, and CGA Service-Type Regulator Specification CAN/CGA-6.18-M22

Vent Elbow

The regulator vent opening should face downward (6 o'clock) to minimize the chance of blockage from ice and snow. If not possible, a 3/4” NPT plastic, 90° vent elbow and separate protective screen may be screwed into the vent to provide the necessary protection.

Elevation Compensation

The E.C. orifice is recommended for installations where the inlet pressure may vary over a wide range. The E.C. orifice is available in two sizes: 1/8” x 3/16” and 3/16”. The capacities of these orifices are the same as the standard orifice of the same size.

Full Capacity Relief Valve

Full capacity internal relief valve standard on all models. (See Performance Graphs)

Splashguards

UV stabilized, weather-resistant, resin device that protects the vent screen from splashes while providing a large external vent opening to keep regulators working properly.



Maximum Allowable Inlet Pressure to ensure complete lock-up

Orifice	Inlet Pressure (PSIG)
9/16"	20
1/2"	50
3/8"	70
5/16"	125
1/4"	125
3/16"	125
1/8" x 3/16"	125
1/8"	125

Regulator Pressure Rating

MAOP = Maximum Allowable Operating Pressure = Consult capacity charts for MAOP of different regulator series, models, set points and sizes.

175 PSIG (12 bar) = Maximum inlet pressure for abnormal or emergency service, without causing damage to regulator case.

2 PSIG (138 mbar) = Maximum outlet pressure for normal service.

10 PSIG (689 mbar) = Maximum outlet pressure which can be contained by pressure carrying components (no flange leakage to atmosphere except for normal relief action). **If regulator is subjected to these conditions, it should be removed from service.**

50 PSIG (3.5 bar) = Maximum outlet pressure for abnormal service without damage to internal components. **If regulator is subjected to these conditions, it should be removed from service.**

1800C Series Residential Regulator

Features & Benefits

Main Features

- Wide range of valve body connection sizes: 3/4" x 3/4", 3/4" x 1", 3/4" x 1 1/4", 1" x 1", 1" x 1 1/4" and 1 1/4" x 1 1/4" NPT or BSP-TR
- Offset valve body: 3/4" x 3/4", 3/4" x 1" and 1" x 1" NPT or BSP-TR.
- Temperature range: -20°F to +150°F (-30°C to 65°C).
- Threaded connections NPT to ANSI/ASME B1.20.1 or BS EN 10226 (ISO 7).
- Variety of interchangeable orifices and spring ranges
- 90 Degree (Right Angle), 180 Degree (Straight-Flow), or Offset Valve Body.

Options

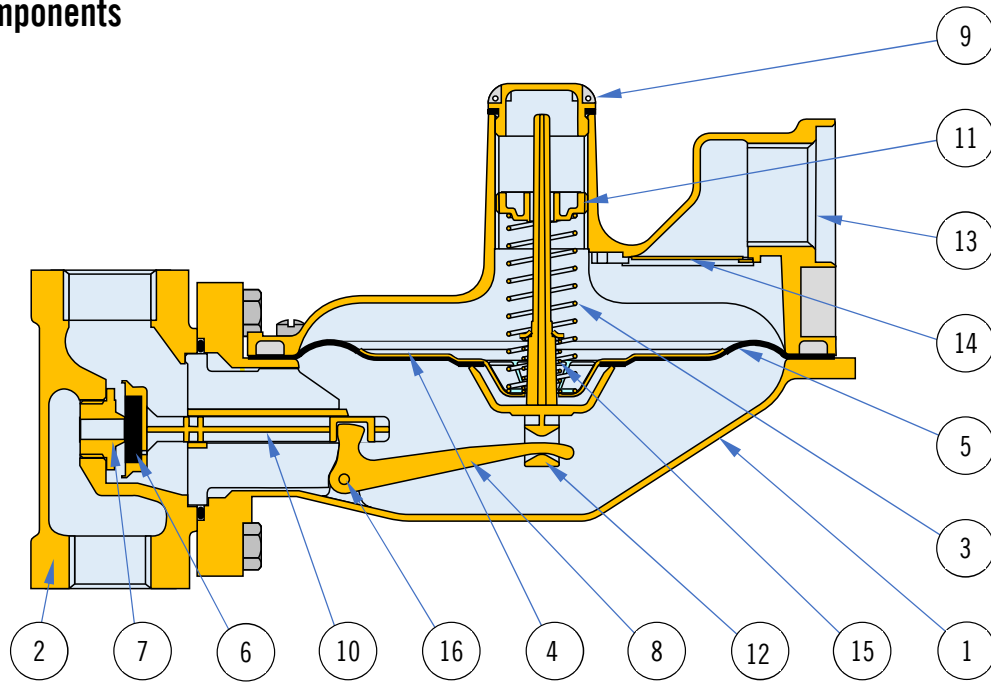
- Over pressure slam shut.
- Under pressure slam shut.
- Elevation compensating orifice.
- Inlet and outlet pressure taps
- Vent elbow.
- Splashguard.

Model Number	Description
1813C	Basic regulator with full-capacity internal relief with 3/4" or 1" NPT vent.
1813C-HC	High capacity regulator with full-capacity internal relief with 3/4" or 1" NPT vent.
1843C	Basic regulator with full-capacity internal relief and overpressure shut-off and 3/4" or 1" NPT vent.
1843C-HC	High capacity regulator with full-capacity internal relief and overpressure shut-off and 3/4" or 1" NPT vent.
1853C w/ USSA	Basic regulator with full-capacity internal relief and overpressure, under pressure shut-off and 3/4" or 1" NPT vent.
1853C-HC w/ USSA	High capacity regulator with fullcapacity internal relief and overpressure, under pressure shut-off and 3/4" or 1" NPT vent.

Orifice Size	Standard Part No.	Part No. with OPSO	Orifice Size	Standard Part No.	Part No. with OPSO
9/16"	72494P026	72751P019	1/4"	72494P021	72751P012
1/2"	72494P025	72751P016	3/16"	72494P020	72751P011
3/8"	72494P023	72751P014	1/8" x 3/16"	72494P030	72751P020
5/16"	72494P022	72751P013	1/8"	72494P019	N/A

1800C Series Residential Regulator

Regulator Components



Item No.	Description	Material	Notes
1	Diaphragm Case	Diecast Aluminum	With unique seven-step advanced conversion coating. Single coat polyester primer and high solid polyurethane topcoat.
2	Valve Body	Gray Cast Iron	Undercoated, single coat polyester primer and high solid polyurethane topcoat.
3	Loading Spring	Spring Steel	Zinc plated and chromate. Color coded for identification.
4	Diaphragm Plate	Steel	Electrogalvanized
5	Diaphragm	Buna N	Fabric reinforced
6	Seat Disc	Buna N	60, 70 (std) or 80 durometer rating
7	Orifice	Aluminum	High strength, corrosion resistant
8	Lever	Stamped aluminum	
9	Seal Plug	Polyester Thermoplastic	UV stabilized
10	Plunger Valve / Plunger Guide	Minlon	
11	Pressure Adjustment Screw	Minlon	
12	Relief Valve Stem	Minlon	

Item No.	Description	Material	Notes
13	Vent Screen	Stainless Steel	Fitted with weather and bug-proof stainless steel screen to resist freeze-ups and dirt. Threaded 3/4" or 1" NPT. Inside installation requires a vent line of sufficient diameter to carry gas vented by the regulator to a safe outside location away from any opening(s) in the structure. Comply with applicable Federal, State and local codes.
14	Vent Valve	Stainless Steel	with Electrogalvanized steel retainer
15	Relief Valve Spring	Spring Steel	Zinc plated and yellow chromate. Non-adjustable. Color coded for identification. Standard set point of 8" W.C. above outlet set pressure of 7" W.C. Standard set point of 1.3 PSIG above outlet set pressure of 2 PSIG.
16	Lever Pin	Carbon Steel	Zinc Plated and yellow chromate
17	Plunger	Reinforced Nylon	

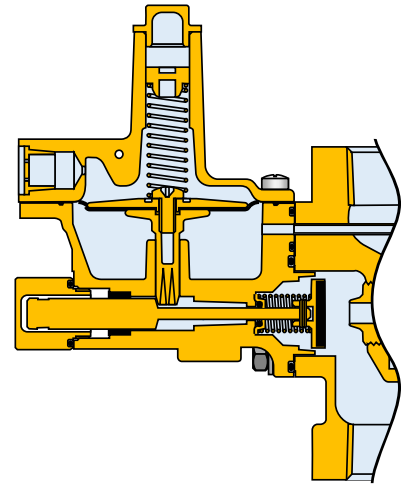
1800C Series Residential Regulator

Slam Shut Valves

Over Pressure Slam Shut

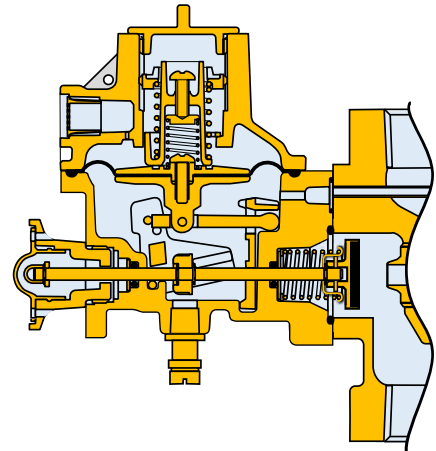
Overpressure Shutoff (OPSO) — Operates independently. The OPSO will shut off the gas supply in the event of a serious downstream pressure build-up. These are available in two pressure ranges on the Models 1843C and 1843C-HC.

When the outlet pressure exceeds the OPSO set point, the pressure under the OPSO diaphragm compresses the pressure spring forcing the diaphragm stem upwards and releasing plunger. This permits the shut-off spring to force the shut-off disc against the back side of the special double-ended orifice.



USSA Slam Shut

The Universal Safety Shutoff Assembly (USSA) can be fitted to an AMCO 1800 Industrial Regulator on the inlet side of the valve head. This provides over pressure and under pressure protection with immediate shut-off at the regulator inlet. It uses well proven principles to give exceptional consistency of operation and an unrivalled insensitivity to nuisance tripping. The USSA senses downstream regulator pressure through a brass sensing tube. In the event of an Overpressure or Underpressure occurrence, there is excess motion of the diaphragm, which causes the USSA mechanism to trip. Shutoff occurs when the spring-loaded seat disc is released to seal off the inlet side of the main regulator orifice.



The OPSS and UPSS loading springs are fitted concentrically and can be adjusted independently.

USSA Specifications

Universal Safety Shutoff Assemblies (USSAs) can be fitted to AMCO Industrial Regulators with inlet pressures from 1/2 PSIG to 125 PSIG.

The USSA meets all applicable EN334 standards of performance with the following features:

- Diaphragm Moulded Buna N with Sealing Ring Minimum burst pressure >100 psig
- Shutoff Pressures OPSO (7.5" w.c. to 35 psig) UPSO (3.0" W.C. to 60" W.C.).
- Repeatability OPSO (< 1% absolute pressure – "W.C. units) (< 1/2% absolute pressure – PSIG units) UPSO (< 2% absolute pressure – all units)
- Response Time Less than one second
- Service Life Type approval of 3000 on/shutoff/reset cycles USSA rated for 20-year average service life
- Temperature Range Operates at -20°F to +140°F
- Vent bug shield is standard equipment.

All USSA models have a Green "Flag" Visual Flow Indicator that shows proper Regulator flow. When the OPSO or UPSO trips, the Green Flag is withdrawn into the USSA, showing that the unit needs to be reset.

1800C Series Residential Regulator

Loading Springs

REGULATOR LOADING SPRINGS		
Shut Off Pressure	Part Number	Color Code
3.5" to 6" W.C.	70017P043	Blue
3.5" to 7.5" W.C.	70017P089	Tan
5.5" to 8.5" W.C.	70017P044	Yellow
6" to 12" W.C.	70017P137	Brown
6" to 15" W.C.	70017P042	Purple
12" to 28" W.C.	70017P060	White
24" to 48" W.C.	70017P082	Red
42" W.C. to 2 PSIG	70017P049	Red - Red

OPSO SHUTOFF SPRINGS		
Shut Off Pressure	Part Number	Color Code
14" to 35" W.C.	71403P005	Green
1 PSIG to 2 PSIG	71403P004	Black

USSA SLAM SHUT - OVER PRESSURE SPRINGS		
Shut Off Pressure	Part Number	Color Code
7.5 – 24 "W.C.	70017P123	Black
20 – 32 "W.C.	70017P124	Orange
24 – 44 "W.C.	70017P125	Red
40 – 84 "W.C.	70017P126	Dark Green
3 – 5 PSIG	70017P127	Yellow
4 – 7 PSIG	70017P128	White

USSA SLAM SHUT - UNDER PRESSURE SPRINGS		
Shut Off Pressure	Part Number	Color Code
3 – 6 "W.C.	70017P133	Light Blue
6 – 24 "W.C.	70017P134	Brown
24 – 60 "W.C.	70017P135	Purple

Regulators

1800C Dimensions

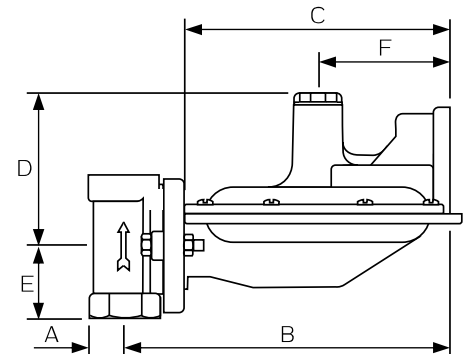
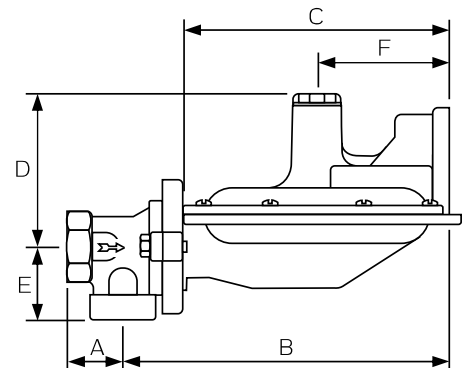
Model 1813C - 90°

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm

Model 1813C - 180°

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1 1/4"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm

1 1/4" Outlet - High Capacity

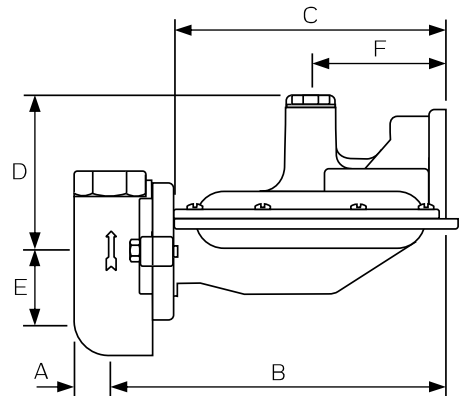


1800C Series Residential Regulator

1800C Dimensions

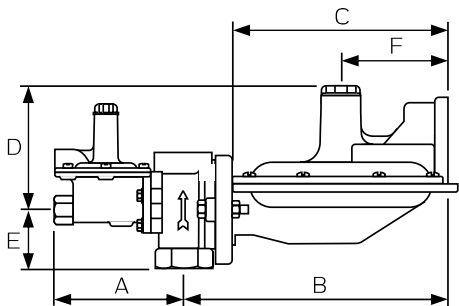
Model 1813C - Offset

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm



Model 1843C

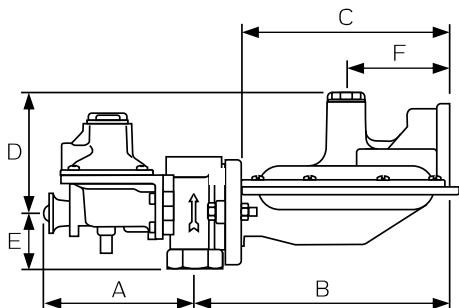
INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1 1/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1 1/4"	1 1/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm



1 1/4" Outlet - High Capacity

Model 1843C with USSA

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1 1/4"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1 1/4"	1 1/4"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm



1 1/4" Outlet - High Capacity

1800C Series Residential Regulator

1800C Series Regulator Capacity Performance SCFH (m3/h)

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
1 (0.07)	—	175 (5.0)	250 (7.1)	325 (9.2)	350 (9.9)	400 (11.3)	400 (11.3)
2 (0.14)	—	300 (8.5)	425 (12.0)	475 (13.5)	550 (15.6)	650 (18.4)	650 (18.4)
3 (0.21)	—	375 (10.6)	500 (14.2)	600 (17.0)	700 (19.8)	800 (22.7)	800 (22.7)
5 (0.34)	275 (7.8)	500 (14.2)	700 (19.8)	800 (22.7)	950 (26.9)	1000 (28.3)	1200 (34.0)
10 (0.70)	375 (10.6)	750 (21.2)	1100 (31.2)	1200 (34.0)	1400 (39.6)	1500 (42.5)	1700 (48.1)
15 (1.00)	450 (12.7)	950 (26.9)	1400 (39.6)	1500 (42.5)	1600 (45.3)	1900 (53.8)	2000 (56.6)
20 (1.40)	500 (14.2)	1100 (31.2)	1700 (48.1)	1700 (48.1)	1900 (53.8)	2200 (62.3)	2300 (65.1)
30 (2.10)	700 (19.8)	1400 (39.6)	2000 (56.6)	2000 (56.6)	2400 (68.0)	2500 (70.8)	—
40 (2.80)	800 (22.7)	1700 (48.1)	2400 (68.0)	2500 (70.8)	2500 (70.8)	—	—
60 (4.10)	1100 (31.2)	2300 (65.1)	2500 (70.8)	2500 (70.8)	—	—	—
100 (6.90)	1700 (48.1)	2500 (70.8)	2500 (70.8)	—	—	—	—
125 (8.60)	2100 (59.5)	—	—	—	—	—	—

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
1 (0.07)	—	175 (5.0)	250 (7.1)	300 (8.5)	375 (10.6)	475 (13.5)	500 (14.2)
2 (0.14)	—	250 (7.1)	350 (9.9)	450 (12.7)	500 (14.2)	600 (17.0)	650 (18.4)
3 (0.21)	—	300 (8.5)	450 (12.7)	550 (15.6)	700 (19.8)	850 (24.1)	950 (26.9)
5 (0.34)	250 (7.1)	450 (12.7)	650 (18.4)	750 (21.2)	950 (26.9)	1200 (34.0)	1300 (36.8)
10 (0.70)	350 (9.9)	700 (19.8)	1000 (28.3)	1400 (39.6)	1600 (45.3)	1900 (53.8)	2000 (56.6)
15 (1.00)	425 (12.0)	900 (25.5)	1400 (39.6)	1900 (53.8)	2100 (59.5)	2500 (70.8)	2500 (70.8)
20 (1.40)	500 (14.2)	1100 (31.2)	1700 (48.1)	2300 (65.1)	2500 (70.8)	2500 (70.8)	—
30 (2.10)	600 (17.0)	1400 (39.6)	2300 (65.1)	2500 (70.8)	2500 (70.8)	—	—
40 (2.80)	750 (21.2)	1700 (48.1)	2500 (70.8)	2500 (70.8)	—	—	—
60 (4.10)	1000 (28.3)	2400 (68.0)	2500 (70.8)	—	—	—	—
100 (6.90)	1600 (45.3)	2500 (70.8)	—	—	—	—	—
125 (8.60)	2000 (56.6)	—	—	—	—	—	—

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

3/4" Outlet Set Point 7.0" W.C. (17.4 mbar) at 50 SCFH

0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P044. Outlet pressure variance not to exceed +2", 1" W.C. from set point, horizontal position.

1" Outlet Set Point 7.0" W.C. (17.4 mbar) at 50 SCFH

0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P044. Outlet pressure variance not to exceed +2", 1" W.C. from set point, horizontal position

Regulators

1800C Series Residential Regulator

1800C Series Regulator Capacity Performance SCFH (m3/h)

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
1 (0.07)	—	200 (5.7)	325 (9.2)	350 (9.9)	375 (10.6)	475 (13.5)	500 (14.2)
2 (0.14)	—	325 (9.2)	500 (14.2)	600 (17.0)	700 (19.8)	950 (26.9)	1400 (39.6)
3 (0.21)	—	425 (12.0)	650 (18.4)	950 (26.9)	1200 (34.0)	1700 (48.1)	1900 (53.8)
5 (0.34)	275 (7.8)	550 (15.6)	1000 (28.3)	1600 (45.3)	2100 (59.5)	2500 (70.8)	2500 (70.8)
10 (0.70)	375 (10.6)	850 (24.1)	1500 (42.5)	2400 (68.0)	2500 (70.8)	2500 (70.8)	2500 (70.8)
15 (1.00)	450 (12.7)	1000 (28.3)	1800 (51.0)	2500 (70.8)	—	—	—
20 (1.40)	550 (15.6)	1200 (34.0)	2100 (59.5)	—	—	—	—
30 (2.10)	700 (19.8)	1600 (45.3)	—	—	—	—	—
40 (2.80)	800 (22.7)	—	—	—	—	—	—
60 (4.10)	1100 (31.2)	—	—	—	—	—	—
100 (6.90)	1400 (31.2)	—	—	—	—	—	—

1 1/4" Outlet Set Point 7.0" W.C. (17.4 mbar) at 50 SCFH

0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P044. Outlet pressure variance not to exceed +2", 1" W.C. from set point, horizontal position.

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
3 (0.21)	150 (4.2)	175 (5.0)	300 (8.5)	325 (9.2)	375 (10.6)	400 (11.3)	500 (14.2)
5 (0.34)	250 (7.1)	325 (9.2)	450 (12.7)	525 (14.9)	575 (16.3)	700 (19.8)	750 (21.2)
10 (0.70)	375 (10.6)	550 (15.6)	700 (19.8)	825 (23.4)	1000 (28.3)	1200 (34.0)	1300 (36.8)
15 (1.00)	450 (12.7)	750 (21.2)	900 (25.5)	1100 (31.2)	1300 (36.8)	1500 (42.5)	1800 (51.0)
20 (1.40)	550 (15.6)	900 (25.5)	1200 (34.0)	1300 (36.8)	1600 (45.3)	1900 (53.8)	—
30 (2.10)	700 (19.8)	1200 (34.0)	1500 (42.5)	1800 (51.0)	2100 (59.5)	—	—
40 (2.80)	850 (24.1)	1500 (42.5)	2000 (56.6)	2200 (62.3)	—	—	—
60 (4.10)	1100 (31.2)	2100 (59.5)	2500 (70.8)	—	—	—	—
100 (6.90)	1700 (48.1)	2500 (70.8)	—	—	—	—	—
125 (8.60)	2100 (59.5)	—	—	—	—	—	—

3/4" Outlet Set Point 2 PSIG (0.14 bar) at 50 SCFH

0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1800C Series Residential Regulator

1800C Series Regulator Capacity Performance SCFH (m3/h)

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
3 (0.21)	150 (4.2)	225 (6.4)	250 (7.1)	350 (9.9)	425 (12.0)	550 (15.6)	550 (15.6)
5 (0.34)	225 (6.4)	350 (9.9)	450 (12.7)	500 (14.2)	650 (18.4)	750 (21.2)	900 (25.5)
10 (0.70)	350 (9.9)	600 (17.0)	750 (21.2)	850 (24.1)	1000 (28.3)	1300 (36.8)	1500 (42.5)
15 (1.00)	425 (12.0)	800 (22.7)	1000 (28.3)	1100 (31.2)	1400 (39.6)	1700 (48.1)	2000 (56.6)
20 (1.40)	500 (14.2)	1000 (28.3)	1200 (34.0)	1400 (39.6)	1800 (51.0)	2100 (59.5)	—
30 (2.10)	650 (18.4)	1300 (36.8)	1700 (48.1)	2000 (56.6)	2100 (59.5)	—	—
40 (2.80)	800 (22.7)	1700 (48.1)	2200 (62.3)	2200 (62.3)	—	—	—
60 (4.10)	1100 (31.2)	2500 (70.8)	2500 (70.8)	—	—	—	—
100 (6.90)	1700 (48.1)	2500 (70.8)	—	—	—	—	—
125 (8.60)	2100 (59.5)	—	—	—	—	—	—

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1" Outlet Set Point 2 PSIG (0.14 bar) at 50 SCFH

0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
3 (0.21)	150 (4.2)	225 (6.4)	350 (9.9)	375 (10.6)	425 (12.0)	550 (15.6)	550 (15.6)
5 (0.34)	225 (6.4)	350 (9.9)	500 (14.2)	600 (17.0)	700 (19.8)	900 (25.5)	1100 (31.2)
10 (0.70)	350 (9.9)	600 (17.0)	850 (24.1)	1100 (31.2)	1200 (34.0)	1700 (48.1)	2200 (62.3)
15 (1.00)	425 (12.0)	850 (24.1)	1200 (34.0)	1600 (45.3)	1900 (53.8)	2500 (70.8)	2500 (70.8)
20 (1.40)	500 (14.2)	1000 (28.3)	1700 (48.1)	2200 (62.3)	2500 (70.8)	2500 (70.8)	—
30 (2.10)	650 (18.4)	1500 (42.5)	2500 (70.8)	2500 (70.8)	2500 (70.8)	—	—
40 (2.80)	800 (22.7)	1900 (53.8)	2500 (70.8)	2500 (70.8)	—	—	—
60 (4.10)	1100 (31.2)	2500 (70.8)	2500 (70.8)	—	—	—	—
100 (6.90)	1700 (48.1)	2500 (70.8)	—	—	—	—	—
125 (8.60)	2100 (59.5)	—	—	—	—	—	—

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1 1/4" Outlet Set Point 2 PSIG (0.14 bar) at 50 SCFH

0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

1800C Series Residential Regulator

1800C-HC Series Regulators

Ideal for light commercial and industrial use, the 1 1/4" 1800C-HC Series regulator is designed to increase output capacity during medium to high inlet pressure operations.

General Information

The 1800C-HC Series regulator's lightweight design features high-capacity capabilities for 1 1/4" NPT connections and flow capacities up to 4900 SCFH depending on inlet pressure and orifice selection. It complements the 1800C Series family of regulators.

1800C-HC Series Regulator Capacity Performance SCFH (m3/h)

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
2 (0.14)	—	275 (7.8)	350 (9.9)	450 (12.7)	525 (14.9)	675 (19.1)	800 (22.7)
3 (0.21)	—	350 (9.9)	450 (12.7)	600 (17.0)	750 (21.2)	800 (22.7)	1100 (31.2)
5 (0.34)	275 (7.8)	450 (12.7)	700 (19.8)	850 (24.1)	1000 (28.3)	1500 (42.5)	1600 (45.3)
10 (0.70)	350 (9.9)	600 (17.0)	1100 (31.2)	1500 (42.5)	1600 (45.3)	2500 (70.8)	2700 (76.5)
15 (1.00)	425 (12.0)	950 (26.9)	1300 (36.8)	2300 (65.1)	2600 (73.6)	3300 (93.5)	3300 (93.5)
20 (1.40)	475 (13.5)	1100 (31.2)	1900 (53.8)	2900 (82.1)	3400 (96.3)	4200 (118.9)	3900 (110.4)
30 (2.10)	600 (17.0)	1500 (42.5)	2500 (70.8)	4000 (113.3)	4600 (130.3)	4900 (138.8)	—
40 (2.80)	750 (21.2)	1800 (51.0)	3200 (90.6)	4900 (138.8)	4900 (138.8)	—	—
60 (4.10)	1100 (31.2)	2500 (70.8)	4400 (124.6)	4900 (138.8)	—	—	—
100 (6.90)	1600 (45.3)	3800 (107.6)	—	—	—	—	—
125 (8.60)	2000 (56.6)	—	—	—	—	—	—

1 1/4" Outlet Set Point 7.0" W.C. (17.4 mbar) at 50 SCFH

0.60 specific gravity gas at 60°F and 14.7 PSIA
(20°C and 1.01 bar).

Pressure spring 70017P044. Outlet pressure
variance not to exceed +2", 1" W.C. from set
point, horizontal position

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1800C Series Residential Regulator

1800C and 1800C-HC Series Service Regulators - Other Technical Data

Full-Open Regulator Relief Capacity

For sizing downstream relief valves, use the following formulas to determine the regulator full-open capacity:

Critical flow rates: *sub-critical flows:*

$$Q = 0.5 C \times \frac{P_1}{\sqrt{G}} \quad Q = C \times \frac{\sqrt{P_2 h}}{\sqrt{G}}$$

Critical flow occurs when the absolute outlet pressure is less than about 1/2 of the absolute inlet pressure.

- Q Maximum capacity of regulator
- C Orifice constant (see table below)
- P₁ Inlet absolute pressure (PSIA)
- P₂ Outlet absolute pressure (PSIA)
- h Differential pressure
- G Specific gravity of gas

Orifice Constants

Orifice	C
1/8"	25
1/8" x 3/16"	25
3/16"	57
1/4"	98
5/16"	149
3/8"	208
1/2"	353
9/16"	421

Other Gas Capacities

To determine the capacity of these regulators for gases other than natural gas, multiply the values within the capacity tables by a Specific Gravity Conversion Factor (F_g). The table below lists this factor for some of the more common gases.

GAS TYPE	SPECIFIC GRAVITY	CONVERSION FACTOR (F _g)
Air	1.00	0.77
Butane	2.01	0.55
Carbon Dioxide	1.52	0.63
Nitrogen	0.97	0.79
Propane	1.53	0.63

To calculate the Conversion Factor for other gases:

$$\sqrt{\frac{\text{Specific gravity of gas on which the capacity table is based}}{\text{Specific gravity of gas being used}}}$$

Example: If using propane and only having tables based on natural gas, the Specific Gravity Conversion Factor is:

$$(F_g) = \sqrt{\frac{\text{Specific gravity of natural gas (0.6)}}{\text{Specific gravity of propane (1.53)}}}$$

$$(F_g) = \sqrt{\frac{0.60}{1.53}}$$

$$(F_g) = 0.626$$

1800C Series Residential Regulator

1800C and 1800C-HC Series Service Regulators

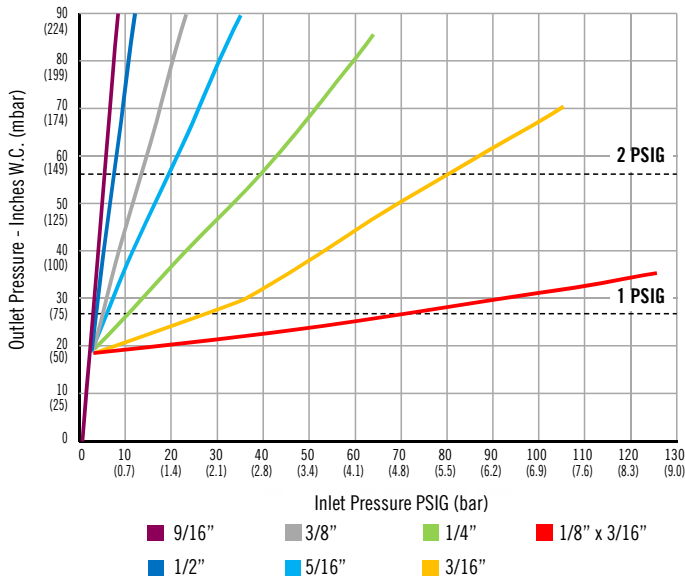
Regulator Relief Valve Performance

There are several methods of measuring the relief performance of a regulator. The worst case scenario will occur when the lever is disconnected. The data presented in the tables below represent this condition.

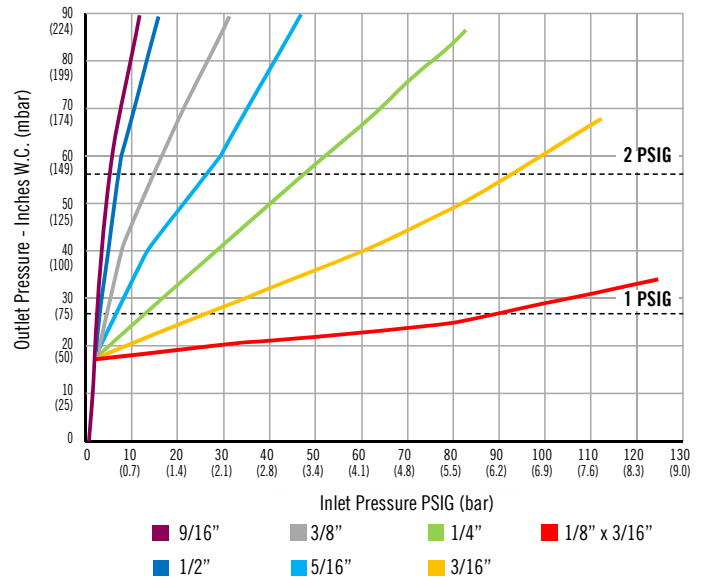
Outlet Pressure Relative to Inlet Pressure

Regulators

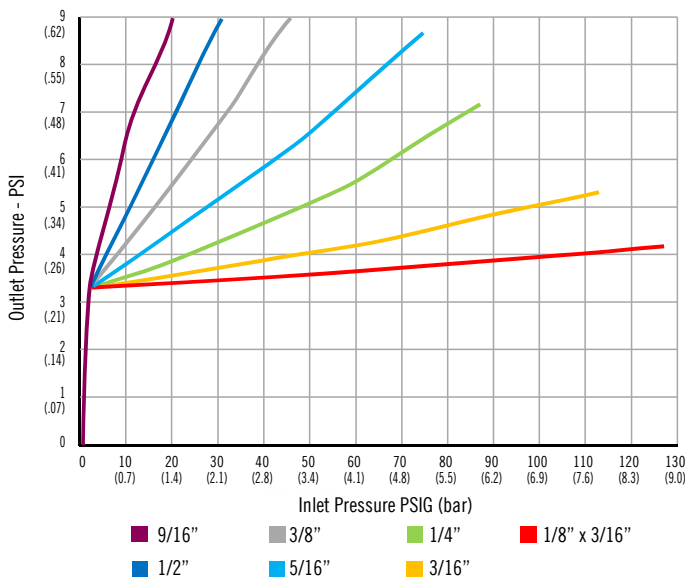
3/4" Screen Vent - No Vent Pipe Set Pressure 7" W.C.



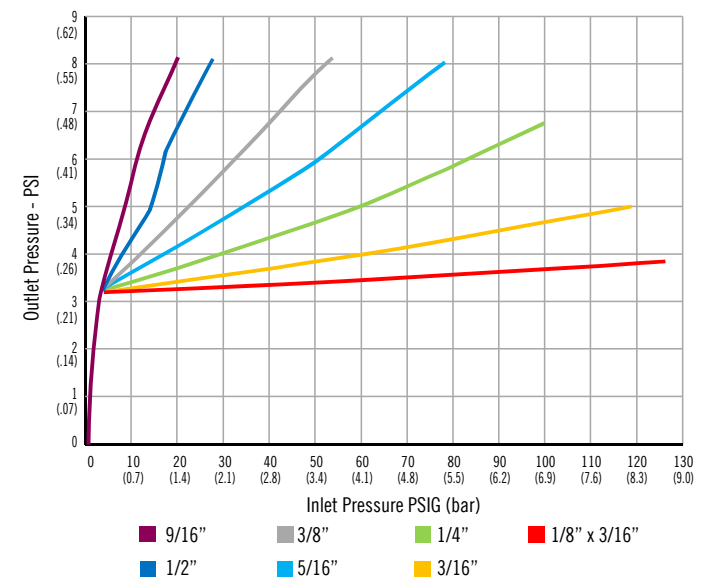
1" Screen Vent - No Vent Pipe Set Pressure 7" W.C.



3/4" Screen Vent - No Vent Pipe Set Pressure 2 PSIG



1" Screen Vent - No Vent Pipe Set Pressure 2 PSIG

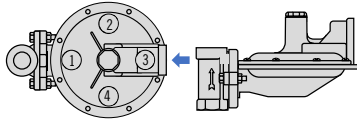


1800C Series Residential Regulator

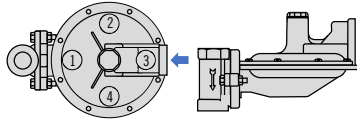
Regulator Assembly Positions

180° Models

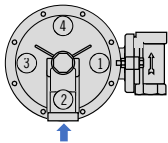
Valve Head Position 'A'



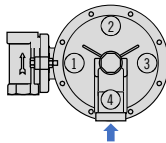
Valve Head Position 'B'



Valve Head Position 'C'

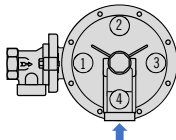


Valve Head Position 'D'

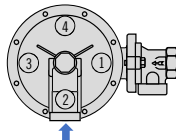


90° Models

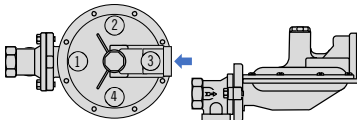
Valve Head Position 'A'



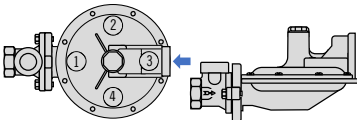
Valve Head Position 'B'



Valve Head Position 'C'

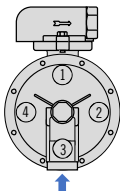


Valve Head Position 'D'



Offset Models

Valve Head Position 'D'



↑ = Standard Vent Position



Example of Regulator Assembly Position

In the photo above the 1813C Regulator shown has a 180-degree valve head in Position "C" (Flow upward) with the vent in position 2 (Looking down). This would be assembly position C2.

Ordering Information

1. Series
2. Model
3. Valve Head Type
4. Pressure Tap
5. Valve Head Size
6. Assembly Position
7. Aluminum Spring
8. RV Spring
9. Seal Plug
10. Seal Disc
11. Top Assembly
12. Inlet Pressure
13. Outlet Pressure
14. Relief Pressure
15. Test Orientation
16. OPSO/UPSO
17. Paint
18. Packing
19. Wrap Type
20. Pallet
21. QTY Per Pallet
22. Sealing Method/Tags
23. Vent Connection
24. Fasteners

1800B2 Series Residential Regulator

Service Regulators

Application:

The 1800B2 Series pressure regulators are designed to control natural gas, air, nitrogen, carbon dioxide, propane vapor, and other non-corrosive gases in residential, light commercial, and small industrial applications. The 1800B2 and B2-HC can be installed in both horizontal and vertical pipelines.

Control:

A comprehensive range of springs is available, as described later. The outlet pressure can be easily and accurately adjusted by turning the spring adjustment unit located under the top cap.

Technical Data:

Inlet Pressures up to 125 PSIG

Outlet Pressures: 3.5" W.C. to 2 PSIG.

All models conform to ANSI Code B109.4-2021, and CGA Service-Type Regulator Specification CAN/CGA-6.18-M22

Vent Elbow

The regulator vent opening should face downward (6 o'clock) to minimize the chance of blockage from ice and snow. If not possible, a 3/4" NPT plastic, 90° vent elbow and separate protective screen may be screwed into the vent to provide the necessary protection.

Elevation Compensation

The E.C. orifice is recommended for installations where the inlet pressure may vary over a wide range. The E.C. orifice is available in two sizes: 1/8" x 3/16" and 3/16". The capacities of these orifices are the same as the standard orifice of the same size.

Full Capacity Relief Valve

Full capacity internal relief valve standard on some models. (See Performance Graphs)

Splashguards

UV stabilized, weather-resistant, resin device that protects the vent screen from splashes while providing a large external vent opening to keep regulators working properly.



Regulators

Maximum Allowable Inlet Pressure to ensure complete lock-up

Orifice	Inlet Pressure (PSIG)
9/16"	20
1/2"	40
3/8"	100
5/16"	110
1/4"	125
3/16"	125
1/8" x 3/16"	125
1/8"	125

Regulator Pressure Rating

MAOP = Maximum Allowable Operating Pressure = Consult capacity charts for MAOP of different regulator series, models, set points and sizes.

175 PSIG (12 bar) = Maximum inlet pressure for abnormal or emergency service, without causing damage to regulator case.

2 PSIG (138 mbar) = Maximum outlet pressure for normal service.

10 PSIG (689 mbar) = Maximum outlet pressure which can be contained by pressure carrying components (no flange leakage to atmosphere except for normal relief action). **If regulator is subjected to these conditions, it should be removed from service.**

50 PSIG (3.5 bar) = Maximum outlet pressure for abnormal service without damage to internal components. **If regulator is subjected to these conditions, it should be removed from service.**

1800B2 Series Residential Regulator

Features, Benefits, & Applications

Features & Benefits

Main Features

- Wide range of valve body connection sizes: 3/4" x 3/4", 3/4" x 1", 3/4" x 1 1/4", 1" x 1", 1" x 1 1/4" and 1 1/4" x 1 1/4" NPT or BSP-TR
- Offset valve body: 3/4" x 3/4", 3/4" x 1" and 1" x 1" NPT or BSP-TR.
- Maximum flow rate is 2500 SCFH (70.8 m3/h).
- Temperature range: -20°F to +150°F (-30°C to 65°C).
- Threaded connections NPT to ANSI/ASME B1.20.1 or BS EN 10226 (ISO 7).
- Variety of interchangeable orifices and spring ranges
- 90 Degree (Right Angle), 180 Degree (Straight-Flow), or Offset Valve Body.

Options

- Over pressure slam shut.
- Under pressure slam shut.
- Elevation compensating orifice.
- 1/8" NPT taps are available on most valve heads.
- Vent elbow.
- Splashguard.

Applications

Model Number	Description
1803B2	Basic regulator, non-relieving with 3/4" or 1" NPT vent.
1803B2-HC	Basic regulator, non-relieving with 3/4" or 1" NPT vent.
1813B2	Basic regulator with full-capacity internal relief with 3/4" or 1" NPT vent.
1813B2-HC	Basic regulator with full-capacity internal relief with 3/4" or 1" NPT vent.
1823B2	Basic regulator, non-relieving with under-pressure shut-off and 3/4" or 1" NPT vent.
1833B2	Basic regulator with full-capacity internal relief and underpressure shut-off and 3/4" or 1" NPT vent.
1843B2	Basic regulator with full-capacity internal relief and overpressure shut-off and 3/4" or 1" NPT vent.
1843B2-HC	Basic regulator with full-capacity internal relief and overpressure shut-off and 3/4" or 1" NPT vent.
1843B2-VL	Basic regulator with limited relief and overpressure shut-off and 3/4" or 1" NPT vent.
1853B2	Basic regulator with full-capacity internal relief and overpressure, underpressure shut-off and 3/4" or 1" NPT vent.
1883B2	Basic regulator, non-relieving with overpressure shut-off and 3/4" or 1" NPT vent.
1883B2-HC	Basic regulator, non-relieving with overpressure shut-off and 3/4" or 1" NPT vent.
1893B2	Basic regulator, non-relieving with overpressure, underpressure shut-off and 3/4" or 1" NPT vent.
1853B2 w/USSA	Basic regulator with full-capacity internal relief and overpressure, underpressure shut-off and 3/4" or 1" NPT vent.
1853B2-HC w/USSA	Basic regulator with full-capacity internal relief and overpressure, underpressure shut-off and 3/4" or 1" NPT vent.
1893B2 w/USSA	Basic regulator, non-relieving with overpressure, underpressure shut-off and 3/4" or 1" NPT vent.
1893B2-HC w/USSA	Basic regulator, non-relieving with overpressure, underpressure shut-off and 3/4" or 1" NPT vent.

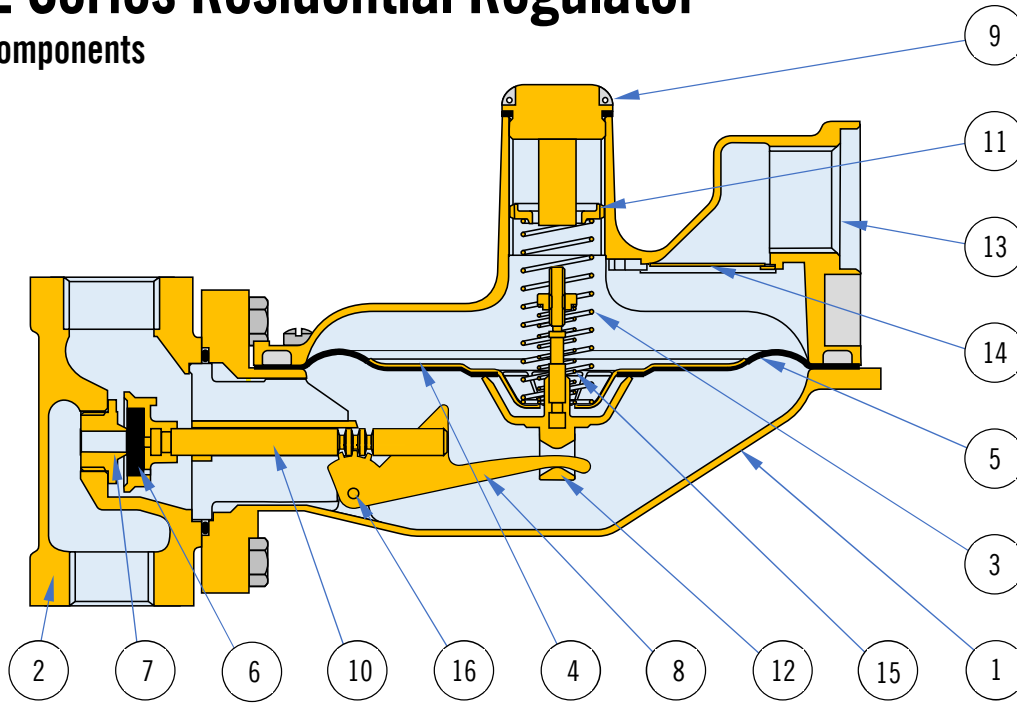
Orifice Size	Standard Part No.	Part No. with OPSO
9/16"	72494P026	72751P019
1/2"	72494P025	72751P016
3/8"	72494P023	72751P014
5/16"	72494P022	72751P013
UPSO	71422G004	7122G004

Orifice Size	Standard Part No.	Part No. with OPSO
1/4"	72494P021	72751P012
3/16"	72494P020	72751P011
1/8" x 3/16"	72494P030	72751P020
1/8"	72494P019	N/A

Regulators

1800B2 Series Residential Regulator

Regulator Components



Regulators

Item No.	Description	Material	Notes
1	Diaphragm Case	Diecast Aluminum	With unique seven-step advanced conversion coating. Single coat polyester primer and high solid polyurethane topcoat.
2	Valve Body	Gray Cast Iron	Undercoated, single coat polyester primer and high solid polyurethane topcoat.
3	Loading Spring	Spring Steel	Zinc plated and chromate. Color coded for identification.
4	Diaphragm Plate	Steel	Electrogalvanized
5	Diaphragm	Buna N	Fabric reinforced
6	Seat Disc	Buna N	60, 70 (std) or 80 durometer rating
7	Orifice	Aluminum	High strength, corrosion resistant
8	Lever	Steel	Zinc plated and yellow chromate.
9	Seal Plug	Minlon	
10	Plunger Guide	Minlon	
11	Pressure Adjustment Screw	Minlon	
12	Relief Valve Stem	Celcon	With steel, zinc plated and yellow chromate insert.

Item No.	Description	Material	Notes
13	Vent Screen	Stainless Steel	All models are designed with a removable weather and bug-proof stainless steel screen to resist freeze-ups and to exclude foreign matter. The vent is threaded 3/4" or 1" NPT (BSP-TR threads available). A vent line can be added to carry gas away to a safe outside location and away from any opening(s) in the building. Comply with applicable Federal, State, and local codes.
14	Vent Valve	Stainless Steel	with Electrogalvanized steel retainer
15	Relief Valve Spring	Spring Steel	Zinc plated and yellow chromate. Non-adjustable. Color coded for identification. Standard set point of 8" W.C. above outlet set pressure of 7" W.C. Standard set point of 1.1 PSIG above outlet set pressure of 2 PSIG.
16	Lever Pin	Carbon Steel	Zinc Plated and yellow chromate
17	Relief Valve Adjustment Nut	Brass, sintered.	

1800B2 Series Residential Regulator

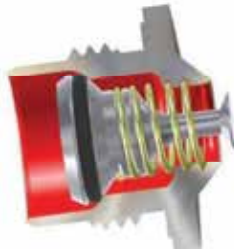
Underpressure Shutoff (UPS0)

Underpressure Shutoff (UPS0) —

The 1823B2, 1833B2, 1853B2, and the 1893B2 regulators come equipped with an underpressure shutoff (UPS0) device which utilizes a spring loaded valve stem and O- ring assembly within an orifice body. It will shut off gas flow through the regulator in the event of an upstream underpressure condition. diaphragm compresses the pressure spring forcing the diaphragm stem upwards and releasing plunger. This permits the shut-off spring to force the shut-off disc against the back side of the special double- ended orifice.



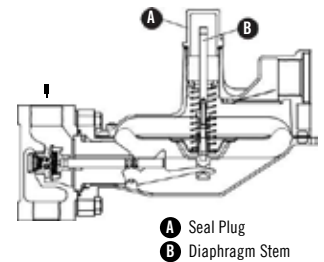
UPS0 in the Open



UPS0 in the Closed

When the inlet underpressure condition has been corrected or repaired, the UPS0 must be manually reset to allow gas flow. Reset is done by unscrewing the seal plug and pulling up on the diaphragm stem. This will open the Underpressure Shutoff and allow gas to flow.

This type of design allows service maintenance to be performed to downstream appliances before pressure is introduced, i.e. lighting the pilot light, closing valves, etc.



A Seal Plug
B Diaphragm Stem

In some cases downstream failure may result in the regulator shutting off.

Excessive flow may result in a decrease in downstream pressure which opens the seat disc away from the orifice until the Underpressure Shutoff takes over and shuts the regulator off.

The design has been tested and meets capacity requirements, while insuring efficient and reliable resetting operation even at sub-zero temperatures.

Capacities of the Underpressure Shutoff orifice:

Set Point: 7" W.C.

Inlet Pressure: 20 PSIG

Set at 50 cubic feet per hour

Maximum inlet pressure rating of 60 PSIG

Applicable to 3/4", 1", and 1 1/4" valve bodies

Inlet Pressure (PSIG)	Max. Flow Rate (SCFH)
3	300
5	400
10	600
15	750
20	900
30	1000
40	1300
60	1500

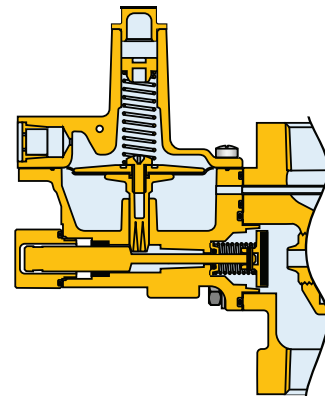
1800B2 Series Residential Regulator

Slam Shut Valves

Over Pressure Slam Shut

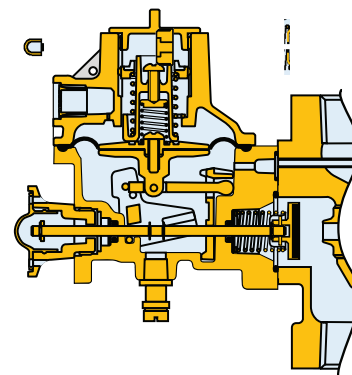
Overpressure Shutoff (OPSO) — Operates independently. The OPSO will shut off the gas supply in the event of a serious downstream pressure build-up. These are available in two pressure ranges on the Models 1843B2, 1843B2-HC, 1843B2-VL, 1853B2, 1883B2, 1883B2- HC, and 1893B2.

When the outlet pressure exceeds the OPSO set point, the pressure under the OPSO diaphragm compresses the pressure spring forcing the diaphragm stem upwards and releasing plunger. This permits the shut-off spring to force the shut-off disc against the back side of the special double-ended orifice.



USSA Slam Shut

The Universal Safety Shutoff Assembly (USSA) can be fitted to an AMCO 1800 Industrial Regulator on the inlet side of the valve head. This provides over pressure and under pressure protection with immediate shut-off at the regulator inlet. It uses well proven principles to give exceptional consistency of operation and an unrivalled insensitivity to nuisance tripping. The USSA senses downstream regulator pressure through a brass sensing tube. In the event of an Overpressure or Underpressure occurrence, there is excess motion of the diaphragm, which causes the USSA mechanism to trip. Shutoff occurs when the spring-loaded seat disc is released to seal off the inlet side of the main regulator orifice.



The OPSS and UPSS loading springs are fitted concentrically and can be adjusted independently.

USSA Specifications

Universal Safety Shutoff Assemblies (USSAs) can be fitted to AMCO Industrial Regulators with inlet pressures from 1/2 psig to 125 psig.

The USSA meets all applicable EN334 standards of performance with the following features:

- Diaphragm Moulded Buna N with Sealing Ring Minimum burst pressure >100 psig
- Shutoff Pressures OPSO (7.5" w.c. to 35 psig) UPSO (3.0" w.c. to 60" w.c.).
- Repeatability OPSO (< 1% absolute pressure – " w.c. units) (< 1/2% absolute pressure – psig units) UPSO (< 2% absolute pressure – all units)
- Response Time Less than one second
- Service Life Type approval of 3000 on/shutoff/reset cycles USSA rated for 20-year average service life
- Temperature Range Operates at -20°F to +140°F
- Vent bug shield is standard equipment.

All USSA models have a Green "Flag" Visual Flow Indicator that shows proper Regulator flow. When the OPSO or UPSO trips, the Green Flag is withdrawn into the USSA, showing that the unit needs to be reset.

1800B2 Series Residential Regulator

Loading Springs

REGULATOR LOADING SPRINGS		
Shut Off Pressure	Part Number	Color Code
3.5" to 6" W.C.	70017P043	Blue
3.5" to 7.5" W.C.	70017P089	Tan
5.5" to 8.5" W.C.	70017P044	Yellow
6" to 12" W.C.	70017P137	Brown
6" to 15" W.C.	70017P042	Purple
12" to 28" W.C.	70017P060	White
24" to 48" W.C.	70017P082	Red
42" W.C. to 2 PSIG	70017P049	Red - Red

OPSO SHUTOFF SPRINGS		
Shut Off Pressure	Part Number	Color Code
14" to 35" W.C.	71403P005	Green
1 PSIG to 2 PSIG	71403P004	Black

USSA SLAM SHUT - OVER PRESSURE SPRINGS		
Shut Off Pressure	Part Number	Color Code
7.5 - 24 "W.C.	70017P123	Black
20 - 32 "W.C.	70017P124	Orange
24 - 44 "W.C.	70017P125	Red
40 - 84 "W.C.	70017P126	Dark Green
3 - 5 PSIG	70017P127	Yellow
4 - 7 PSIG	70017P128	White

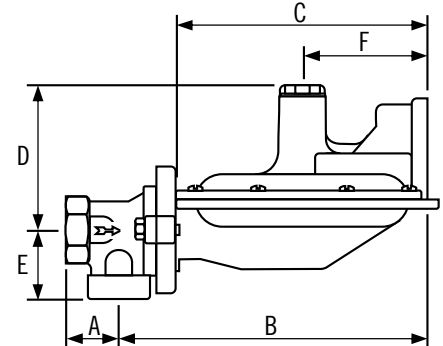
USSA SLAM SHUT - UNDER PRESSURE SPRINGS		
Shut Off Pressure	Part Number	Color Code
3 - 6 "W.C.	70017P133	Light Blue
6 - 24 "W.C.	70017P134	Brown
24 - 60 "W.C.	70017P135	Purple

Regulators

1800B2 Dimensions

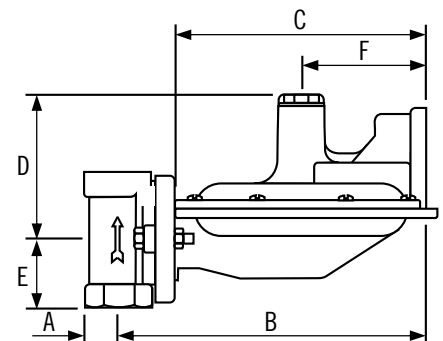
Model 1803B2, 1813B2 - 90°

		DIMENSIONS					
INLET	OUTLET	A	B	C	D	E	F
3/4"	3/4"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm



Model 1803B2, 1813B2 - 180°

		DIMENSIONS					
INLET	OUTLET	A	B	C	D	E	F
3/4"	3/4"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1 1/4"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm



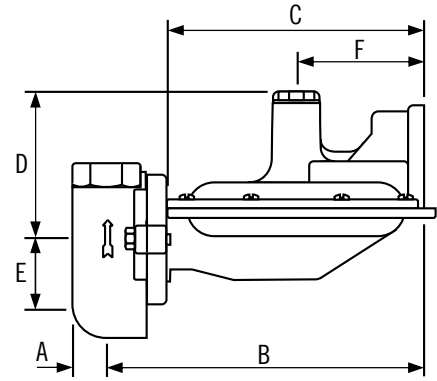
1 1/4" Outlet - High Capacity

1800B2 Series Residential Regulator

1800B2 Dimensions

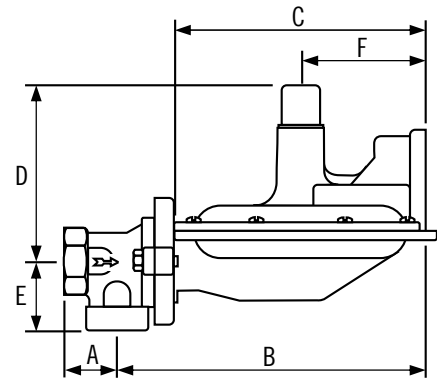
Model 1803B2 and 1813B2 - Offset

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm



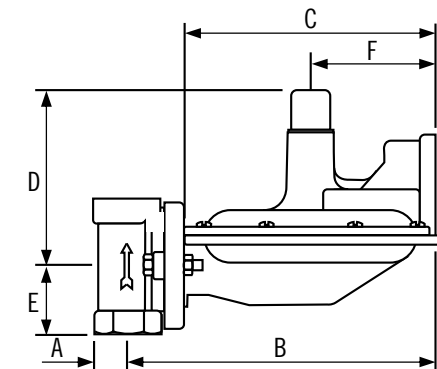
Model 1823B2 and 1833B2 - 90°

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1 9/16" 39.7mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm



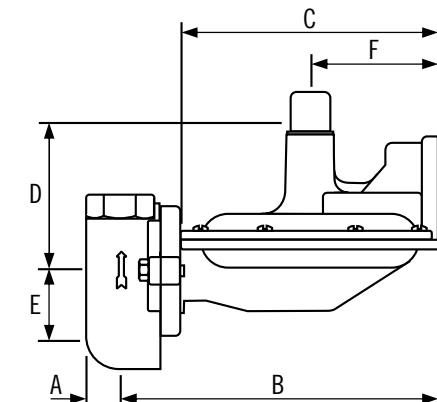
Model 1823B2 and 1833B2 - 180°

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
1"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
1 1/4"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1 1/4"	1 1/8" 28.6mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm



Model 1823B2 and 1833B2 - Offset

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	1" 25.4mm	8 7/8" 225.4mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm



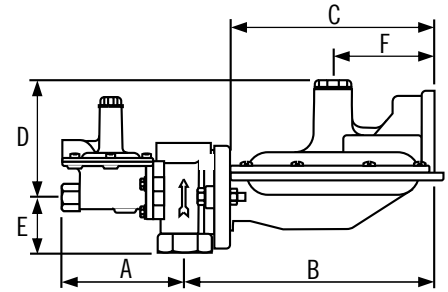
1800B2 Series Residential Regulator

1800B2 & 1800B2-HC Dimensions

Model 1843B2 and 1883B2

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1 1/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1 1/4"	1 1/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm

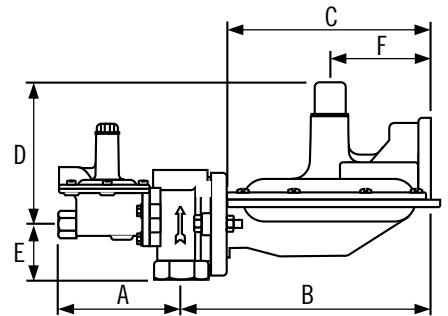
1 1/4" Outlet - High Capacity



Model 1843B2 and 1883B2

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
1"	1 1/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm
1 1/4"	1 1/4"	4 1/2" 114.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	5 1/8" 130.2mm	2" 50.8mm	3 5/8" 92.1mm

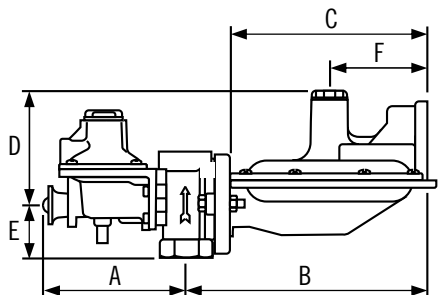
1 1/4" Outlet - High Capacity



Model 1853B2 and 1893B2 +USSA

INLET	OUTLET	DIMENSIONS					
		A	B	C	D	E	F
3/4"	3/4"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
3/4"	1"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1"	1 1/4"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm
1 1/4"	1 1/4"	5.25" 133.3mm	8 15/16" 227.0mm	7 1/4" 184.2mm	4 1/8" 104.8mm	2" 50.8mm	3 5/8" 92.1mm

1 1/4" Outlet - High Capacity



1800B2 Series Residential Regulator

1800B2 Series Regulator Capacity Performance SCFH (m3/h)

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
1 (0.07)	—	150 (4.2)	175 (5.0)	250 (7.1)	300 (8.5)	350 (9.9)	350 (9.9)
2 (0.14)	150 (4.2)	225 (6.4)	275 (7.8)	375 (10.6)	400 (11.3)	475 (13.4)	475 (13.4)
3 (0.21)	200 (5.7)	300 (8.5)	375 (10.6)	425 (12.0)	500 (14.2)	550 (15.6)	600 (17.0)
5 (0.34)	250 (7.1)	400 (11.3)	500 (14.2)	600 (17.0)	700 (19.8)	800 (22.7)	1000 (28.3)
10 (0.70)	350 (9.9)	600 (17.0)	850 (24.1)	1000 (28.3)	1200 (34.0)	1300 (36.8)	1400 (39.6)
15 (1.00)	425 (12.0)	900 (25.5)	1100 (31.2)	1500 (42.5)	1500 (42.5)	1500 (42.5)	1600 (45.3)
20 (1.40)	500 (14.2)	1100 (31.2)	1400 (39.6)	1600 (45.3)	1800 (51.0)	1800 (51.0)	1900 (53.8)
30 (2.10)	650 (18.4)	1400 (39.6)	1800 (51.0)	2100 (59.5)	2100 (59.5)	2100 (59.5)	—
40 (2.80)	800 (22.7)	1800 (51.0)	2200 (62.3)	2400 (68.0)	2500 (70.8)	—	—
60 (4.10)	1100 (31.2)	2200 (62.3)	2500 (70.8)	2500 (70.8)	—	—	—
100 (6.90)	1700 (48.1)	2400 (68.0)	2500 (70.8)	—	—	—	—
125 (8.60)	2000 (56.6)	—	—	—	—	—	—

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
2 (0.14)	175 (5.0)	250 (7.1)	350 (9.9)	375 (10.6)	400 (11.3)	475 (13.4)	475 (13.4)
3 (0.21)	200 (5.7)	325 (9.2)	400 (11.3)	425 (12.0)	500 (14.2)	550 (15.6)	600 (17.0)
5 (0.34)	275 (7.8)	425 (12.0)	550 (15.6)	600 (17.0)	700 (19.8)	800 (22.7)	1000 (28.3)
10 (0.70)	350 (9.9)	650 (18.4)	900 (25.5)	1000 (28.3)	1400 (39.6)	1500 (42.5)	1800 (51.0)
15 (1.00)	425 (12.0)	900 (25.5)	1200 (34.0)	1500 (42.5)	1800 (51.0)	2100 (59.5)	2400 (68.0)
20 (1.40)	500 (14.2)	1100 (31.2)	1600 (45.3)	1800 (51.0)	2300 (65.1)	2500 (70.8)	2500 (70.8)
30 (2.10)	650 (18.4)	1400 (39.6)	2200 (62.3)	2500 (70.8)	2500 (70.8)	2500 (70.8)	—
40 (2.80)	800 (22.7)	1800 (51.0)	2500 (70.8)	2500 (70.8)	2500 (70.8)	2500 (70.8)	—
60 (4.10)	1100 (31.2)	2400 (68.0)	2500 (70.8)	2500 (70.8)	2500 (70.8)	—	—
100 (6.90)	1700 (48.1)	2500 (70.8)	2500 (70.8)	—	—	—	—
125 (8.60)	2000 (56.6)	—	—	—	—	—	—

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

3/4" Outlet

**Set Point 7.0" W.C. (17.4 mbar)
at 50 SCFH**

0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P044. Outlet pressure variance not to exceed +2", 1" W.C. from set point, horizontal position

1" Outlet

**Set Point 7.0" W.C. (17.4 mbar)
at 50 SCFH**

0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P044. Outlet pressure variance not to exceed +2", 1" W.C. from set point, horizontal position

1800B2 Series Residential Regulator

1800B2 Series Regulator Capacity Performance SCFH (m³/h)

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
2 (0.14)	175 (5.0)	250 (7.1)	350 (9.9)	475 (13.4)	500 (14.2)	650 (18.4)	900 (25.5)
3 (0.21)	225 (6.4)	325 (9.2)	475 (13.4)	550 (15.6)	700 (19.8)	1000 (28.3)	1500 (42.5)
5 (0.34)	275 (7.8)	475 (13.4)	750 (21.2)	1000 (28.3)	1200 (34.0)	2000 (56.6)	2500 (70.8)
10 (0.70)	375 (10.6)	800 (22.7)	1500 (42.5)	2200 (62.3)	2500 (70.8)	2500 (70.8)	2500 (70.8)
15 (1.00)	450 (12.7)	1000 (28.3)	1800 (51.0)	2500 (70.8)	2500 (70.8)	2500 (70.8)	2500 (70.8)
20 (1.40)	500 (14.2)	1200 (34.0)	2100 (59.5)	2500 (70.8)	2500 (70.8)	—	—
30 (2.10)	650 (18.4)	1600 (45.3)	2500 (70.8)	—	—	—	—
40 (2.80)	800 (22.7)	1900 (53.8)	—	—	—	—	—
60 (4.10)	1100 (31.2)	—	—	—	—	—	—
100 (6.90)	1700 (48.1)	—	—	—	—	—	—

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
5 (0.34)	200 (5.7)	300 (8.5)	375 (10.6)	475 (13.4)	475 (13.4)	600 (17.0)	700 (19.8)
10 (0.70)	325 (9.2)	450 (12.7)	600 (17.0)	750 (21.2)	800 (22.7)	1100 (31.2)	1200 (34.0)
15 (1.00)	425 (12.0)	600 (17.0)	800 (22.7)	1000 (28.3)	1000 (28.3)	1400 (39.6)	1500 (42.5)
20 (1.40)	500 (14.2)	750 (21.2)	1000 (28.3)	1200 (34.0)	1300 (36.8)	1600 (45.3)	1800 (51.0)
30 (2.10)	600 (17.0)	950 (26.9)	1300 (36.8)	1600 (45.3)	1700 (48.1)	2300 (65.1)	—
40 (2.80)	750 (21.2)	1200 (34.0)	1600 (45.3)	1900 (53.8)	2100 (59.5)	2500 (70.8)	—
60 (4.10)	1100 (31.2)	1600 (45.3)	2100 (59.5)	2300 (65.1)	2500 (70.8)	—	—
100 (6.90)	1600 (45.3)	2200 (62.3)	2500 (70.8)	—	—	—	—
125 (8.60)	2000 (56.6)	—	—	—	—	—	—

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1 1/4" Outlet Set Point 7.0" W.C. (17.4 mbar) at 50 SCFH

SCFH (m³/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P044. Outlet pressure variance not to exceed +2", 1" W.C. from set point, horizontal position.

3/4" Outlet Set Point 2 PSIG (0.14 bar) at 50 SCFH

SCFH (m³/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

Regulators

1800B2 Series Residential Regulator

1800B2 Series Regulator Capacity Performance SCFH (m3/h)

Regulators

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
5 (0.34)	200 (5.7)	300 (8.5)	375 (10.6)	475 (13.4)	475 (13.4)	600 (17.0)	700 (19.8)
10 (0.70)	350 (9.9)	475 (13.4)	600 (17.0)	750 (21.2)	850 (24.1)	1200 (34.0)	1300 (36.8)
15 (1.00)	425 (12.0)	650 (18.4)	850 (24.1)	1000 (28.3)	1100 (31.2)	1500 (42.5)	1700 (48.1)
20 (1.40)	500 (14.2)	800 (22.7)	1100 (31.2)	1300 (36.8)	1400 (39.6)	2000 (56.6)	2300 (65.1)
30 (2.10)	650 (18.4)	1000 (28.3)	1500 (42.5)	1800 (51.0)	2000 (56.6)	2500 (70.8)	—
40 (2.80)	800 (22.7)	1300 (36.8)	1900 (53.8)	2400 (68.0)	2500 (70.8)	2500 (70.8)	—
60 (4.10)	1100 (31.2)	2100 (59.5)	2500 (70.8)	2500 (70.8)	2500 (70.8)	—	—
100 (6.90)	1600 (45.3)	2500 (70.8)	2500 (70.8)	—	—	—	—
125 (8.60)	2000 (56.6)	—	—	—	—	—	—

1" Outlet

Set Point 2 PSIG (0.14 bar) at 50 SCFH

SCFH (m3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
5 (0.34)	200 (5.7)	300 (8.5)	375 (10.6)	475 (13.4)	500 (14.2)	600 (17.0)	750 (21.2)
10 (0.70)	350 (9.9)	475 (13.4)	500 (14.2)	750 (21.2)	950 (26.9)	1200 (34.0)	1400 (39.6)
15 (1.00)	425 (12.0)	650 (18.4)	650 (18.4)	1100 (31.2)	1300 (36.8)	1800 (51.0)	2100 (59.5)
20 (1.40)	500 (14.2)	800 (22.7)	850 (24.1)	1400 (39.6)	1700 (48.1)	2400 (68.0)	2500 (70.8)
30 (2.10)	650 (18.4)	1000 (28.3)	1100 (31.2)	2300 (65.1)	2500 (70.8)	2500 (70.8)	—
40 (2.80)	800 (22.7)	1300 (36.8)	1500 (42.5)	2500 (70.8)	2500 (70.8)	2500 (70.8)	—
60 (4.10)	1100 (31.2)	2100 (59.5)	2400 (68.0)	2500 (70.8)	2500 (70.8)	—	—
100 (6.90)	1700 (48.1)	2500 (70.8)	2500 (70.8)	—	—	—	—
125 (8.60)	2100 (59.5)	—	—	—	—	—	—

1 1/4" Outlet

Set Point 2 PSIG (0.14 bar) at 50 SCFH

SCFH (m3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P049. Outlet pressure variance not to exceed +/- 10% from set point, horizontal position.

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1800B2 Series Residential Regulator

1800B2-HC Series Regulators

Ideal for light commercial and industrial use, the 1-1/4" 1800B"-HC Series regulator is designed to increase output capacity during medium to high inlet pressure operations.

General Information

The 1800B2-HC Series regulator's lightweight design features high-capacity capabilities for 1-1/4" NPT connections and flow capacities up to 4600 SCFH depending on inlet pressure and orifice selection. It complements the 1800B2 Series of regulators.

1800B2-HC Series Regulator Capacity Performance

SCFH (m3/h)

Inlet PSIG (bar)	Orifice						
	1/8" x 3/16"	3/16"	1/4"	5/16"	3/8"	1/2"	9/16"
1 (0.07)	—	150 (4.2)	225 (6.4)	225 (6.4)	200 (4.2)	325 (9.2)	300 (8.5)
2 (0.14)	150 (4.2)	200 (5.7)	275 (7.8)	300 (8.5)	350 (9.9)	375 (10.6)	450 (12.7)
3 (0.21)	200 (5.7)	250 (7.1)	350 (9.9)	350 (9.9)	425 (12.0)	600 (17.0)	600 (17.0)
5 (0.34)	250 (7.1)	350 (9.9)	425 (12.0)	500 (14.2)	600 (17.0)	750 (21.2)	850 (24.1)
10 (0.70)	350 (9.9)	500 (14.2)	650 (18.4)	800 (22.7)	800 (22.7)	1500 (42.5)	1700 (48.1)
15 (1.00)	425 (12.0)	600 (17.0)	900 (25.5)	950 (26.9)	1500 (42.5)	2200 (62.3)	2300 (65.1)
20 (1.40)	500 (14.2)	750 (21.2)	1000 (28.3)	2100 (59.4)	2200 (62.3)	2700 (76.4)	2900 (82.1)
30 (2.10)	650 (18.4)	1200 (34.0)	1700 (48.1)	3600 (101.9)	3000 (84.9)	3900 (110.4)	—
40 (2.80)	800 (22.7)	1650 (46.7)	2600 (73.6)	4300 (121.7)	4100 (116.0)	—	—
60 (4.10)	1100 (31.2)	2500 (70.8)	4500 (127.4)	4600 (130.2)	3900 (110.4)	—	—
100 (6.90)	1700 (48.1)	3900 (110.4)	2500 (70.8)	—	—	—	—
125 (8.60)	1900 (53.8)	—	—	—	—	—	—

1 1/4" Outlet Set Point 7.0" W.C. (17.4 mbar) at 50 SCFH

SCFH (m3/h) 0.60 specific gravity gas at 60°F and 14.7 PSIA (20°C and 1.01 bar).

Pressure spring 70017P044. Outlet pressure variance not to exceed +2" -1" W.C. from set point, horizontal position

For optimum performance, maximum inlet pressure should not exceed maximum capacity rating for any given orifice size.

1800B2 Series Residential Regulator

1800B2 and 1800B2-HC Series Service Regulators - Other Technical Data

Full-Open Regulator Relief Capacity

For sizing downstream relief valves, use the following formulas to determine the regulator full-open capacity:

Critical flow rates: *sub-critical flows:*

$$Q = 0.5 C \times \frac{P_1}{\sqrt{G}} \quad Q = C \times \frac{\sqrt{P_2 h}}{\sqrt{G}}$$

Critical flow occurs when the absolute outlet pressure is less than about 1/2 of the absolute inlet pressure.

- Q Maximum capacity of regulator
- C Orifice constant (see table below)
- P₁ Inlet absolute pressure (PSIA)
- P₂ Outlet absolute pressure (PSIA)
- h Differential pressure
- G Specific gravity of gas

Orifice Constants

Orifice	C
1/8"	25
1/8" x 3/16"	25
3/16"	57
1/4"	98
5/16"	149
3/8"	208
1/2"	353
9/16"	421

Other Gas Capacities

To determine the capacity of these regulators for gases other than natural gas, multiply the values within the capacity tables by a Specific Gravity Conversion Factor (F_g). The table below lists this factor for some of the more common gases.

GAS TYPE	SPECIFIC GRAVITY	CONVERSION FACTOR (F _g)
Air	1.00	0.77
Butane	2.01	0.55
Carbon Dioxide	1.52	0.63
Nitrogen	0.97	0.79
Propane	1.53	0.63

To calculate the Conversion Factor for other gases:

$$\sqrt{\frac{\text{Specific gravity of gas on which the capacity table is based}}{\text{Specific gravity of gas being used}}}$$

Example: If using propane and only having tables based on natural gas, the Specific Gravity Conversion Factor is:

$$(F_g) = \sqrt{\frac{\text{Specific gravity of natural gas (0.6)}}{\text{Specific gravity of propane (1.53)}}}$$

$$(F_g) = \sqrt{\frac{0.60}{1.53}}$$

$$(F_g) = 0.626$$

1800B2 Series Residential Regulator

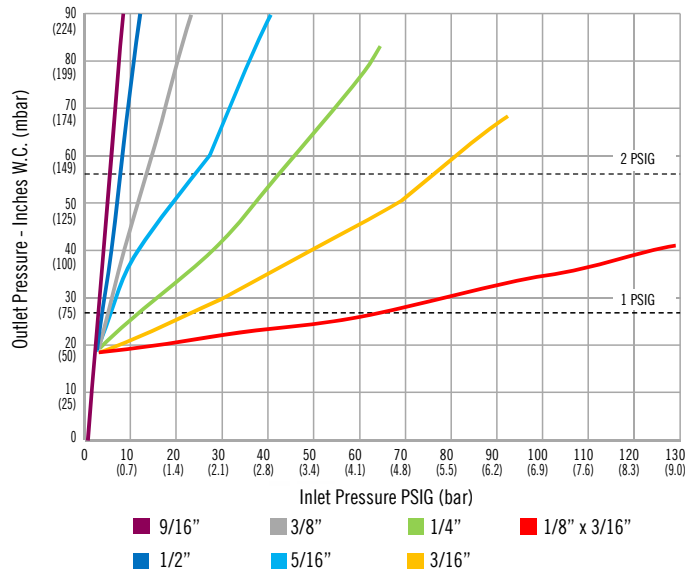
1800B2 and 1800B2-HC Series Service Regulators

Regulator Relief Valve Performance

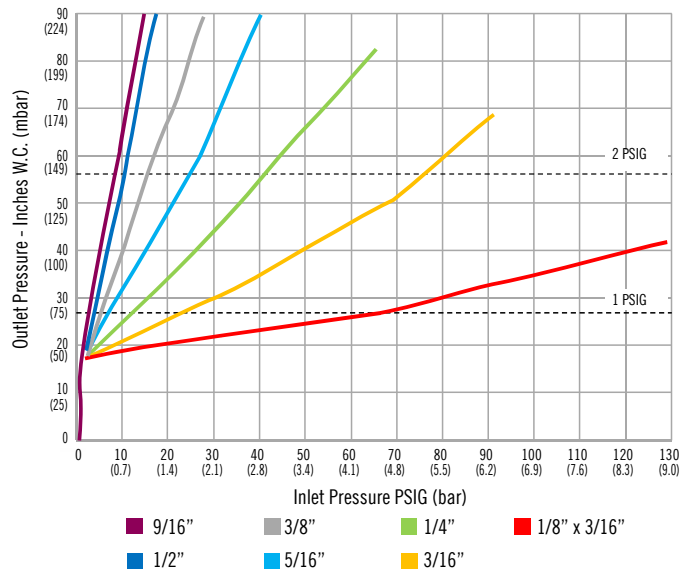
There are several methods of measuring the relief performance of a regulator. The worst case scenario will occur when the lever is disconnected. The data presented in the tables below represent this condition.

Outlet Pressure Relative to Inlet Pressure

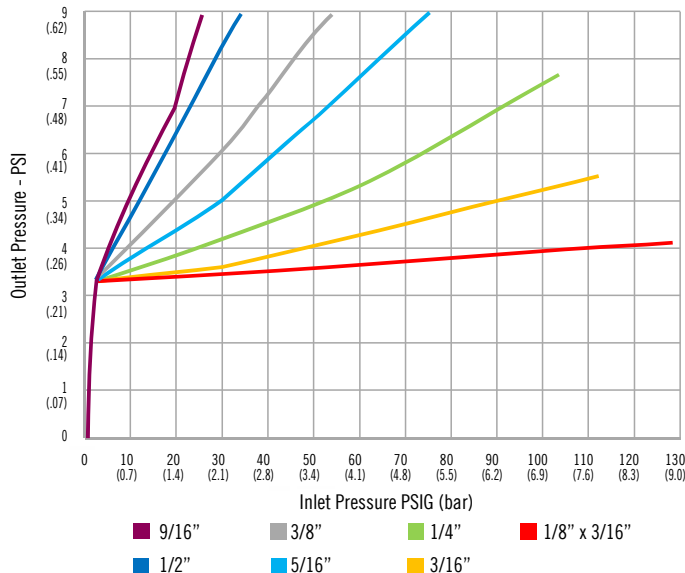
3/4" Screen Vent - No Vent Pipe Set Pressure 7" W.C.



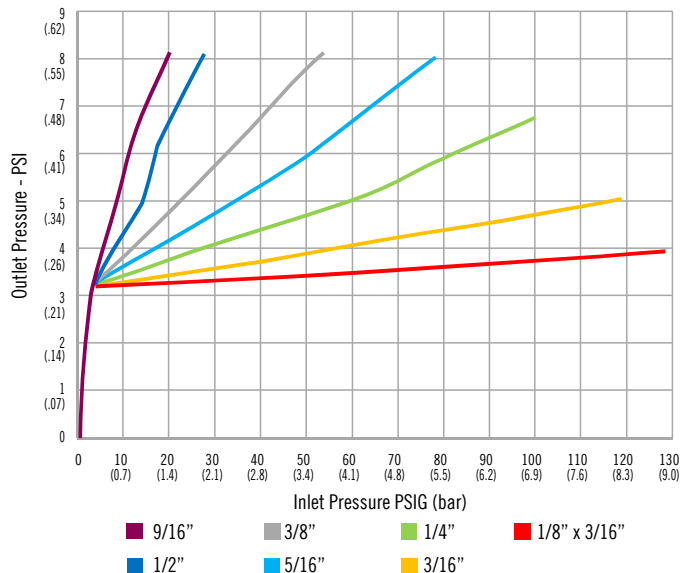
1" Screen Vent - No Vent Pipe Set Pressure 7" W.C.



3/4" Screen Vent - No Vent Pipe Set Pressure 2 PSIG



1" Screen Vent - No Vent Pipe Set Pressure 2 PSIG



1800B2 Series Residential Regulator

1843B2-VL Regulator with Limited Relief

The 1843B2-VL has a limited relief feature that reduces the amount of gas released to the atmosphere.

General Information

Limited Relief is accomplished by installing a relief limiter cup inside the diaphragm assembly of the 1843B2 regulator. The 1843B2-VL regulator utilizes overpressure protection as part of its assembly, which will shut off the gas in the event of over pressure condition.



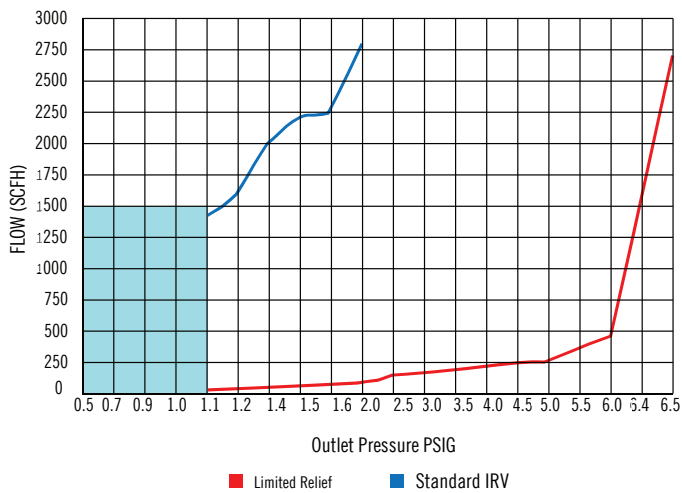
Full Relief Diaphragm Assembly

Under regulator lockup conditions, an increase in gas temperature or very small gas leakage through the orifice can raise the outlet gas pressure. The limited relief will release this small increase in outlet pressure to atmosphere without the OPSO tripping. But should the outlet pressure continue to increase for some reason, then the OPSO will shut off and close off the gas flow.

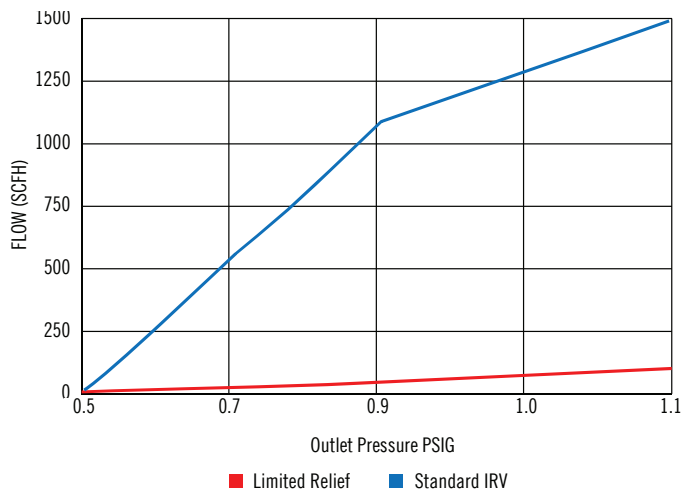
3/8" OD minimum pipe size is recommended should the relief connection require piping to a safe location. Care must be taken to prevent water from closing off or entering into the vent opening. Any kind of blockage of the vent or vent pipe must be prevented.

Below is a graphical representation of the difference of gas flow between a standard relief valve and a limited relief valve.

Flow Through Vent



Flow Through Vent - Enlarged View of Tinted Area



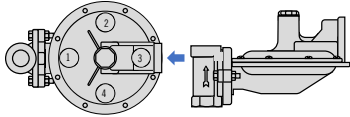
Regulators

1800B2 Series Residential Regulator

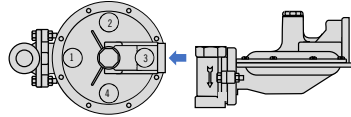
Regulator Assembly Positions

180° Models

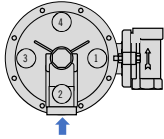
Valve Head Position 'A'



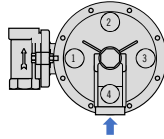
Valve Head Position 'B'



Valve Head Position 'C'

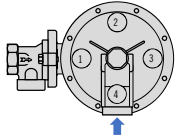


Valve Head Position 'D'

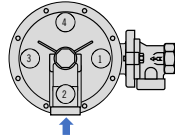


90° Models

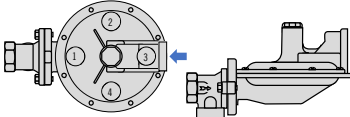
Valve Head Position 'A'



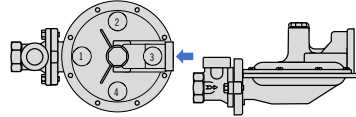
Valve Head Position 'B'



Valve Head Position 'C'

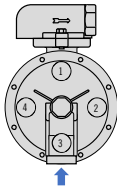


Valve Head Position 'D'



Offset Models

Valve Head Position 'D'



↑ = Standard Vent Position

Offset Valve Body



Example of Regulator Assembly Position

In the photo above the 1813B2 Regulator shown has a 180-degree valve head in Position "C" (Flow upward) with the vent in position 2 (Looking down). This would be assembly position C2.

Ordering Information

1. Series
2. Model
3. Valve Head Type
4. Pressure Tap
5. Valve Head Size
6. Assembly Position
7. Aluminum Spring
8. RV Spring
9. Seal Plug
10. Seal Disc
11. Top Assembly
12. Inlet Pressure
13. Outlet Pressure
14. Relief Pressure
15. Test Orientation
16. OPSO/UPS0
17. Paint
18. Packing
19. Wrap Type
20. Pallet
21. QTY Per Pallet
22. Sealing Method/Tags
23. Vent Connection
24. Fasteners

Shipping Weight

17.5 lbs/carton of four regulators.

1800CPB2 Series Pilot-Loaded Residential Regulator

Brief information

Application: The 1800CPB2 regulator is designed for pressure reducing service requiring stability and metering accuracy. They are used on gas distribution systems as intermediate or low-pressure regulators. They are also effective for large farm and commercial operations with widely varying inlet pressures up to 125 PSIG with accurate control of outlet pressures between 1 PSIG and 30 PSIG. 1800CPB2 regulators are excellent for use with American Meter large capacity meters as well as with American Meter domestic meters. Model 1883CPB2 is equipped with overpressure shutoff (OPSO) that provides protection against downstream overpressure.

The 1800CPB2 regulator will accurately control the metering pressure to a constant value, thus the pressure correction factor becomes a constant factor for a given metering pressure. The pressure-corrected volume equals meter volume multiplied by the pressure factor constant.

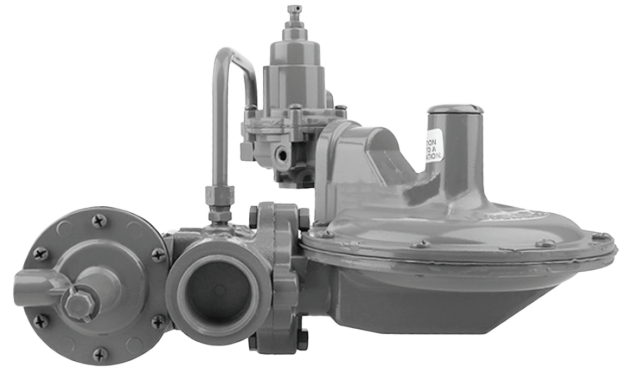
General Information

The American Meter Series 1800CPB2 pressure regulator is designed for natural gas applications and features a compact, lightweight design for fast, easy installation.

The 1800CPB2 regulator consists of a main regulator and a pilot regulator. It is a downstream bleed, pressure loaded regulator, designed to provide stability of operation for precise and constant outlet metering pressure control. The regulator is capable of handling varying inlet pressures up to 125 PSIG while controlling a set constant outlet pressure (1 to 30 PSIG) within $\pm 1\%$ of the absolute set pressure over a wide range of flow rates.

The main regulator is normally closed, furnished with one spring (for all outlet pressures) to close the regulator if loading pressure fails. The pilot regulator outlet line mounts to the main regulator vent and connection tubing brings the main regulator inlet pressure to the pilot regulator inlet.

The pilot regulator (one spring controls all outlet pressures from 1 PSIG to 30 PSIG) is used to load pressure on the diaphragm of the main regulator. Adjustment of the pilot regulator depends upon the inlet pressure and outlet pressure range desired. The pilot regulator using upstream pressure as its supply, reduces this pressure to a pre-determined value and then loads the main regulator diaphragm. The loading pressure overcomes the force of the main regulator spring causing the main regulator to open.



Model Number	Description
1803CPB2	Compact Pilot-loaded regulator, non-relieving
1883CPB2	Compact Pilot-loaded regulator, non-relieving with over-pressure shut off (OPSO)

FEATURES & BENEFITS

Main Features

3/4" x 3/4", 3/4" x 1", 1" x 1", 1" x 1 1/4" and 1 1/4" x 1 1/4" NPT or BSP-TR.

Available 90° valve body sizes

(1800CPB2 only) are: 3/4" x 3/4", 3/4" x 1", 1" x 1" NPT.

Maximum Allowable Inlet Pressure to ensure complete lock-up

Orifice Size	Inlet Pressure PSIG (bar)
1/2"	50
3/8"	80
5/16"	100
1/4"	100
3/16"	125
1/8" x 3/16"	125

Regulator Pressure Rating

MAOP = Maximum Allowable Operating Pressure = Consult capacity charts for MAOP of different regulator series, models, set points and sizes.

175 PSIG (12 bar) = Maximum inlet pressure for abnormal or emergency service, without causing damage to regulator case.

2 PSIG (138 mbar) = Maximum outlet pressure for normal service.

10 PSIG (689 mbar) = Maximum outlet pressure which can be contained by pressure carrying components (no flange leakage to atmosphere except for normal relief action). **If regulator is subjected to these conditions, it should be removed from service.**

50 PSIG (3.5 bar) = Maximum outlet pressure for abnormal service without damage to internal components. **If regulator is subjected to these conditions, it should be removed from service.**

1800CPB2 Series Pilot-Loaded Residential Regulator

1800B2-L Regulator with Limited Relief

Exclusive Seven-Step Corrosion Protection

The protective finish on the Series 1800CPB2 regulators resists corrosive effects of weather and harsh environments better than any other in the industry. Each precision die-cast aluminum regulator is treated inside and out with a special conversion coating that's part of an exclusive, seven-step finishing process. This coating greatly inhibits oxidation of the metal's surface that can eventually compromise the integrity of the metal. It also prevents finish paint from cracking and blistering. A single-coat polyester primer and the high solid poly urethane topcoat provide a long-lasting protection to all exterior regulator surfaces. The American Meter conversion coating process meets all environmental protection regulations.

High Tensile Strength Valve Bodies

Each Series of 1800CPB2 regulators is equipped with a high tensile strength cast-iron valve body and features extra heavy wall thickness. This provides maximum strength to withstand installation stresses without damage and prevents thread galling experienced with aluminum.

Series 1800CPB2 regulator valve bodies are treated with a five-step metal finishing process. The treated metal is primer painted with a single-coat polyester paint.

Fixed Factor Measurement

Fixed factor measurement is the measurement of gas at a controlled, elevated pressure without the use of an automatic correcting device to correct the volume for variations from base or contract pressure. The 1800CPB2 regulator provides accurately controlled, constant metering pressure for this application.

Volume of gas being metered at other than base pressure must be corrected to base or contract conditions. The American Gas Association specifies that a cubic foot of gas at base conditions be defined as the quantity which occupies a volume of one cubic foot at a pressure of 14.73 PSIA and at a temperature of 60°F.

Therefore, to determine the volume of gas at medium or high pressure, the volume must be corrected to base or contract pressure.

The correction factor to correct volume for pressure is determined from Boyle's Law:

$$\text{Volume Corrected} = \text{Volume Metered} \times \frac{\text{Metering Pressure} + \text{Atmospheric Pressure}}{\text{Base Pressure}}$$

Where temperature varies, American Meter recommends the 1800CPB2 regulator be used with a pressure compensating index for the desired metering pressure and with an American Meter temperature compensated meter to provide accurate flow measurement without subsequent calculations.

1800CPB2 Series Pilot-Loaded Residential Regulator

Regulator Capacity Performance - Capacity 3/4" Model 1800CPB2 Regulator

1/8" x 3/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	375 (10.6)	450 (12.7)	600 (17.0)	775 (21.9)	1000 (28.3)	1450 (41.1)	1800 (51.0)	1900 (53.8)
2 (0.14)	375 (10.6)	450 (12.7)	600 (17.0)	775 (21.9)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
5 (0.34)	350 (9.9)	450 (12.7)	600 (17.0)	800 (22.7)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
10 (0.69)	-	400 (11.3)	600 (17.0)	800 (22.7)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
20 (1.38)	-	-	500 (14.2)	750 (21.2)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
30 (2.07)	-	-	-	600 (17.0)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)

5/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	1500 (42.5)	2000 (56.6)	2200 (62.3)	2300 (65.1)	2350 (66.5)	-	-	-
2 (0.14)	1400 (39.6)	1900 (53.8)	2000 (56.6)	2400 (68.0)	2600 (73.6)	3100 (87.7)	3100 (87.7)	-
5 (0.34)	1400 (39.6)	2000 (56.6)	2500 (70.8)	2900 (82.1)	3150 (89.1)	3450 (97.6)	3600 (101.9)	-
10 (0.69)	-	1600 (45.3)	2700 (76.4)	3300 (93.4)	3700 (104.7)	4100 (116.0)	4200 (118.9)	-
20 (1.38)	-	-	1900 (53.8)	3300 (93.4)	4300 (121.7)	5300 (150.0)	5600 (158.5)	-
30 (2.07)	-	-	-	2300 (65.1)	4500 (127.4)	6100 (172.6)	6400 (181.1)	-

3/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	800 (22.7)	1000 (28.3)	1350 (38.2)	1700 (48.1)	2200 (62.3)	2500 (70.8)	2000 (56.6)	-
2 (0.14)	750 (21.2)	1000 (28.3)	1350 (38.2)	1700 (48.1)	2200 (62.3)	2650 (75.0)	2700 (76.4)	-
5 (0.34)	700 (19.8)	950 (26.9)	1300 (36.8)	1700 (48.1)	2200 (62.3)	3200 (90.6)	3100 (87.7)	-
10 (0.69)	-	800 (22.7)	1300 (36.8)	1700 (48.1)	2200 (62.3)	3200 (90.6)	3900 (110.4)	4000 (113.2)
20 (1.38)	-	-	1000 (28.3)	1550 (43.9)	2200 (62.3)	3200 (90.6)	3900 (110.4)	4000 (113.2)
30 (2.07)	-	-	-	1100 (31.2)	2100 (59.5)	3200 (90.6)	3850 (109.0)	4000 (113.2)

3/8" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	1600 (45.3)	1900 (53.8)	2000 (56.6)	2100 (59.5)	2300 (65.1)	-	-	-
2 (0.14)	1600 (45.3)	1900 (53.8)	2200 (62.3)	2500 (70.8)	2600 (73.6)	2900 (82.1)	-	-
5 (0.34)	1600 (45.3)	2100 (59.5)	2600 (73.6)	2800 (79.2)	3250 (92.0)	3450 (97.6)	-	-
10 (0.69)	-	1800 (51.0)	2800 (79.2)	3300 (93.4)	3600 (101.9)	4100 (116.0)	-	-
20 (1.38)	-	-	2250 (63.7)	3400 (96.2)	4500 (127.4)	5300 (150.0)	-	-
30 (2.07)	-	-	-	2600 (73.6)	4750 (134.4)	6500 (184.0)	-	-

1/4" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	1200 (34.0)	1600 (45.3)	2200 (62.3)	2800 (79.2)	2800 (79.2)	2500 (70.8)	2000 (56.6)	-
2 (0.14)	1200 (34.0)	1500 (42.5)	2200 (62.3)	2800 (79.2)	2800 (79.2)	2800 (79.2)	2500 (70.8)	-
5 (0.34)	1000 (28.3)	1400 (39.6)	2100 (59.5)	2600 (73.6)	2800 (79.2)	3300 (93.4)	3500 (99.1)	-
10 (0.69)	-	1100 (31.2)	2000 (56.6)	2600 (73.6)	3200 (90.6)	3800 (107.5)	4200 (118.9)	-
20 (1.38)	-	-	1300 (36.8)	2300 (65.1)	3500 (99.1)	4600 (130.2)	5100 (144.3)	-
30 (2.07)	-	-	-	1550 (43.9)	3000 (84.9)	5300 (150.0)	5900 (167.0)	-

1/2" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	1700 (48.1)	1900 (53.8)	2300 (65.1)	2400 (68.0)	-	-	-	-
2 (0.14)	1500 (42.5)	2150 (60.8)	2200 (62.3)	2300 (65.1)	-	-	-	-
5 (0.34)	2000 (56.6)	2400 (68.0)	2800 (79.2)	3100 (87.7)	3200 (90.6)	-	-	-
10 (0.69)	-	2400 (68.0)	3200 (90.6)	3500 (99.1)	3750 (106.1)	-	-	-
20 (1.38)	-	-	3000 (84.9)	4100 (116.0)	4600 (130.2)	-	-	-
30 (2.07)	-	-	-	3500 (99.1)	5300 (150.0)	-	-	-

** Set Inlet Pressure for all outlet pressures Set Flow 200 SCFH of 0.60 Specific Gravity.

At given outlet pressure setting, the outlet pressure is controlled to ±1% absolute outlet pressure over full range of inlet pressure shown.

Note: Capacity figures shown represent the capability of the regulator when installed with **adequately sized downstream piping**.

The following table may be used as a guide in sizing downstream piping:

Pipe Size	Maximum Flow SCFH
3/4"	2,000
1"	3,000
1 1/4"	6,000
1 1/2"	9,000

1800CPB2 Series Pilot-Loaded Residential Regulator

Regulator Capacity Performance - Capacity 1" Model 1800CPB2 Regulator

1/8" x 3/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	400 (11.3)	450 (12.7)	600 (17.0)	800 (22.7)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
2 (0.14)	350 (9.9)	450 (12.7)	600 (17.0)	800 (22.7)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
5 (0.34)	300 (8.5)	450 (12.7)	600 (17.0)	800 (22.7)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
10 (0.69)	-	375 (10.6)	600 (17.0)	800 (22.7)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
20 (1.38)	-	-	450 (12.7)	750 (21.2)	1000 (28.3)	1500 (42.5)	1800 (51.0)	1900 (53.8)
30 (2.07)	-	-	-	500 (14.2)	950 (26.9)	1500 (42.5)	1800 (51.0)	1900 (53.8)

3/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	800 (22.7)	1000 (28.3)	1250 (35.4)	1650 (46.7)	2200 (62.3)	3200 (90.6)	3800 (107.5)	-
2 (0.14)	800 (22.7)	1000 (28.3)	1350 (38.2)	1700 (48.1)	2200 (62.3)	3200 (90.6)	3800 (107.5)	-
5 (0.34)	700 (19.8)	950 (26.9)	1350 (38.2)	1700 (48.1)	2200 (62.3)	3200 (90.6)	3800 (107.5)	-
10 (0.69)	-	800 (22.7)	1300 (36.8)	1700 (48.1)	2200 (62.3)	3200 (90.6)	3800 (107.5)	4000 (113.2)
20 (1.38)	-	-	1000 (28.3)	1600 (45.3)	2200 (62.3)	3200 (90.6)	3800 (107.5)	4000 (113.2)
30 (2.07)	-	-	-	1100 (31.2)	2050 (58.0)	3200 (90.6)	3800 (107.5)	4000 (113.2)

1/4" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	1350 (38.2)	1750 (49.5)	2400 (68.0)	3000 (84.9)	3900 (110.4)	4500 (127.4)	4800 (135.8)	-
2 (0.14)	1300 (36.8)	1700 (48.1)	2400 (68.0)	3000 (84.9)	3900 (110.4)	5300 (150.0)	5500 (155.7)	-
5 (0.34)	1000 (28.3)	1450 (41.0)	2300 (65.1)	2950 (83.5)	3900 (110.4)	5600 (158.5)	6000 (169.8)	-
10 (0.69)	-	1100 (31.2)	2100 (59.5)	2900 (82.1)	3800 (107.5)	5600 (158.5)	6700 (189.6)	-
20 (1.38)	-	-	1300 (36.8)	2400 (68.0)	3600 (101.9)	5600 (158.5)	6700 (189.6)	-
30 (2.07)	-	-	-	1550 (43.9)	3150 (89.1)	5600 (158.5)	6700 (189.6)	-

** Set Inlet Pressure for all outlet pressures Set Flow 200 SCFH of 0.60 Specific Gravity.

At given outlet pressure setting, the outlet pressure is controlled to ±1% absolute outlet pressure over full range of inlet pressure shown.

5/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	1850 (52.4)	2500 (70.8)	3500 (99.1)	4000 (113.2)	4200 (118.9)	4500 (127.4)	-	-
2 (0.14)	1750 (49.5)	2400 (68.0)	3500 (99.1)	4300 (121.7)	5000 (141.5)	5500 (155.7)	-	-
5 (0.34)	1400 (39.6)	1950 (55.2)	3250 (92.0)	4200 (118.9)	5500 (155.7)	6600 (186.8)	7200 (203.8)	-
10 (0.69)	-	1500 (42.5)	2900 (82.1)	4000 (113.2)	5500 (155.7)	7000 (198.1)	7600 (215.1)	-
20 (1.38)	-	-	1800 (51.0)	3200 (90.6)	4900 (138.7)	7500 (212.3)	9000 (254.7)	-
30 (2.07)	-	-	-	1950 (55.2)	4300 (121.7)	7300 (206.6)	9000 (254.7)	-

3/8" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	2100 (59.4)	2800 (79.2)	3700 (104.7)	4000 (113.2)	4450 (125.9)	4900 (138.7)	-	-
2 (0.14)	2200 (62.3)	2600 (73.6)	3400 (96.2)	4200 (118.9)	4700 (133.0)	5350 (151.4)	-	-
5 (0.34)	1750 (49.5)	2500 (70.8)	3600 (101.9)	4600 (130.2)	5000 (141.5)	7300 (206.6)	-	-
10 (0.69)	-	1500 (42.5)	3400 (96.2)	4900 (138.7)	6100 (172.6)	7800 (220.7)	-	-
20 (1.38)	-	-	2200 (62.3)	4100 (116.0)	6000 (169.8)	8800 (249.0)	-	-
30 (2.07)	-	-	-	2650 (75.0)	5400 (152.8)	7300 (206.6)	-	-

1/2" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	2900 (82.1)	3350 (94.8)	4200 (118.9)	4200 (118.9)	-	-	-	-
2 (0.14)	3000 (84.9)	3400 (96.2)	4400 (124.5)	4900 (138.7)	-	-	-	-
5 (0.34)	2400 (67.9)	3000 (84.9)	4200 (118.9)	4950 (140.1)	-	-	-	-
10 (0.69)	-	2400 (68.0)	4300 (121.7)	5350 (151.4)	-	-	-	-
20 (1.38)	-	-	3000 (84.9)	5400 (152.8)	-	-	-	-
30 (2.07)	-	-	-	3600 (101.9)	-	-	-	-

Note: Capacity figures shown represent the capability of the regulator when installed with **adequately sized downstream piping**.

The following table may be used as a guide in sizing downstream piping:

Pipe Size	Maximum Flow SCFH
3/4"	2,000
1"	3,000
1 1/4"	6,000
1 1/2"	9,000

1800CPB2 Series Pilot-Loaded Residential Regulator

Regulator Capacity Performance - Capacity 1 1/4" Model 1800CPB2 Regulator

1/8" x 3/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	350 (9.9)	450 (12.7)	600 (17.0)	750 (21.2)	1000 (28.3)	1450 (41.1)	1800 (51.0)	1900 (53.8)
2 (0.14)	350 (9.9)	450 (12.7)	600 (17.0)	750 (21.2)	1000 (28.3)	1450 (41.1)	1800 (51.0)	1900 (53.8)
5 (0.34)	300 (8.5)	400 (11.3)	600 (17.0)	750 (21.2)	1000 (28.3)	1450 (41.1)	1750 (49.5)	1900 (53.8)
10 (0.69)	-	350 (9.9)	600 (17.0)	750 (21.2)	1000 (28.3)	1450 (41.1)	1750 (49.5)	1900 (53.8)
20 (1.38)	-	-	450 (12.7)	700 (19.8)	1000 (28.3)	1400 (39.6)	1750 (49.5)	1900 (53.8)
30 (2.07)	-	-	-	550 (15.6)	950 (26.9)	1400 (39.6)	1750 (49.5)	1900 (53.8)

5/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	2000 (56.6)	2600 (73.6)	3900 (110.4)	4900 (138.7)	6400 (181.1)	-	-	-
2 (0.14)	1900 (53.8)	2600 (73.6)	3800 (107.5)	4900 (138.7)	6300 (178.3)	-	-	-
5 (0.34)	1500 (42.5)	2300 (65.1)	3400 (96.2)	4600 (130.2)	6100 (172.6)	8500 (240.6)	-	-
10 (0.69)	-	1700 (48.1)	3200 (90.6)	4500 (127.4)	6000 (169.8)	8500 (240.6)	10200 (288.7)	-
20 (1.38)	-	-	2000 (56.6)	3800 (107.5)	5600 (158.5)	8500 (240.6)	10200 (288.7)	-
30 (2.07)	-	-	-	2400 (67.9)	4800 (135.8)	8000 (226.4)	10200 (288.7)	-

3/16" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	800 (22.7)	1050 (29.7)	1400 (39.6)	1750 (49.5)	2300 (65.1)	3400 (96.2)	4100 (116.0)	4200 (118.9)
2 (0.14)	800 (22.7)	1000 (28.3)	1400 (39.6)	1750 (49.5)	2300 (65.1)	3350 (94.8)	4100 (116.0)	4200 (118.9)
5 (0.34)	700 (19.8)	950 (26.9)	1350 (38.2)	1750 (49.5)	2250 (63.7)	3300 (93.4)	4000 (113.2)	4200 (118.9)
10 (0.69)	-	700 (19.8)	1350 (38.2)	1750 (49.5)	2250 (63.7)	3300 (93.4)	4000 (113.2)	4200 (118.9)
20 (1.38)	-	-	1000 (28.3)	1600 (45.3)	2250 (63.7)	3200 (90.6)	4000 (113.2)	4200 (118.9)
30 (2.07)	-	-	-	1000 (28.3)	2150 (60.8)	3200 (90.6)	3900 (110.4)	4200 (118.9)

3/8" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	2300 (65.1)	3100 (87.7)	4400 (124.5)	5300 (150.0)	7150 (202.3)	-	-	-
2 (0.14)	2200 (62.3)	3000 (84.9)	4400 (124.5)	5300 (150.0)	7200 (203.8)	-	-	-
5 (0.34)	1700 (48.1)	2600 (73.6)	4050 (114.6)	5300 (150.0)	7150 (202.3)	-	-	-
10 (0.69)	-	2000 (56.6)	3600 (101.9)	5050 (142.9)	7050 (199.5)	-	-	-
20 (1.38)	-	-	2300 (65.1)	4200 (118.9)	6600 (186.8)	-	-	-
30 (2.07)	-	-	-	2800 (79.2)	6000 (169.8)	-	-	-

1/4" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	1300 (36.8)	1700 (48.1)	2500 (70.8)	3150 (89.1)	4100 (116.0)	6100 (172.6)	6700 (189.6)	-
2 (0.14)	1300 (36.8)	1700 (48.1)	2500 (70.8)	3150 (89.1)	4100 (116.0)	6100 (172.6)	7200 (203.8)	-
5 (0.34)	1000 (28.3)	1500 (42.5)	2400 (68.0)	3100 (87.7)	4000 (113.2)	5850 (165.6)	7100 (200.9)	-
10 (0.69)	-	1200 (34.0)	2200 (62.3)	3050 (86.3)	3900 (110.4)	5850 (165.6)	7100 (200.9)	-
20 (1.38)	-	-	1400 (39.6)	2600 (73.6)	3900 (110.4)	5850 (165.6)	7100 (200.9)	-
30 (2.07)	-	-	-	1600 (45.3)	3400 (96.2)	5800 (164.1)	7100 (200.9)	-

1/2" Orifice

SCFH (m ³ /h)								
Outlet Pressure PSIG (bar)	Inlet Pressure PSIG (bar)							
	10 (0.69)	15 (1.03)	25 (1.72)	35 (2.41)	50 (3.45)	80** (5.52)	100 (6.89)	125 (8.62)
1 (0.07)	3200 (90.6)	4500 (127.4)	6350 (179.7)	7500 (212.3)	-	-	-	-
2 (0.14)	3200 (90.6)	4400 (124.5)	6300 (178.3)	7800 (220.7)	-	-	-	-
5 (0.34)	2600 (73.6)	4000 (113.2)	6100 (172.6)	7900 (223.6)	-	-	-	-
10 (0.69)	-	-	5500 (155.7)	7700 (217.9)	-	-	-	-
20 (1.38)	-	-	3600 (101.9)	6400 (181.1)	-	-	-	-
30 (2.07)	-	-	-	4150 (117.4)	-	-	-	-

** Set Inlet Pressure for all outlet pressures Set Flow 200 SCFH of 0.60 Specific Gravity.

At given outlet pressure setting, the outlet pressure is controlled to ±1% absolute outlet pressure over full range of inlet pressure shown.

Note: Capacity figures shown represent the capability of the regulator when installed with **adequately sized downstream piping**.

The following table may be used as a guide in sizing downstream piping:

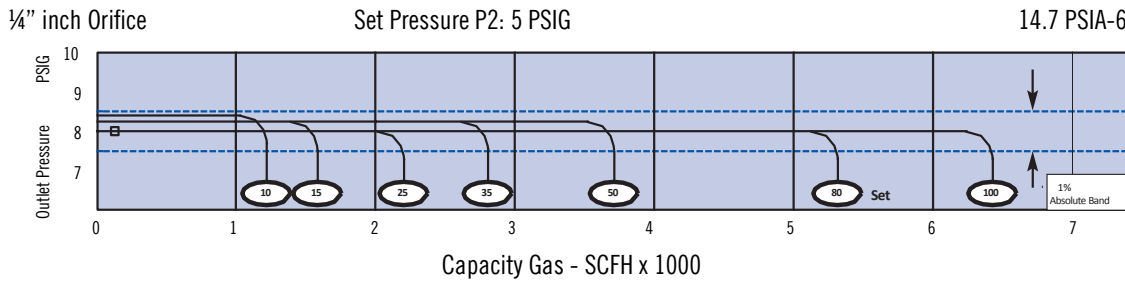
Pipe Size	Maximum Flow SCFH
3/4"	2,000
1"	3,000
1 1/4"	6,000
1 1/2"	9,000

1800CPB2 Series Pilot-Loaded Residential Regulator

Typical Performance Data

Model No.: 1800CPB2
 Set Pressure P1: 80 PSIG
 Set Pressure P2: 5 PSIG

Set Flow: 200 SCFH
 Test Medium: 0.60 SP. GR. Gas
 14.7 PSIA-60°F



Overpressure Shutoff (OPSO) Regulator

General Information

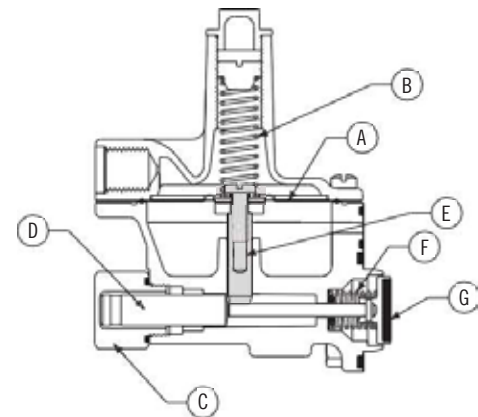
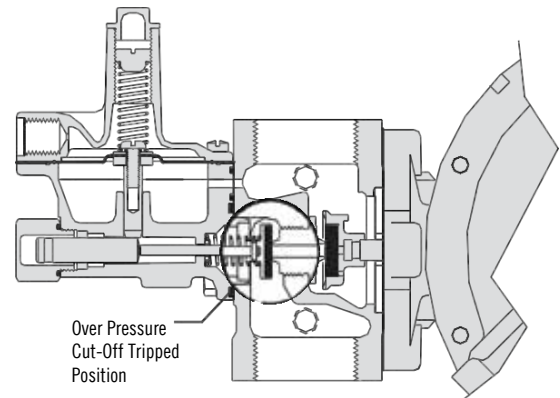
Model 1883CPB2 regulators are compact units designed to regulate line pressure and to provide protection against any downstream overpressure.

Rugged, compact OPSO operates independently. The OPSO will shut off the gas supply in the event of serious downstream pressure build-up.

Adjustable Overpressure Shut-Off Pressure is adjustable via the overpressure shut-off adjustment screw to settings from 5 to 15 PSIG and 15 to 40 PSIG depending on spring selected.

How the OPSO Operates

When the outlet pressure exceeds the OPSO set point, the pressure under the OPSO diaphragm (A) compresses the pressure spring (B) forcing the diaphragm stem (E) upwards and releasing plunger (D). This permits the shut-off spring (F) to force the shut-off disc (G) against the back side of the special double-ended orifice.



Shut-Off Assembly Range	Adjustable Trip Point Range
72978G096	5 to 15 PSIG
72978G097	15 to 40 PSIG

Note: The OPSO setting is preset at the factory to the desired trip point. To reset the OPSO, shut off gas supply and depressurize the regulator system, unscrew cap (C), and pull back the plunger (D) until the diaphragm stem (E) repositions.

1800CPB2 Service Regulators

Full-Open Regulator Relief Capacity

For sizing downstream relief valves, use the following formulas to determine the regulator full-open capacity:

For critical flow rates

$$Q = 0.5 C \times \sqrt{\frac{P_1}{G}}$$

For sub-critical flows

$$Q = C \sqrt{\frac{P_2 h}{G}}$$

Key

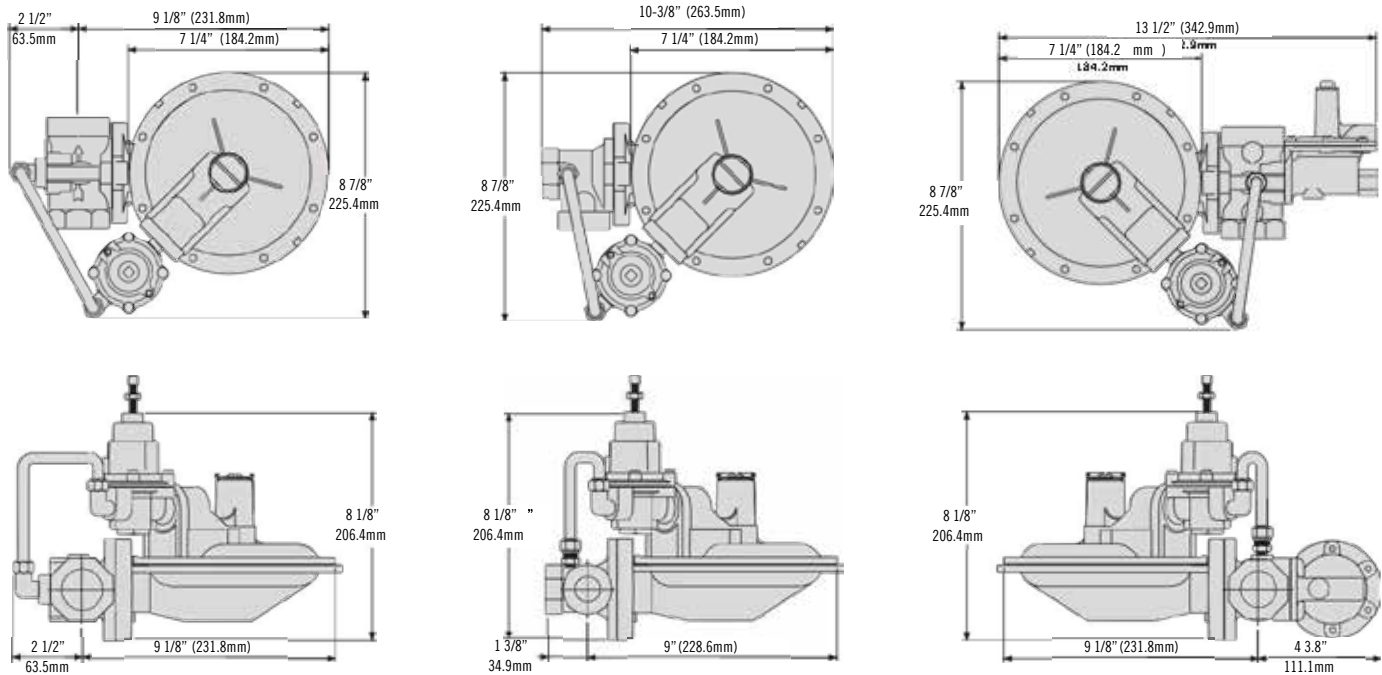
- Q = Maximum capacity of regulator
- C = Orifice constant (see table)
- P₁ = Inlet absolute pressure (PSIA)
- P₂ = Outlet absolute pressure (PSIA)
- h = Differential pressure (P₁-P₂)
- G = Specific gravity of gas

Orifice	C
1/8"	25
1/8" x 3/16"	25
3/16"	57
1/4"	98
5/16"	149
3/8"	208
1/2"	353
9/16"	421

Regulators

1800CPB2 Series Pilot-Loaded Residential Regulator

1800CPB2 Service Regulators - Dimensions



Regulators

Construction

Diaphragm Casing - Precision die-cast aluminum with an exclusive seven-step advanced conversion coating, single-coat polyester primer and high solid polyurethane top coat.

Valve Body - Cast grey iron, undercoated, single-coat polyester primer and high solid polyurethane top coat.

Closing Spring - Steel, zinc plated and yellow chromate. Color coded for identification.

Diaphragm Plate - Steel, terne plated.

Seat Disc - Buna-N.

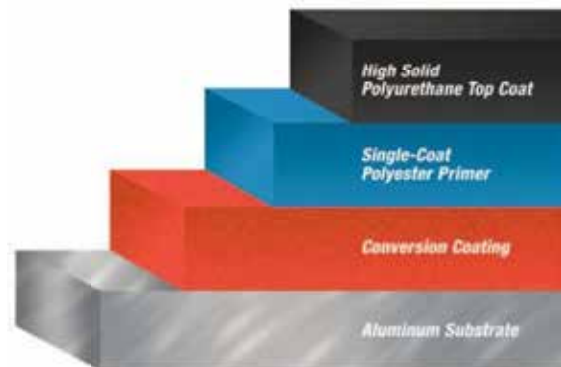
Orifice - Super high strength, corrosion-resistant, aluminum.

Lever - Steel, zinc plated and yellow chromate.

Vent Screen - Stainless steel.

Seal Plug - Precision, die-cast aluminum.

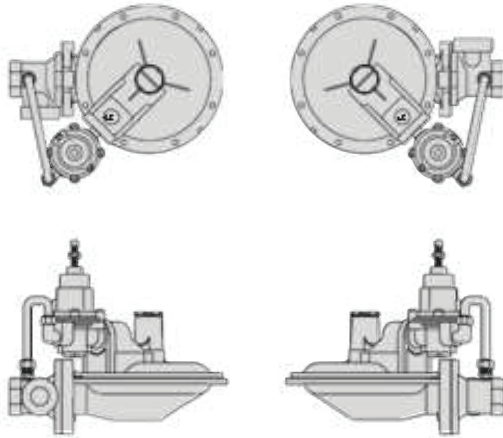
Corrosion Protection



1800CPB2 Series Pilot-Loaded Residential Regulator

Regulator Assembly Positions

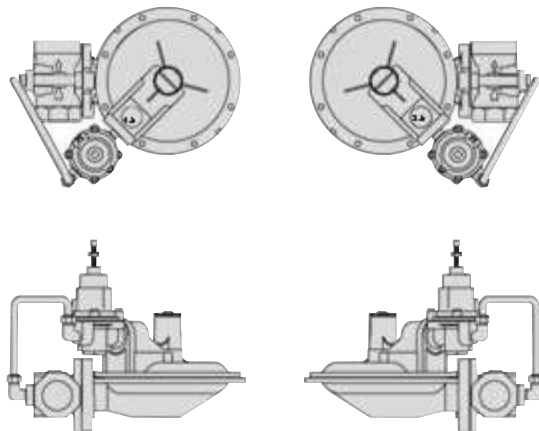
1803CPB2-90° Models



Assembly Position "A" - 4.5

Assembly Position "A" - 1.5

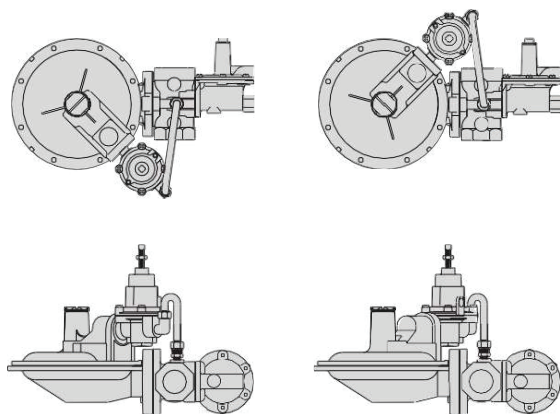
1803CPB2-180° Models



Assembly Position "D" - 4.5

Assembly Position "C" - 1.5

1883CPB2 Models



Assembly Position "C" - 1.5

Assembly Position "C" - 4.5

Orifice Sizes

Orifice Size	Part Number	
	Standard	w/OPSO
1/8" x 3/16"	72494P030	72751P020
3/16"	72494P020	72751P011
1/4"	72494P021	72751P012
5/16"	72494P022	72751P013
3/8"	72494P023	72751P014
1/2"	72494P025	72751P016

Ordering Information

1. Model number
2. Size of inlet and outlet connections
3. Inlet pressure, PSIG (bar)
4. Outlet pressure, PSIG (bar)
5. Flow, scfh (m³/h)
6. Kind and specific gravity of gas
7. Orifice size
8. Regulator assembly position
9. OPSO shut-off set point (1883CPB2 only)

Shipping Weight

8.4 lbs/unit

1800PFM Series Pilot-Loaded Industrial Regulator

Brief Information

General Information:

- Maximum 125 PSIG inlet pressure
- Operating temperature range of -20°F to 150°F (-30°C to 65°C)
- Maximum flow rates of up to 80,000 SCFH
- 1 1/2" or 2" NPT connection or 2" ANSI Class 125 lb. Flat Faced flanged connection

Enhancements:

- Extended outlet pressure range to cover 7" W.C. to 30 PSIG
- Improved ease of pilot maintenance
- 1804 pilot covers wide range of 2-30 PSIG outlet
- 1805 pilot optimizes performance between 7" W.C. and 2 PSIG outlet range
- 3 closing spring options provide for improved lock-up performance



Features & Benefits

Main Features

- Same great PFM rugged design and proven reliability
- Expanded orifice offerings with the addition of 1/2" and 3/4" sizes
- Maintains constant outlet pressure within $\pm 1\%$ absolute set pressure over a wide range of flow rates
- Ideal for fixed factor measurement
- Available with optional OPS (over pressure shut off), USSA (universal safety shut off assembly).

Pilot Options

1804PFM Series
(2-30 PSIG Outlet Range)

- 2 pilot spring range options
 - 2-30 PSIG
 - 2-10 PSIG

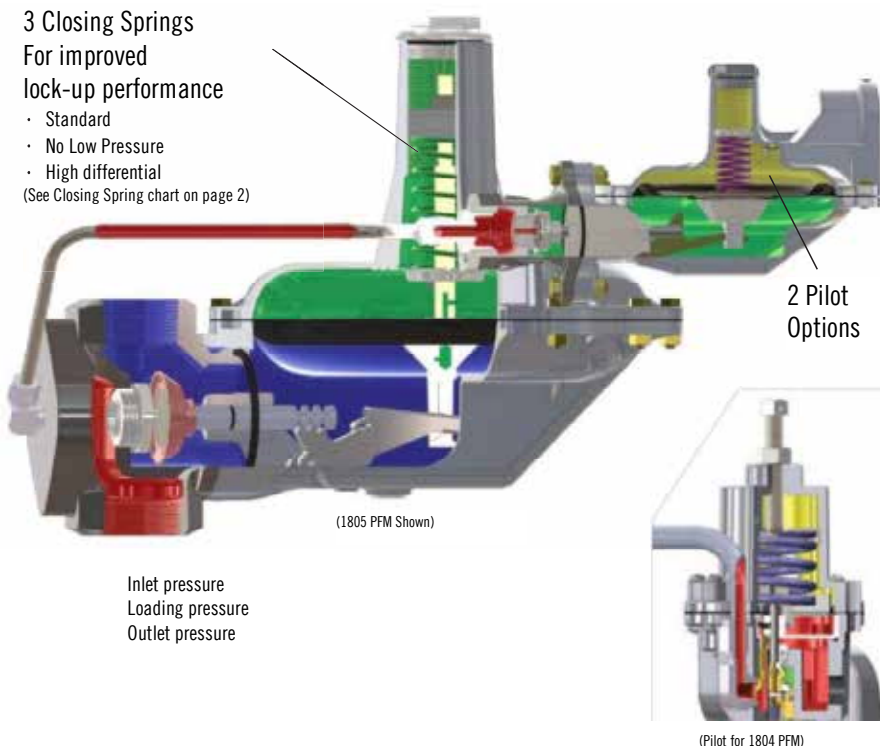
1805PFM Series
(7" WC to 2 PSIG Outlet Range)

- 2 pilot spring range options
 - 7"-30" W.C.
 - 1.0-2.4 PSIG

3 Closing Springs
For improved
lock-up performance

- Standard
- No Low Pressure
- High differential

(See Closing Spring chart on page 2)



1800PFM Series Pilot-Loaded Industrial Regulator

1804PFM Series (2-30 PSIG Outlet Pressure)

Model Number	Description
1804PFM	Standard regulator
1804MPFM	Standard regulator with external sense
1884PFM	Standard regulator with overpressure shut-off
1884MPFM	Standard regulator with external sense and overpressure shut-off
1884PFM w/USSA	Standard regulator with overpressure and under pressure shut-off
1884MPFM w/USSA	Standard regulator with external sense, overpressure and under pressure shut-off

Ordering Information

1. Model Number
2. Connection Size: 1 1/2 " Threaded, 2" Threaded, 2" Flanged
3. Inlet Pressure Range: up to 125 PSIG
4. Outlet Set Pressure: 7" W.C. to 30 PSIG
5. Main Orifice Diameter: 1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1 1/4"
6. Gas Specific Gravity
7. Regulator Assembly Position: See below
8. Pilot Filter Option: Yes/No
9. OPSO Spring Range (USSA only)
10. Under pressure spring range (USSA only)

1805PFM Series (7" W.C.-2 PSIG Outlet Pressure)

Model Number	Description
1805PFM	Standard regulator
1805MPFM	Standard regulator with external sense
1885PFM	Standard regulator with overpressure shut-off
1885MPFM	Standard regulator with external sense and overpressure shut-off
1885PFM w/USSA	Standard regulator with overpressure and under pressure shut-off
1885MPFM w/USSA	Standard regulator with external sense, overpressure and under pressure shut-off

Maximum Allowable Pressure Across Orifice (PSID) 1804 & 1805PFM Series

Closing Spring Part Number	Spring Color	Description	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
71424P025	Black	Standard	125	125	125	125	80	55	40	35
71424P036	Solid Silver	High Differential	N/A	N/A	N/A	N/A	125	125	100	80

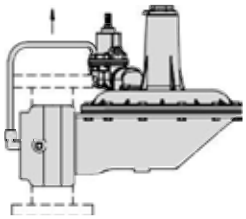
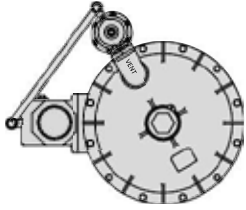
NR=Not recommended for optimum lock-up preferences

1800PFM Series Pilot-Loaded Industrial Regulator

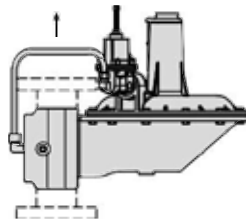
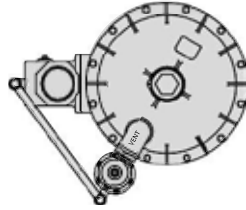
1804/1884PFM Series Assembly Positions

1804PFM Series

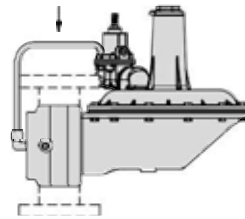
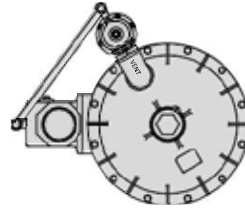
Assembly Position "A1.5"



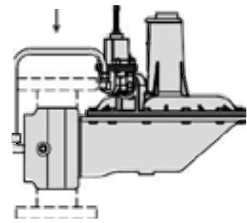
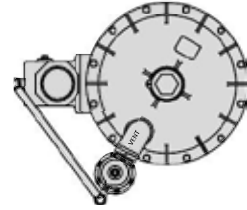
Assembly Position "A4.5"



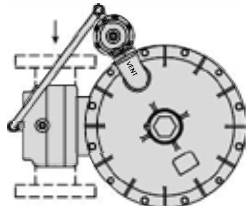
Assembly Position "B1.5"



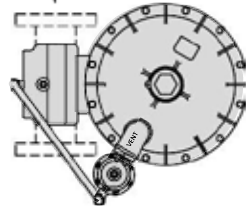
Assembly Position "B4.5"



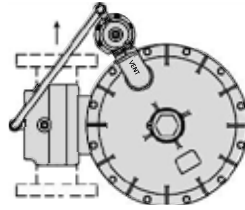
Assembly Position "C1.5"



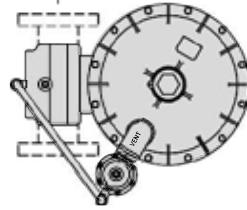
Assembly Position "C4.5"



Assembly Position "D1.5"

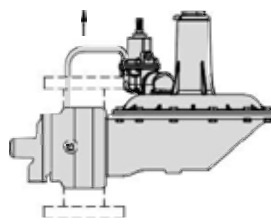
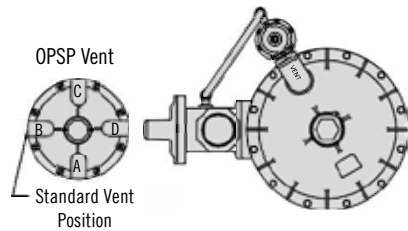


Assembly Position "D4.5"

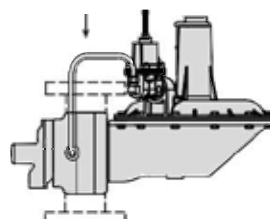
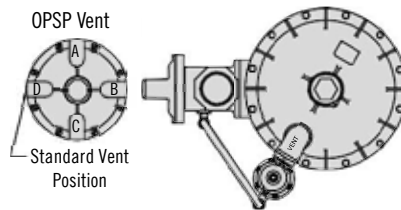


1884PFM Series

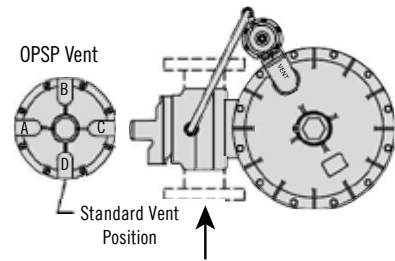
Assembly Position "A1.5"



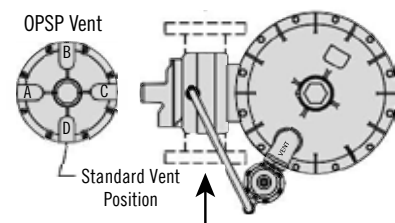
Assembly Position "B4.5"



Assembly Position "D1.5"



Assembly Position "D4.5"

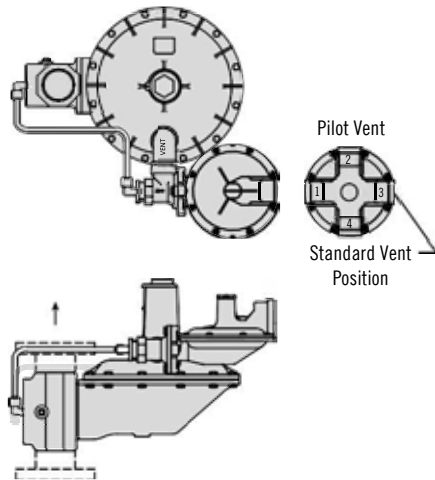


1800PFM Series Pilot-Loaded Industrial Regulator

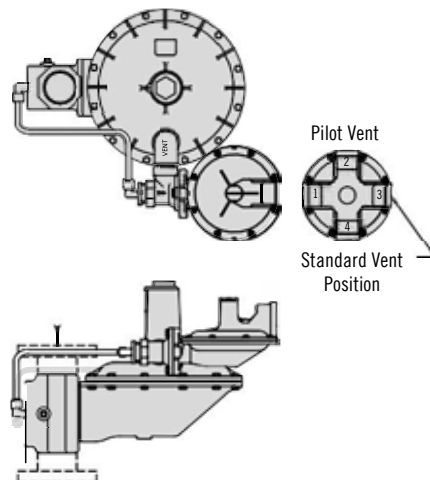
1805/1885PFM Series Assembly Positions

1805PFM Series

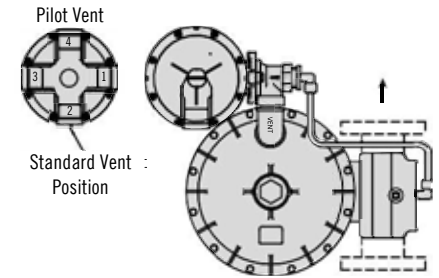
Valve Head Position "A"



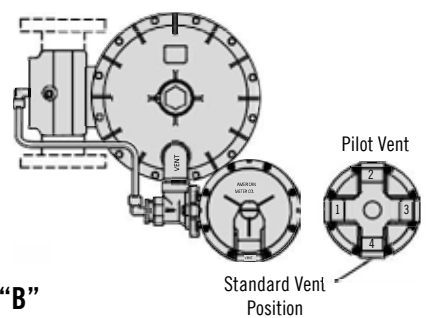
Valve Head Position "B"



Valve Head Position "C"



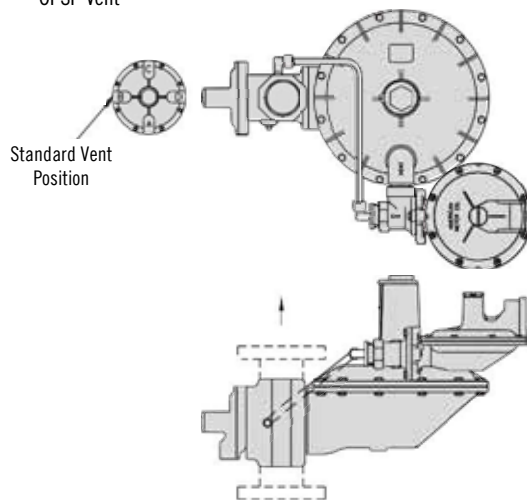
↑ Valve Head Position "D"



1885PFM Series

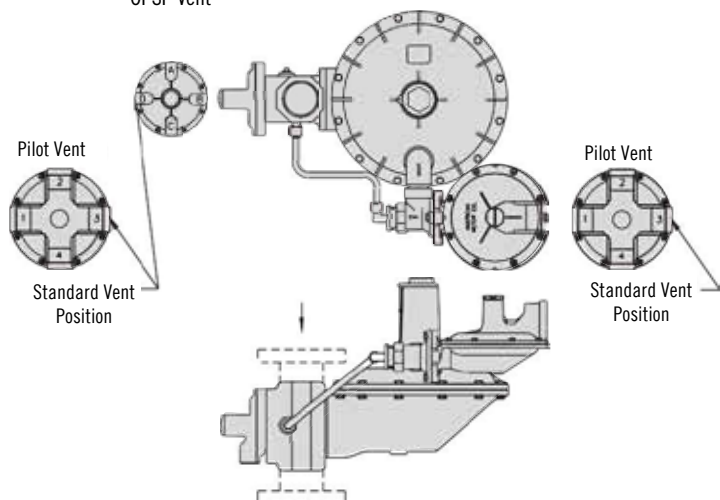
Valve Head Position "A"

OPSP Vent

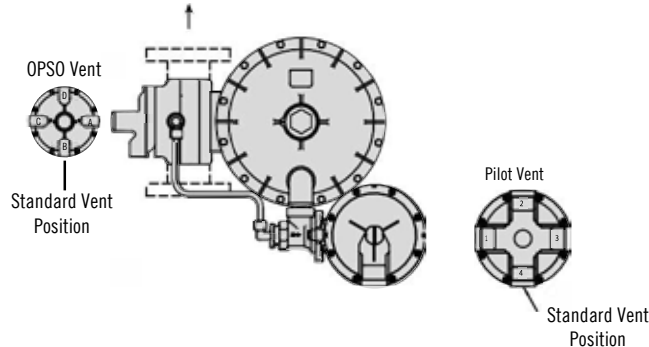


Valve Head Position "B"

OPSP Vent



Valve Head Position "D"



1805PFM Series Pilot-Loaded Industrial Regulator

2" X 2" VALVE HEAD

Capacity (SCFH) 2" Valve Body - 7" W.C. set, 1" droop, 2" boost

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
0.5	400	600	1,200	1,200	1,100	2,000	1,700	2,400
1	600	800	1,300	1,700	1,900	2,400	2,900	3,400
2	800	1,300	2,400	2,700	4,000	3,800	4,400	5,800
3	800	1,500	2,500	3,400	4,600	5,400	6,100	8,600
5	1,000	2,000	3,200	4,300	6,000	8,000	10,000	13,200
10	1,700	3,100	4,900	6,300	9,000	13,200	16,100	16,200
15	2,000	4,000	6,400	9,700	11,600	16,900	19,200	19,900
20	2,200	4,700	8,900	12,300	15,500	21,200	18,500	25,200
30	3,400	7,300	12,800	17,100	20,000	26,400	18,100	24,000
40	4,100	8,700	13,400	18,600	20,400	28,700	17,700	23,500
60	6,100	9,600	17,600	16,300	22,200	26,100	16,600	20,100
80	7,700	9,200	19,400	16,000	21,100	24,900	15,300	15,300
100	9,300	8,400	18,800	15,600	17,100	20,100	9,300	
125	8,700	6,800	17,100	15,200	10,400	12,200		

Regulators

Capacity (SCFH) 2" Valve Body - 4" W.C. set, ±2" W.C.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
1	500	1,000	1,300	1,500	1,800	2,200	2,700	3,600
2	700	1,400	1,800	3,400	3,600	3,300	5,400	4,900
3	900	1,800	2,700	4,300	4,900	4,600	5,700	6,700
5	1,200	2,500	4,000	5,600	6,200	6,500	8,800	11,600
10	1,800	3,900	4,900	7,500	8,900	11,600	12,600	19,400
15	2,400	4,300	7,300	10,900	13,800	16,900	19,200	20,700
20	2,800	5,300	9,600	14,200	14,200	21,200	21,800	26,100
30	3,600	7,400	12,800	19,500	26,600	27,400	15,400	26,400
40	4,400	9,300	12,300	18,600	21,200	14,400	15,500	26,500
60	6,100	10,900	17,600	20,400	16,700	12,100	15,100	32,100
80	7,700	16,200	20,300	12,900	14,100	10,400	10,700	20,400
100	7,200	9,100	11,700	12,500	12,800	10,000	10,200	
125	8,700	5,100	8,600	11,400	12,500	9,800		

1805PFM Series Pilot-Loaded Industrial Regulator

2" X 2" VALVE HEAD

Capacity (SCFH) 2" Valve Body - 1 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
2	700	1,100	2,000	3,000	3,600	3,900	4,700	7,000
3	900	1,700	2,800	4,100	4,900	5,000	6,200	7,100
5	1,200	2,600	4,000	5,900	6,400	6,900	8,000	11,600
10	1,800	4,100	6,100	8,400	11,000	12,500	14,000	18,500
15	2,400	5,100	7,900	12,600	14,700	13,600	19,800	23,100
20	2,900	5,900	9,900	15,100	18,700	21,500	23,600	28,000
30	3,600	7,600	12,800	20,100	25,800	27,400	30,400	32,400
40	4,400	9,700	16,800	25,400	20,400	32,100	26,600	35,900
60	6,100	13,200	13,700	11,200	18,100	14,000	18,100	38,200
80	7,700	11,500	10,700	12,400	12,300	12,400	19,200	38,200
100	9,300	11,700	8,900	7,200	12,800	13,500	18,600	
125	6,500	5,100	6,000	6,100	13,000	20,800		

Capacity (SCFH) 2" Valve Body - 2 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
5	1,100	2,300	3,400	3,200	4,400	4,300	6,000	10,100
10	1,700	3,800	5,800	8,200	10,700	11,600	13,300	16,800
15	2,400	5,200	7,400	11,600	14,300	12,900	18,500	25,300
20	2,900	5,700	9,200	15,500	18,100	18,200	23,200	31,700
30	3,600	7,600	13,300	20,100	26,600	29,300	31,700	40,800
40	4,400	9,300	15,700	26,100	32,600	33,500	39,800	41,100
60	6,000	13,200	14,500	30,500	41,700	21,200	52,900	46,200
80	7,600	16,900	18,400	25,800	35,200	20,700	57,500	30,500
100	9,300	14,700	22,300	18,800	25,600	25,100	55,700	
125	8,700	17,900	27,100	22,900	31,200	30,600		

1804PFM Series Pilot-Loaded Industrial Regulator

2" X 2" VALVE HEAD

Capacity (SCFH) 2" Valve Body - 1 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
10	1,500	1,700	1,800	3,200	3,500	3,100	5,800	12,800
15	2,200	2,100	3,000	4,000	4,400	6,500	9,000	12,000
20	2,200	3,400	3,600	6,600	5,200	6,100	10,500	20,500
30	3,400	5,500	5,500	10,400	6,700	11,700	21,700	28,800
40	4,300	6,000	8,900	11,900	14,200	23,900	24,400	35,300
60	5,600	10,900	18,300	18,300	27,800	32,700	24,200	48,200
80	6,500	15,000	27,100	18,100	24,700	41,400	23,000	61,100
100	7,200	18,200	4,700	15,600	21,300	40,100	22,300	
125	8,700	4,300	5,700	19,000	26,000	48,900		

Regulators

Capacity (SCFH) 2" Valve Body - 2 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
10	900	1,900	2,400	2,500	2,600	3,000	5,600	7,500
15	1,100	2,700	3,000	5,200	6,600	6,400	7,200	12,700
20	1,700	2,800	3,500	6,600	9,000	7,600	11,900	16,800
30	2,500	4,100	7,300	9,700	10,000	13,700	18,100	26,400
40	3,600	6,700	8,900	15,700	22,400	21,500	26,600	32,300
60	5,400	8,200	15,300	22,400	27,800	29,400	30,200	20,100
80	7,100	12,700	23,200	20,700	26,400	20,700	19,200	25,400
100	8,600	7,000	28,100	18,800	21,300	25,100	23,200	
125	10,500	8,500	17,100	19,000	26,000	30,600		

1804PFM Series Pilot-Loaded Industrial Regulator

2" X 2" VALVE HEAD

Capacity (SCFH) 2" Valve Body - 2 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
10	1,300	2,400	3,900	4,200	7,400	4,400	9,600	12,300
15	1,800	3,400	5,100	6,500	11,000	9,800	16,500	22,600
20	2,100	4,000	6,300	9,800	13,400	12,000	21,600	29,600
30	2,800	6,500	8,200	17,100	18,300	21,500	30,800	43,200
40	3,400	6,700	13,400	22,400	22,400	26,300	39,800	45,600
60	5,100	11,400	17,600	32,600	34,800	32,700	54,400	40,100
80	5,900	15,600	23,200	36,100	37,000	37,300	46,000	40,700
100	7,200	18,900	28,100	28,100	25,600	18,100	46,400	
125	10,500	18,700	28,600	29,700	31,200	9,200		

Capacity (SCFH) 2" Valve Body - 10 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
15	1,400	2,700	4,100	6,100	8,300	5,300	10,800	7,900
20	2,200	3,800	6,400	8,600	12,900	11,000	15,300	14,400
30	2,800	5,400	9,100	14,400	18,200	21,400	28,800	33,400
40	3,400	6,700	12,300	17,900	20,400	28,700	39,800	47,000
60	4,700	10,000	16,800	32,600	34,800	49,000	57,400	53,800
80	5,900	12,700	21,300	41,300	49,300	55,900	49,800	61,600
100	7,200	15,400	25,800	42,200	34,100	50,200	39,000	
125	8,700	18,700	24,300	30,900	41,600	61,100		

1804PFM Series Pilot-Loaded Industrial Regulator

2" X 2" VALVE HEAD

Capacity (SCFH) 2" Valve Body - 15 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
20	1,500	3,000	5,000	5,300	9,100	6,900	12,800	8,500
30	2,600	5,100	8,600	13,800	16,500	16,600	24,800	31,800
40	3,400	7,000	11,100	19,300	22,300	28,600	36,400	43,900
60	5,100	11,800	15,300	28,500	38,900	47,400	57,400	70,200
80	6,500	16,200	19,400	38,700	56,400	53,800	57,500	89,100
100	7,900	19,300	23,500	46,900	64,000	28,600	60,300	
125	9,600	23,900	34,300	38,100	36,400	27,500		

Capacity (SCFH) 2" Valve Body - 20 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
30	2,700	4,100	7,600	7,600	14,600	13,900	21,900	24,000
40	3,300	7,700	12,900	18,700	20,600	27,700	34,100	35,400
60	5,100	11,800	19,900	30,500	38,900	49,000	52,900	64,200
80	6,500	15,600	25,200	41,300	52,900	62,100	53,700	84,000
100	7,900	19,600	30,500	46,900	59,800	70,200	32,000	
125	9,600	20,400	37,100	60,900	62,400	48,900		

Capacity (SCFH) 2" Valve Body - 25 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
30	1,800	3,600	5,800	6,900	10,500	9,200	16,000	15,100
40	3,000	6,500	10,000	13,300	18,200	21,300	29,600	39,300
60	4,400	10,000	16,800	28,500	33,300	45,600	51,300	56,100
80	5,900	12,700	23,200	36,100	45,800	62,100	69,000	88,500
100	7,200	16,800	30,500	46,900	59,800	75,300	88,200	
125	9,200	20,400	37,100	57,100	52,000	73,300		

Capacity (SCFH) 2" Valve Body - 30 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
40	2,400	5,200	8,600	9,200	17,300	14,800	24,000	32,900
60	4,600	10,700	18,000	26,000	38,200	44,800	47,400	39,400
80	7,100	15,000	25,200	38,700	49,300	62,100	61,300	50,900
100	8,600	18,200	32,800	50,000	68,300	70,200	78,900	
125	10,500	22,100	40,000	60,900	83,200	85,500		

1805PFM Series Pilot-Loaded Industrial Regulator

1 1/2" X 1 1/2" VALVE HEAD

Capacity (SCFH) 1 1/2" Valve Body - 7" W.C. set, 1" droop

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
0.5	400	600	1,400	1,200	1,200	1,900	1,600	2,400
1	600	700	1,400	1,400	1,900	1,900	2,500	2,800
2	800	1,300	2,700	2,300	3,900	2,600	3,300	3,900
3	800	1,300	2,500	2,700	4,100	3,600	4,000	4,600
5	1,000	1,800	3,300	3,700	4,800	4,300	5,100	5,800
10	1,700	3,100	4,500	5,100	6,500	6,400	7,600	7,100
15	2,000	3,900	5,500	6,800	7,600	8,200	10,000	8,700
20	2,200	4,600	7,300	8,100	8,600	10,300	10,600	11,000
30	3,400	7,200	10,100	10,900	10,700	15,600	12,300	10,500
40	4,100	8,600	10,000	11,100	12,500	20,000	12,000	10,300
60	6,100	9,400	12,100	9,800	13,800	18,300	11,300	8,800
80	7,700	8,900	13,600	9,600	13,100	17,400	10,400	6,700
100	9,300	8,000	13,200	9,400	10,600	14,100	6,300	
125	8,700	6,400	12,000	9,100	6,400	8,500		

Capacity (SCFH) 1 1/2" Valve Body - 14" W.C. set, 1" droop

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
1	500	900	1,400	1,300	1,800	2,000	2,600	3,400
2	700	1,300	2,300	3,100	3,800	3,100	4,500	4,100
3	900	1,700	3,000	4,000	4,700	4,100	4,300	5,300
5	1,200	2,500	4,200	5,100	5,800	4,600	6,300	6,200
10	1,700	3,900	5,000	6,300	7,300	6,400	8,100	8,400
15	2,400	4,300	6,900	8,600	10,500	8,300	9,500	8,900
20	2,800	5,300	8,300	11,200	10,200	10,200	17,400	11,300
30	3,600	7,400	10,400	12,200	17,000	16,700	13,900	11,400
40	4,400	9,400	9,400	11,600	13,600	10,700	16,300	11,400
60	6,100	11,400	12,500	14,100	13,400	14,500	16,600	13,900
80	7,700	16,200	13,400	11,000	13,500	10,400	10,700	8,800
100	7,200	8,700	7,100	10,600	14,300	10,000	10,200	
125	8,700	4,600	4,700	9,700	16,500	9,800		

1805PFM Series Pilot-Loaded Industrial Regulator

1 1/2" X 1 1/2" VALVE HEAD

Regulators

Capacity (SCFH) 1 1/2" Valve Body - 1 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
2	800	1,200	2,100	3,400	4,000	4,300	4,700	5,100
3	1,100	1,600	2,900	4,700	5,500	5,500	6,200	5,200
5	1,400	2,400	4,200	6,700	7,200	7,600	8,000	8,500
10	2,200	3,800	6,300	9,600	12,300	13,800	17,300	13,500
15	2,700	4,700	8,700	16,200	17,800	15,500	22,400	18,600
20	3,700	5,900	11,700	20,500	21,800	21,000	27,600	18,500
30	4,400	8,000	14,300	23,800	26,000	22,900	30,400	22,000
40	4,800	11,200	18,100	25,400	16,800	20,900	22,100	24,400
60	6,200	14,700	15,100	15,700	27,200	16,800	15,000	25,900
80	7,200	12,300	12,000	18,600	18,500	14,900	15,900	25,900
100	7,900	12,100	10,200	11,500	19,200	16,200	15,400	
125	5,500	5,000	7,100	10,500	19,500	25,000		

Capacity (SCFH) 1 1/2" Valve Body - 2 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
5	1,300	2,100	3,100	4,600	4,800	5,500	4,800	7,900
10	2,000	3,500	5,800	8,200	11,600	14,800	6,700	13,200
15	2,700	5,900	8,400	13,100	14,600	11,800	11,100	10,600
20	2,900	6,300	10,100	17,100	18,900	18,000	11,300	12,800
30	3,300	8,400	14,300	21,100	27,400	29,500	18,100	19,300
40	4,500	11,100	16,200	22,800	27,900	28,100	23,800	23,300
60	5,900	14,500	14,000	25,200	45,700	29,000	20,700	34,700
80	7,700	18,500	19,900	27,600	38,400	23,100	22,500	28,600
100	9,000	14,500	27,400	27,600	27,800	21,600	21,800	
125	8,000	16,300	38,200	32,100	33,700	16,700		

1804PFM Series Pilot-Loaded Industrial Regulator

1 1/2" X 1 1/2" VALVE HEAD

Capacity (SCFH) 1 1/2" Valve Body - 1 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
10	1,800	1,600	1,900	3,700	3,900	3,400	7,200	9,400
15	2,500	1,900	3,300	5,200	5,300	7,400	10,200	9,700
20	2,800	3,400	4,200	8,900	6,100	6,000	12,300	13,500
30	4,100	5,800	6,200	12,300	6,800	9,800	21,700	19,600
40	4,700	6,900	9,600	11,900	11,700	15,500	20,300	24,000
60	5,700	12,100	20,100	25,600	41,700	39,200	20,100	32,700
80	6,000	16,100	30,500	27,200	37,100	49,700	19,100	41,500
100	6,100	18,800	5,400	25,000	32,000	48,100	18,500	
125	7,400	4,200	6,700	32,800	39,000	58,700		

Capacity (SCFH) 1 1/2" Valve Body - 2 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
10	1,100	1,700	2,400	2,500	2,800	3,800	2,800	5,900
15	1,300	3,100	3,400	5,900	6,800	5,900	4,300	5,300
20	1,700	3,100	3,900	7,300	9,400	7,500	5,800	6,800
30	2,300	4,500	7,900	10,200	10,300	13,800	10,300	12,500
40	3,700	8,000	9,200	13,700	19,200	18,100	15,900	18,300
60	5,300	9,000	14,700	18,500	30,500	40,200	11,800	15,100
80	7,200	13,900	25,100	22,100	28,800	23,100	7,500	23,800
100	8,300	6,900	34,500	27,600	23,200	21,600	9,100	
125	9,600	7,700	24,100	26,600	28,100	16,700		

1804PFM Series Pilot-Loaded Industrial Regulator

1 1/2" X 1 1/2" VALVE HEAD

Capacity (SCFH) 1 1/2" Valve Body - 5 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
10	1,700	4,200	5,900	5,300	8,200	4,200	4,800	8,200
15	2,200	4,600	6,300	7,200	10,800	8,400	7,200	10,400
20	2,100	4,900	7,300	10,600	12,900	10,100	11,600	12,800
30	2,600	7,700	9,500	19,400	18,200	18,300	18,100	20,300
40	3,500	7,700	13,800	20,300	19,900	22,700	23,000	26,700
60	5,000	12,500	17,400	28,700	32,700	32,700	30,300	32,700
80	6,000	17,100	22,900	31,600	34,800	37,500	24,700	42,600
100	7,000	19,300	29,500	30,300	24,100	18,300	24,000	
125	9,600	17,200	32,300	39,500	29,400	9,400		

Regulators

Capacity (SCFH) 1 1/2" Valve Body - 10 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
15	4,000	2,400	3,100	3,900	6,700	5,200	7,500	7,900
20	4,700	3,800	5,100	5,200	7,300	5,800	10,600	19,200
30	2,900	5,200	8,300	12,300	13,300	13,100	13,700	24,000
40	3,500	7,300	12,400	16,700	16,300	19,000	22,300	30,700
60	4,800	11,000	17,400	31,500	29,200	34,800	39,900	27,900
80	6,100	12,900	20,900	39,200	40,600	39,000	41,300	31,900
100	7,200	15,700	24,100	35,800	27,500	34,400	37,600	
125	7,900	17,300	30,000	22,300	32,800	40,900		

1804PFM Series Pilot-Loaded Industrial Regulator

1 1/2" X 1 1/2" VALVE HEAD

Capacity (SCFH) 1 1/2" Valve Body - 15 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
20	2,400	2,700	4,600	4,800	6,400	3,400	13,600	14,000
30	2,700	4,400	7,400	11,800	13,200	12,500	16,500	25,200
40	3,400	6,500	10,500	18,300	18,500	20,200	22,500	31,400
60	5,500	12,700	15,700	27,900	34,500	37,600	39,900	39,200
80	6,800	16,200	19,000	37,300	48,700	41,100	44,300	49,800
100	7,800	19,600	21,800	39,200	53,500	21,100	51,100	
125	8,700	22,100	29,400	25,800	29,100	19,300		

Capacity (SCFH) 1 1/2" Valve Body - 20 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
30	2,800	5,900	8,400	5,700	10,800	10,100	13,100	27,900
40	3,200	8,900	16,300	25,700	21,400	19,500	22,600	33,000
60	5,300	14,200	22,000	30,800	34,700	37,900	42,300	59,900
80	6,900	16,600	25,600	40,000	45,800	47,400	50,400	40,300
100	7,800	19,900	28,000	38,400	49,000	52,800	30,000	
125	8,700	18,700	29,300	38,400	47,400	36,200		

Capacity (SCFH) 1 1/2" Valve Body - 25 PSIG set, ±1% abs.

INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
30	3,100	3,600	5,800	7,000	10,700	9,400	16,100	14,900
40	2,800	7,300	10,800	13,900	16,600	16,500	24,400	31,200
60	4,600	13,500	19,900	19,900	30,800	37,700	41,700	44,600
80	6,200	14,000	23,800	23,800	39,300	47,900	55,200	36,300
100	7,100	16,500	27,000	27,000	47,100	53,900	69,500	
125	8,300	18,300	26,300	26,300	36,300	47,500		

Capacity (SCFH) 1 1/2" Valve Body - 30 PSIG set, ±1% abs.

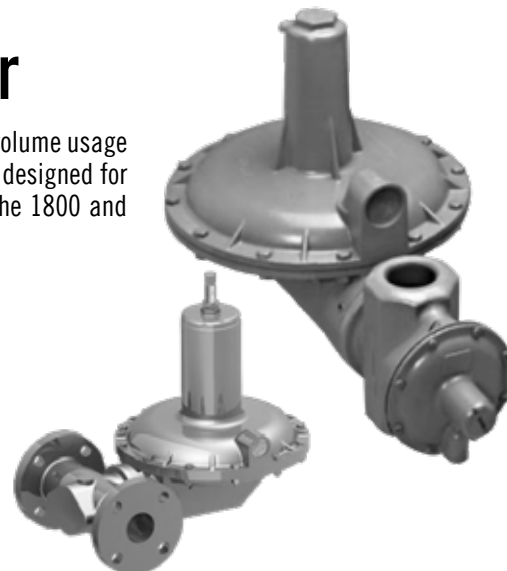
INLET (PSIG)	ORIFICE							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
40	4,100	5,500	10,500	12,700	19,500	12,800	11,800	24,700
60	4,800	14,100	21,000	26,500	35,600	37,900	42,300	29,600
80	7,200	16,600	25,100	34,300	40,500	47,100	54,700	38,200
100	8,500	17,700	29,500	41,200	56,300	47,000	70,400	
125	9,500	19,800	31,200	45,400	68,700	47,800		

1800/2000 Series Industrial Regulator

Application: The 1800 and 2000 Series regulators are suitable for a wide range of large volume usage in commercial, industrial, and gas utility distribution station applications. All units are designed for natural, propane vapor, air, nitrogen, carbon dioxide, and other non-corrosive gases. The 1800 and 2000 Series can be installed in both horizontal and vertical pipelines.

Control: A comprehensive range of springs is available. The outlet pressure can be easily and accurately adjusted by turning the spring adjustment unit located under the top cap. The 1800 Series can be ordered as Full Relief, Partial Relief or No Relief. 2000 Series Regulators are non-relieving. Both models are available with Over-pressure Shut off, Underpressure Shutoff and monitor capabilities.

The design of this mechanism provides virtually frictionless adjustment and eliminates “spring wind up”. The complete spring adjustment mechanism can be removed easily for maintenance and spring changes.



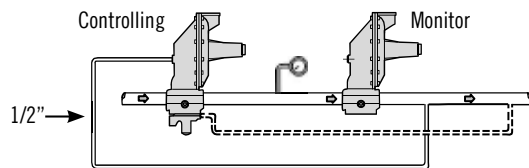
Technical Data:

Inlet Pressures up to 125 PSIG

Outlet Pressures: 1800 Series 3.5” W.C. to 5 PSIG.
2000 Series 0.5 PSIG to 15 PSIG.

Worker/Monitor: Commonly used to provide overpressure protection. A worker/monitor installation consists of a monitor with an external static connection and a worker with an internal static connection. The regulator selected to be the monitor is set at 2” to 5” W.C. above the worker. The external static connection is connected at a point free of turbulence and preferably a minimum of five pipe diameters downstream.

Four industrial monitor regulators are offered: the 1803M, 2003M, 1883M, and 2083M although all models can be configured as Monitor Regulators. All models are pre-machined to accept a monitor conversion kit. When a regulator with an OPSO is converted to a monitor, a sense line must extend down-stream of the worker, as shown in the diagram below.



Features & Benefits

- Sizes 1 1/2” and 2” screwed and 50mm flanged.
- Temperature range: -20°F to +150°F
- Threaded connections to NPT, BS EN 10226 (ISO 7) or Flanged to ANSI or BS EN 1092-2 NP16
- Inlet and outlet pressure taps
- Spring loaded
- Excellent outlet pressure control

Options

- Full or partial relief valve
- Over pressure slam shut
- Under pressure slam shut
- Monitor version with external impulse on regulator and slam shut.

Maximum Allowable Inlet Pressure to ensure complete lock-up

Orifice	Inlet Pressure (PSIG)
1/4"	125
3/8"	100
1/2"	80
5/8"	80
3/4"	80
7/8"	60
1"	30
1 1/4"	20

Regulator Pressure Rating

MAOP = Maximum Allowable Operating Pressure = Consult capacity charts for MAOP of different regulator series, models, set points and sizes.

175 PSIG (12 bar) = Maximum inlet pressure for abnormal or emergency service, without causing damage to regulator case.

2 PSIG (138 mbar) = Maximum outlet pressure for normal service.

10 PSIG (689 mbar) = Maximum outlet pressure which can be contained by pressure carrying components (no flange leakage to atmosphere except for normal relief action). **If regulator is subjected to these conditions, it should be removed from service.**

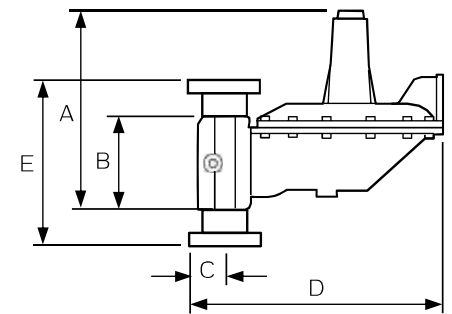
50 PSIG (3.5 bar) = Maximum outlet pressure for abnormal service without damage to internal components. **If regulator is subjected to these conditions, it should be removed from service.**

1800/2000 Series Industrial Regulator

Low Pressure

Model Number	Description	DIMENSIONS				
		A	B*	C	D	E**
1803	Standard Regulator	12.75" (324mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)
1803M	Standard Monitor Regulator	12.75" (324mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)
1813	Partial Internal Relief Regulator	12.75" (324mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)
1813B	Full Capacity Internal Relief Regulator	12.75" (324mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)

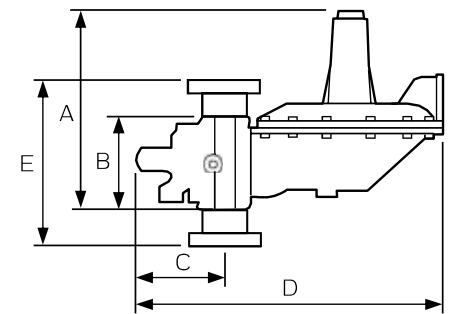
Low Pressure



Low Pressure with OPSS

Model Number	Description	DIMENSIONS				
		A	B*	C	D	E**
1843	OPSO with Partial Internal Relief	12.75" (324mm)	6" (512mm)	5.62" (143mm)	19.87" (505mm)	10.5" (267mm)
1843B	OPSO with Full Capacity Internal Relief	12.75" (324mm)	6" (512mm)	5.62" (143mm)	19.87" (505mm)	10.5" (267mm)
1853	OPSO with Partial Internal Relief	12.75" (324mm)	6" (512mm)	5.62" (143mm)	19.87" (505mm)	10.5" (267mm)
1883	OPSO	12.75" (324mm)	6" (512mm)	5.62" (143mm)	19.87" (505mm)	10.5" (267mm)
1883M	OPSO with Monitor	12.75" (324mm)	6" (512mm)	5.62" (143mm)	19.87" (505mm)	10.5" (267mm)

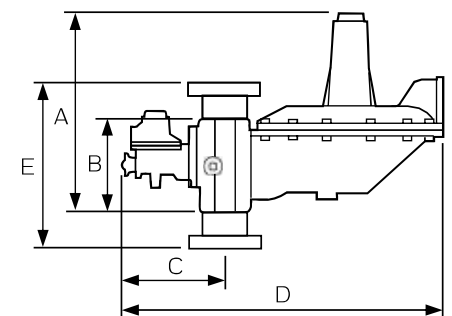
Low Pressure with OPSS



Low Pressure with USSA

Model Number	Description	DIMENSIONS				
		A	B*	C	D	E**
1823	Underpressure Shutoff (USSA)	12.75" (324mm)	6" (512mm)	1.75" (45mm)	21" (533mm)	10.5" (267mm)
1833	UPSO with Partial Internal Relief (USSA)	12.75" (324mm)	6" (512mm)	1.75" (45mm)	21" (533mm)	10.5" (267mm)
1833B	UPSO with Full Internal Relief (USSA)	12.75" (324mm)	6" (512mm)	1.75" (45mm)	21" (533mm)	10.5" (267mm)
1853B	OPSO & UPSO with Full Capacity Internal Relief (USSA)	12.75" (324mm)	6" (512mm)	1.75" (45mm)	21" (533mm)	10.5" (267mm)
1893	OPSO and UPSO (USSA)	12.75" (324mm)	6" (512mm)	1.75" (45mm)	21" (533mm)	10.5" (267mm)

Low Pressure with USSA



*B = NPT

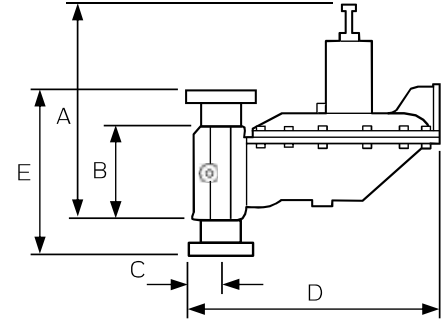
**E = Flange

1800/2000 Series Industrial Regulator

High Pressure

Model Number	Description	DIMENSIONS				
		A	B*	C	D	E**
2003	Standard Regulator	18.19" (462mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)
2003M	Standard Monitor Regulator	18.19" (462mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)
2023	UPSO	18.19" (462mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)
2083	OPSO	18.19" (462mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)
2083M	OPSO with Monitor	18.19" (462mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)
2093	OPSO and UPSO	18.19" (462mm)	6" (512mm)	1.75" (45mm)	16" (407mm)	10.5" (267mm)

High Pressure



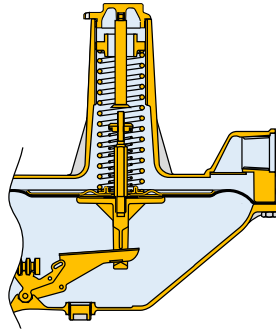
*B = NPT
 **E = Flange

Regulator Repair Kits

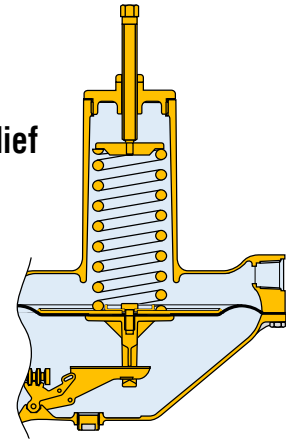
Kit Part No.	Description	USED ON.
73909K013.	O-Rings, Diaphragm Assy, Seat Disc Assy, Fasteners	Models 2003, 2003M, 2023, 2083, 2083M, & 2093 Made - after 4/1/1994
73909K012	Monitor Conversion Kit	All Models
73909K015	O-Rings, Diaphragm Assy, Seat Disc Assy, Fasteners	Models 1813B, 1833B, 1843B, & 1853B - Made after 4/1/1994
73909K006	O-Rings, Diaphragm Assy, Seat Disc Assy, Fasteners	Models 1813, 1823, 1833, 1843, 1843M, 1853, & 1853M (All Partial Relief) – Made after 4/1/1994
73909K014	Seal plug and body O-Rings & Seat Disc Assy	All Models

1800/2000 Series Industrial Regulator

1813 Partial Relief



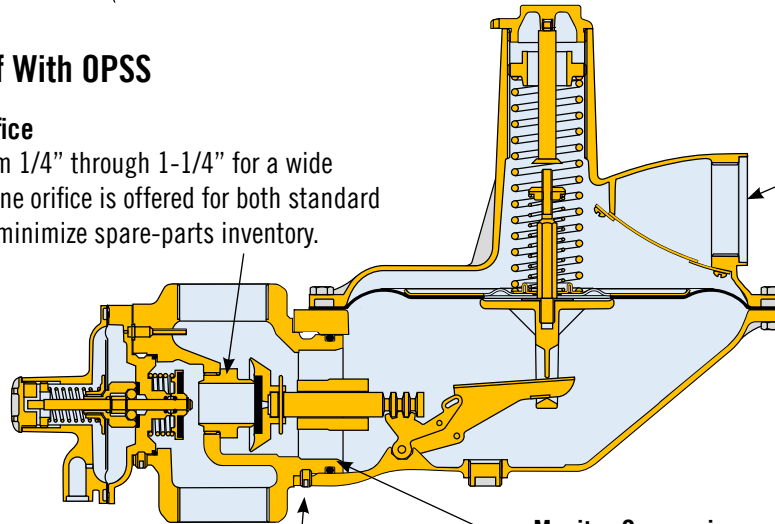
2003 No Relief



1843B Full Relief With OPSS

Interchangeable Orifice

Available in sizes from 1/4" through 1-1/4" for a wide range of flow rates. One orifice is offered for both standard and OPSO models to minimize spare-parts inventory.



Relief Vent

A 2" vent for Full Relief overpressure protection in three models, such as the 1813B. Partial Relief has 1" vent and 2000 Series has 3/4".

Maintenance

The body and valve head are pre-machined to allow easy conversion to a monitor model.

Monitor Conversion

The body and valve head are pre-machined to allow easy conversion to a monitor model.

OPSS.

Overpressure shutoff regulator models prevent excessive gas pressure from entering a building causing a hazardous condition. The shutoff device closes if the regulator outlet pressure rises above a maximum set point or set pressure

OPSS Operation.

When line or static pressure increases to the specified overpressure shutoff setting, the pressure on the underside of the shutoff diaphragm over-balances the spring, forcing the diaphragm stem outward, releasing the plunger. This permits the shutoff spring to force the shut-off disc against the orifice, closing off gas flow. The OPSO assembly is part of the regulator but is not connected to the regulator operating mechanism.

When selecting a shutoff spring, a minimum differential of 14" W.C. between normal operating pressures and the shutoff pressure setting should be provided.

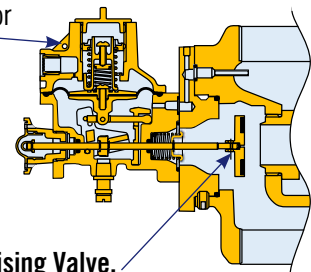
To reset the overpressure shutoff device, unscrew the seal cap, which opens the regulator orifice, permitting gas flow. Pull out on the seal cap until the overpressure shutoff device latches completely. Tighten the seal cap.

Do not trip the shutoff valve unless the seal cap is installed.

USSA with Overpressure and/or underpressure shutoff

USSA Slam Shut.

Available as OPSS only, UPSS only or OPSS and UPSS.



Equalising Valve.

Pressure is automatically stabilised across orifice during reset for easy operation.

Regulators

1800/2000 Series Industrial Regulator

USSA SLAM SHUT VALVE

The Universal Safety Shut-off Assembly (USSA) can be fitted to an AMCO 1800/2000 Industrial Regulator on the inlet side of the valve head. This provides over pressure and/or under pressure protection with immediate shutoff at the regulator inlet. It uses well proven principles to give exceptional consistency of operation and an unrivalled insensitivity to nuisance tripping. The USSA senses downstream regulator pressure through a brass sensing tube (standard models) or is piped to a remote sensing port (monitor versions). In the event of an Overpressure or Underpressure occurrence, there is excess motion of the diaphragm, which causes the USSA mechanism to trip. Shutoff occurs when the spring-loaded seat disc is released to seal off the inlet side of the main regulator orifice.

The OPSS and UPSS loading springs are fitted concentrically and can be adjusted independently.

The USSA is constructed as either OPSS or OPSS/UPSS UPSS. It is not practicable to convert from one variant to the other.

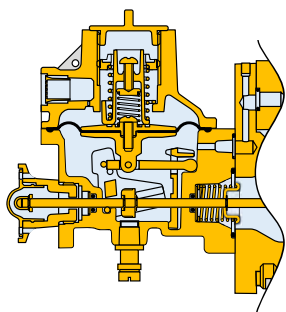
There is also a special High Pressure OPSS only version for trip pressures above 7 PSIG.

USSA Specifications

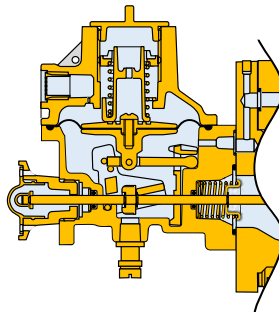
Universal Safety shutoff Assembly (USSAs) can be fitted to AMCO Industrial Regulators with inlet pressures from 1/2 PSIG to 150 PSIG. The USSA has the following features:

- Diaphragm Molded Buna N with Sealing Ring Minimum burst pressure >100 psig
- Shutoff Pressures OPSO (7.5" W.C. to 7 PSIG) UPSO (3.0" W.C. to 60" W.C.).
- Repeatability OPSO (< 1% absolute pressure " W.C. units) (< 1/2% absolute pressure PSIG units) UPSO (< 2% absolute pressure all units)
- Response Time Less than one second
- Service Life Type approval of 3000 on/shutoff/reset cycles USSA rated for
- 20-year average service life
- Temperature Range Operates at -20°F to +140°F
- Optional Equipment
- Monitor adaptor plate for remote pressure sensing
- Vent flow limiter (meets EN334 flow limit). Vent bug shield is standard equipment.

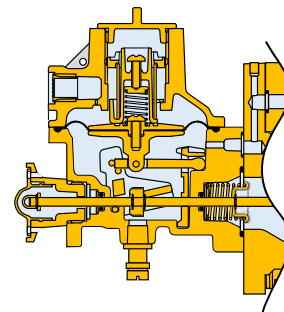
All USSA models have a Green "Flag" Visual Flow Indicator that shows proper Regulator flow. When the OPSO or UPSO trips, the Green Flag is withdrawn into the USSA, showing that the unit needs to be reset.



OPSS and UPSS



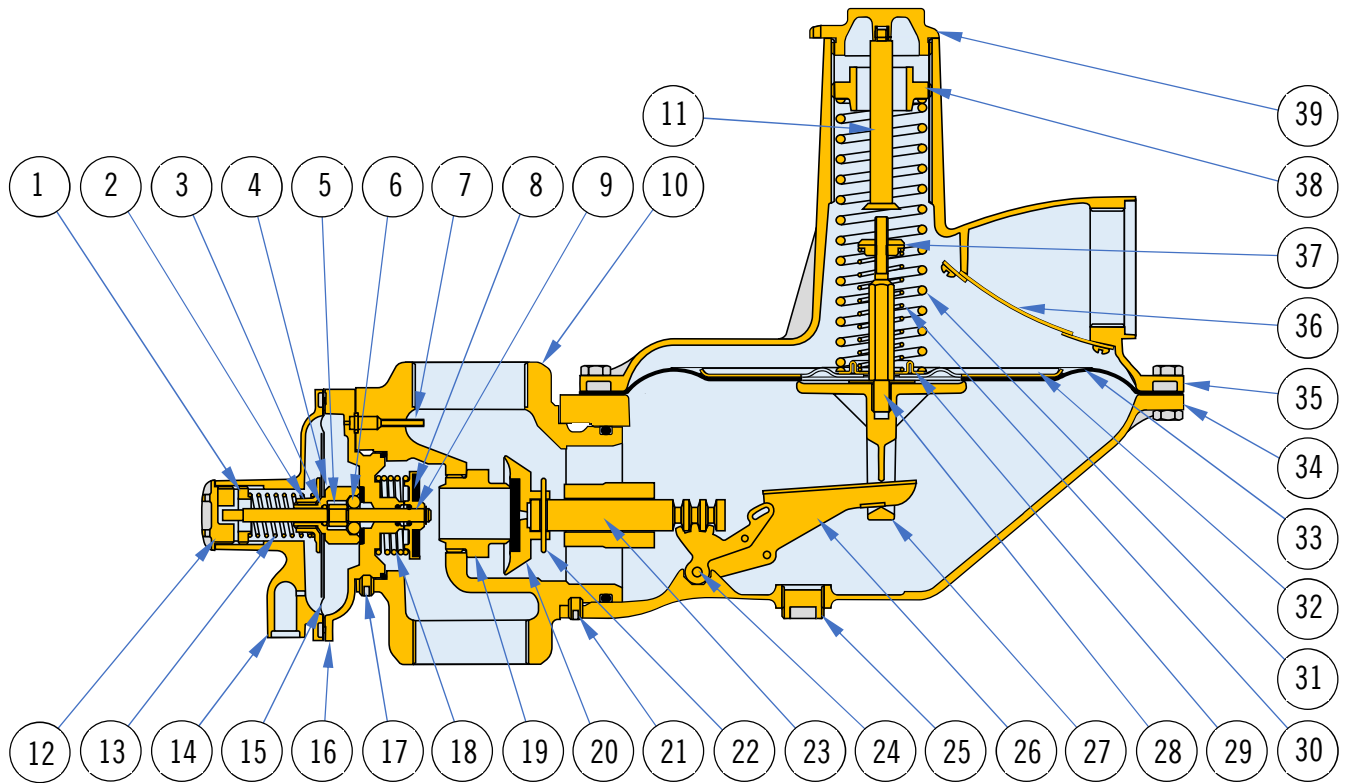
OPSS only



UPSS only

1800/2000 Series Industrial Regulator

Regulator Components



Regulators

Item No.	Description	Material
1	OPSO Pressure Adjuster	Diecast Aluminum
2	OPSO Diaphragm Nut	Gray Cast Iron
3	Loading Spring	Spring Steel
4	OPSO Ball Cage	Steel
5	Diaphragm Plate	Steel
6	OPSO Ball	
7	OPSO Impulse Tube	
8	Valve Discs	Buna N
9	Diaphragm Stop	
10	Valve Body	Gray Cast Iron
11	Plunger Valve	
12	Regulator Pressure Adjuster	
13	OPSO Loading Spring	Stainless Steel
14	OPSO Top Cover	Diecast Aluminum
15	OPSO Diaphragm	Buna N
16	OPSO Diaphragm Case	Diecast Aluminum
17	Grub Screw	Steel
18	OPSO Actuating Spring	Spring Steel
19	Orifice	Aluminum
20	Valve Disc Holder	Aluminum

Item No.	Description	Material
21	Grub Screw	Steel
22	Cotter Pin	
23	Valve Spindle	Stainless Steel
24	Lever Pin	Carbon Steel
25	Seal Plug	
26	Lever Arm	
27	Relief Valve	Diecast Aluminum
28	Relief Valve Stem	
29	Bottom Spring Holder	Steel
30	Relief Valve Spring	Spring Steel
31	Regulator Loading Spring	Spring Steel
32	Diaphragm Plate	Steel
33	Regulator Diaphragm	Buna N
34	Diaphragm Case	Diecast Aluminum
35	Top Cover	Diecast Aluminum
36	Vent Valve	
37	Relief Spring Adjuster	
38	Regulator Loading Spring	Spring Steel
39	Regulator Top Cap	

1800/2000 Series Industrial Regulator

1 1/2" SERIES 1800 CAPACITY DATA - ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

Orifice Size - All Models with Silver Holder

Orifice Size - All Models with Silver Holder

	Orifice							Inlet PSIG (bar)	Orifice										
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1/4"	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"		3/8"	1/4"	
SPRING NO. 71424P017 3.5" to 6" W.C. Set: 6" W.C. Droop: 1" W.C. Max. Compound: 2" W.C. (8.7 to 15mbar) Set: 15mbar Droop: 2.5 mbar Max. Compound: (5mbar)	2,000 (56.6)	1,600 (45.3)	1,300 (36.8)	1,100 (31.1)	900 (25.5)	550 (15.6)			1/2" (0.03)	1,900 (53.8)	1,550 (43.9)	1,300 (36.8)	1,100 (31.1)	1,000 (28.3)	600 (17.0)			SPRING NO. 71424P018 5.5" to 8" W.C. Set: 7" Droop: 1" W.C. Max. Compound: 2" W.C. (13.7 to 20mbar) Set: 17.4mbar Droop: 2.5 mbar Max. Compound: (5mbar)	
	2,850 (80.7)	2,300 (65.1)	2,100 (59.5)	1,800 (51.0)	1,400 (39.6)	1,100 (31.1)	750 (21.2)		1 (0.07)	2,750 (77.9)	2,300 (65.1)	1,850 (52.4)	1,800 (51.0)	1,300 (36.8)	1,150 (32.6)	780 (19.8)			
	3,800 (108)	3,250 (92.0)	2,900 (81.2)	2,700 (76.5)	2,000 (56.6)	1,700 (48.1)	1,200 (34.0)		2 (0.14)	3,750 (106)	3,300 (93.4)	2,600 (73.6)	2,600 (73.6)	2,000 (56.6)	1,800 (51.0)	1,100 (31.1)			
	4,500 (127)	3,900 (110)	3,400 (96.3)	3,400 (96.4)	2,500 (70.8)	2,200 (62.3)	1,400 (39.6)		3 (0.21)	4,500 (127)	3,900 (110)	3,300 (93.4)	3,200 (90.6)	2,500 (70.8)	2,100 (59.5)	1,300 (36.8)			
	5,700 (161)	5,100 (114)	4,400 (125)	4,300 (122)	3,300 (93.4)	2,900 (82.1)	2,000 (56.6)	1,100 (31.1)	5 (0.34)	5,700 (161)	5,100 (114)	4,300 (122)	4,000 (113)	3,400 (96.4)	2,950 (83.5)	1,800 (51.0)	1,000 (28.3)		
		7,500 (212)	6,200 (176)	6,100 (173)	4,800 (136)	4,400 (125)	3,000 (84.9)	1,550 (43.9)	10 (0.70)		7,400 (210)	6,300 (178)	6,000 (170)	5,000 (142)	4,400 (125)	3,000 (84.9)	1,600 (45.3)		
		9,100 (258)	7,900 (224)	7,500 (213)	6,200 (176)	5,400 (153)	3,850 (109)	1,900 (53.8)	15 (1.00)		9,150 (259)	7,800 (221)	7,500 (212)	6,300 (178)	5,500 (156)	3,850 (109)	1,900 (53.8)		
				9,200 (260)	8,700 (246)	7,200 (204)	6,300 (178)	4,600 (130)	2,300 (65.1)	20 (1.40)			9,300 (263)	8,600 (243)	7,250 (205)	6,400 (181)	4,550 (129)		2,200 (62.3)
				11,750 (333)	11,100 (314)	9,000 (255)	7,700 (218)	5,900 (167)	2,850 (80.7)	30 (2.0)			11,800 (334)	10,700 (303)	8,900 (252)	8,100 (229)	5,800 (164)		2,800 (79.3)
					12,300 (348)	10,800 (306)	9,200 (260)	7,200 (204)	3,400 (96.3)	40 (2.80)				12,300 (348)	11,000 (311)	9,300 (263)	7,150 (202)		3,400 (96.3)
							12,000 (340)	9,400 (266)	4,500 (127)	60 (4.10)						12,000 (340)	9,400 (266)		4,500 (127)
									5,850 (165)	80 (5.50)									5,800 (164)
								7,000 (198)	100 (6.90)								7,000 (198)		
								8,400 (238)	125 (8.60)								8,300 (235)		

Orifice Size - All Models with Silver Holder

Orifice Size - All Models with Silver Holder

	Orifice							Inlet PSIG (bar)	Orifice										
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1/4"	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"		3/8"	1/4"	
SPRING NO. 71424P019 8.5" to 14" W.C. Set: 11" W.C. Droop: 2" W.C. (21 to 35mbar) Set: 27.4mbar Droop: (5mbar Max)	2,800 (79.3)	2,300 (65.1)	1,900 (53.8)	1,800 (51.0)	1,300 (36.8)	1,100 (31.1)	750 (21.2)		1 (0.07)	2,550 (72.2)	2,100 (59.5)	1,700 (48.1)	1,500 (42.5)	1,300 (36.8)	1,000 (28.3)	700 (19.8)		SPRING NO. 71424P019 8.5" to 14" W.C. Set: 14" W.C. Droop: 2" W.C. (21 to 35mbar) Set: 34.8mbar Droop: (5mbar Max)	
	4,300 (122)	3,500 (99.1)	2,800 (79.3)	2,500 (70.8)	2,000 (56.6)	1,700 (48.1)	1,200 (34.0)		2 (0.14)	3,800 (108)	3,200 (90.6)	2,600 (73.6)	2,400 (68.0)	1,900 (53.8)	1,500 (42.8)	1,000 (28.3)			
	5,800 (164)	4,000 (113)	3,550 (100)	3,200 (90.6)	2,550 (72.2)	2,100 (59.5)	1,400 (39.6)		3 (0.21)	4,750 (134)	4,000 (113)	3,200 (90.6)	3,100 (87.7)	2,500 (70.8)	2,000 (56.6)	1,350 (38.2)			
	6,100 (173)	5,300 (150)	4,500 (127)	4,200 (119)	3,600 (102)	2,800 (79.3)	2,000 (56.6)	1,000 (28.3)	5 (0.34)	5,700 (161)	5,400 (153)	4,400 (125)	4,100 (116)	3,300 (93.4)	2,600 (73.6)	1,800 (51.0)	1,000 (28.3)		
	8,000 (226)	7,600 (215)	6,600 (187)	6,200 (176)	5,100 (144)	4,300 (122)	2,900 (82.1)	1,500 (42.5)	10 (0.70)	8,200 (232)	7,800 (221)	6,400 (181)	6,100 (173)	4,900 (139)	4,100 (116)	2,800 (79.3)	1,500 (42.5)		
		9,300 (263)	8,100 (229)	7,800 (221)	6,500 (184)	5,400 (153)	3,800 (108)	1,850 (52.4)	15 (1.00)		9,400 (266)	8,000 (226)	7,600 (215)	6,250 (177)	5,200 (147)	3,700 (105)	1,900 (53.8)		
			9,500 (269)	9,000 (255)	7,350 (208)	6,500 (184)	4,500 (127)	2,150 (60.9)	20 (1.40)			9,600 (272)	8,800 (249)	7,500 (212)	6,200 (176)	4,300 (122)	2,200 (62.3)		
				12,300 (348)	11,100 (314)	9,200 (260)	8,100 (229)	5,800 (164)	2,700 (76.5)	30 (2.0)			12,200 (345)	11,100 (314)	9,400 (266)	8,000 (226)	5,600 (159)		2,800 (79.3)
					12,700 (360)	11,400 (323)	9,500 (268)	7,200 (204)	3,300 (93.4)	40 (2.80)				12,800 (362)	11,200 (317)	9,300 (263)	7,100 (201)		3,300 (93.4)
						13,900 (394)	12,500 (354)	9,600 (272)	5,800 (164)	60 (4.10)					13,800 (391)	12,300 (348)	9,400 (266)		4,500 (127)
							14,100 (399)	11,800 (344)	5,700 (161)	80 (5.50)						14,000 (396)	11,800 (334)		5,700 (161)
									7,000 (198)	100 (6.90)									7,000 (198)
								8,200 (232)	125 (8.60)								8,100 (229)		

For optimum performance, regulator should be operated above solid line.

1800/2000 Series Industrial Regulator

1 1/2" SERIES 1800 CAPACITY DATA - ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

Orifice Size - All Models with Silver Holder

Orifice Size - All Models with Silver Holder

	Orifice							Inlet PSIG (bar)	Orifice										
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1/4"	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"		3/8"	1/4"	
SPRING NO. 71424P020 14.5" to 28" W.C. Set: 1 PSIG Droop: 6" W.C. (36 to 70mbar) Set: 69mbar Droop: (15mbar Max)	6,300 (178)	4,900 (139)	4,200 (119)	3,400 (96.4)	3,000 (85.0)	2,300 (65.1)	1,500 (42.5)		3 (0.21)									SPRING NO. 71424P021 1 PSIG to 2 PSIG Set: 2 PSIG Droop: 0.4" W.C.	
	8,000 (226)	6,650 (188)	5,600 (159)	4,700 (133)	4,100 (116)	3,200 (90.6)	2,000 (56.6)	1,000 (28.3)	5 (0.34)	7,200 (204)	5,800 (164)	4,900 (139)	4,400 (125)	3,600 (102)	2,800 (79.3)	1,750 (49.6)	900 (25.5)		
	11,000 (311)	9,400 (266)	8,100 (229)	7,000 (198)	6,300 (178)	4,900 (139)	2,800 (79.3)	1,500 (42.5)	10 (0.70)	11,000 (311)	9,200 (260)	7,800 (221)	7,000 (198)	5,900 (167)	4,700 (133)	2,900 (82.1)	1,500 (42.5)		
		11,300 (320)	10,000 (283)	8,700 (246)	7,800 (221)	6,200 (176)	3,700 (105)	1,900 (53.8)	15 (1.00)	13,000 (368)	11,500 (326)	9,750 (276)	8,700 (246)	7,600 (215)	6,300 (178)	3,800 (108)	1,900 (53.8)		
		12,700 (360)	11,400 (323)	10,000 (283)	9,200 (260)	7,300 (207)	4,300 (122)	2,250 (63.7)	20 (1.40)	14,900 (422)	12,800 (362)	11,900 (337)	10,800 (306)	9,500 (269)	7,400 (209)	4,700 (133)	2,200 (62.3)		
			14,200 (402)	12,300 (348)	11,600 (328)	9,300 (263)	5,600 (159)	2,800 (79.3)	30 (2.0)		15,400 (436)	14,850 (420)	13,300 (377)	12,100 (343)	9,500 (269)	6,000 (170)	2,800 (79.3)		
				15,600 (442)	13,900 (394)	13,700 (388)	10,900 (309)	7,100 (201)	3,400 (96.3)	40 (2.80)			17,000 (481)	15,200 (430)	13,850 (392)	11,600 (328)	7,100 (201)		3,400 (96.3)
					16,400 (464)	16,000 (453)	14,200 (402)	9,300 (263)	4,700 (133)	60 (4.10)			19,600 (555)	18,200 (515)	17,200 (487)	15,000 (428)	9,800 (277)		4,600 (130)
						16,000 (453)	11,500 (326)	5,800 (164)		80 (5.50)				20,000 (566)	18,900 (535)	17,700 (501)	11,500 (326)		5,800 (164)
							13,800 (391)	7,000 (198)		100 (6.90)						13,800 (391)	7,000 (198)		
							8,400 (238)		125 (8.60)							8,400 (238)			

Orifice Size - All Models with Silver Holder

Orifice Size - All Models with Silver Holder

	Orifice							Inlet PSIG (bar)	Orifice										
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1/4"	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"		3/8"	1/4"	
SPRING NO. 71424P022 2 PSIG to 3 PSIG Set: 3 PSIG Droop: 0.6 PSIG (138 to 207mbar) Set: 207mbar Droop: (41mbar Max)	4,100 (116)	3,400 (96.3)	2,900 (82.1)	2,900 (82.1)	2,000 (56.6)	2,000 (56.6)	1,300 (36.8)	750 (21.2)	5 (0.34)									SPRING NO. 71424P023 3 PSIG to 5 PSIG Set: 5 PSIG Droop: 1 PSIG (207 to 345mbar) Set: 345mbar Droop: (69 mbar Max)	
	7,600 (215)	5,800 (164)	5,000 (142)	5,000 (142)	3,500 (99.1)	3,500 (99.1)	2,200 (62.3)	1,400 (39.6)	10 (0.70)	7,000 (198)	5,600 (158)	4,800 (136)	4,800 (136)	3,700 (105)	3,100 (87.8)	2,200 (62.3)	1,200 (34.0)		
	10,000 (283)	7,900 (224)	6,550 (186)	6,550 (186)	4,800 (136)	4,800 (136)	3,000 (84.9)	1,800 (51.0)	15 (1.00)	9,500 (269)	7,600 (215)	6,200 (176)	6,200 (176)	4,800 (136)	4,200 (119)	3,000 (84.9)	1,850 (52.4)		
	12,000 (340)	9,700 (275)	8,100 (229)	8,100 (229)	5,800 (164)	5,800 (164)	3,600 (102)	2,200 (62.3)	20 (1.40)	11,800 (334)	9,750 (276)	7,600 (215)	7,600 (215)	6,000 (170)	5,300 (150)	3,800 (108)	2,200 (62.3)		
		13,100 (371)	10,800 (306)	10,800 (306)	8,000 (227)	8,000 (227)	4,800 (136)	2,900 (82.1)	30 (2.0)		12,700 (360)	10,500 (297)	10,500 (297)	8,300 (235)	7,200 (204)	5,000 (142)	2,900 (82.1)		
			13,400 (379)	13,400 (379)	9,800 (277)	9,800 (277)	6,000 (170)	3,500 (99.1)	40 (2.80)			13,000 (368)	13,000 (368)	9,400 (266)	8,700 (246)	6,500 (184)	3,500 (99.1)		
				17,000 (481)	17,000 (481)	12,900 (365)	12,900 (365)	8,400 (238)	4,800 (136)	60 (4.10)			17,200 (487)	17,200 (487)	12,700 (359)	12,000 (340)	8,900 (252)		4,900 (139)
					20,000 (566)	15,500 (439)	15,500 (439)	10,850 (307)	6,200 (176)	80 (5.50)				20,000 (566)	16,000 (453)	15,200 (430)	10,800 (306)		6,200 (176)
							12,700 (360)	7,500 (212)	100 (6.90)							12,700 (359)	7,500 (212)		
								8,100 (229)	125 (8.60)								8,100 (229)		

For optimum performance, regulator should be operated above solid line. Enquire for performance figures for 1 1/4" size.

1800/2000 Series Industrial Regulator

Orifice Size - All Models with Silver Holder

	Orifice							Inlet PSIG (bar)	
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"	
SPRING NO. 71424P026 1.5 to 2.5 PSIG Set: 2.5 PSIG Droop: 0.4 PSIG (103 to 172mbar) Set: 172mbar Droop: (27mbar Max)	4,050 (115)	3,400 (96.3)	3,400 (96.3)	2,800 (79.3)	2,300 (65.1)	1,800 (51.0)	1,400 (39.6)	800 (22.7)	5 (0.34)
	7,200 (204)	5,800 (164)	5,000 (142)	4,500 (127)	4,700 (133)	2,800 (79.3)	2,200 (62.3)	1,200 (34.0)	10 (0.70)
	8,640 (245)	7,400 (210)	6,300 (178)	5,800 (164)	5,800 (164)	3,500 (99.1)	3,000 (84.9)	1,600 (45.3)	15 (1.00)
	9,090 (257)	8,600 (244)	7,000 (198)	6,800 (193)	6,700 (190)	4,800 (136)	3,500 (99.1)	2,000 (56.6)	20 (1.40)
		10,600 (300)	8,700 (246)	8,800 (249)	8,100 (229)	5,900 (167)	4,800 (136)	2,600 (73.6)	30 (2.0)
			11,200 (317.1)	12,400 (351)	9,700 (275)	6,900 (195)	5,600 (159)	3,100 (87.8)	40 (2.80)
			14,200 (402)	12,800 (362)	12,100 (342)	10,100 (286)	7,400 (210)	4,300 (122)	60 (4.10)
				14,800 (419)	13,700 (388)	12,200 (345)	9,400 (266)	5,400 (153)	80 (5.50)
							10,500 (297)	6,300 (178)	100 (6.90)
								7,500 (212)	125 (8.60)

Regulators

For optimum performance, regulator should be operated above solid line. Enquire for performance figures for 1 1/4" size.

1800/2000 Series Industrial Regulator

2" SERIES 1800 CAPACITY DATA - ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

Orifice Size For Models with Blue Holder Without OPSO

Orifice Size For Models with Silver Holder Without OPSO

Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Red Holder With OPSO

	Orifice			Inlet PSIG (bar)	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"
	1 1/4"	1"	7/8"							
SPRING NO. 71424P020 14.5" to 28" W.C. Set: 1 PSIG Droop: 6" W.C. (36 to 70mbar) Set: 69mbar Droop: (15mbar Max)	2,500 (70.8)	2,000 (56.6)	1,600 (45.3)	1/2" (0.03)	1,500 (42.5)	1,300 (36.8)	1,000 (28.3)	500 (14.2)		
	3,800 (108)	3,200 (90.6)	2,500 (70.8)	1 (0.07)	2,400 (68.0)	1,900 (53.8)	1,600 (45.3)	1,100 (31.1)	900 (25.5)	
	5,600 (158)	5,000 (142)	3,800 (108)	2 (0.14)	3,800 (108)	2,900 (82.1)	2,400 (68.0)	1,650 (46.7)	1,300 (36.8)	
	8,900 (252)	6,300 (178)	5,100 (144)	3 (0.21)	4,800 (136)	3,800 (108)	3,200 (90.6)	2,100 (59.5)	1,600 (45.3)	
	13,200 (374)	10,000 (283)	8,000 (227)	5 (0.34)	7,200 (204)	5,200 (147)	4,000 (113)	2,900 (82.1)	2,000 (56.6)	1,100 (31.1)
		16,500 (467)	13,000 (368)	10 (0.70)	12,300 (348)	8,300 (235)	6,200 (176)	4,800 (136)	3,000 (84.9)	1,650 (46.7)
		20,000 (566)	16,500 (467)	15 (1.00)	16,000 (453)	10,800 (306)	9,000 (255)	6,600 (187)	4,000 (113)	1,950 (55.2)
			20,000 (566)	20 (1.40)	19,000 (538)	15,700 (445)	11,700 (331)	8,000 (227)	4,600 (130)	2,300 (65.1)
				30 (2.0)	20,000 (566)	20,000 (566)	14,300 (405)	10,500 (297)	5,900 (167)	2,850 (80.7)
				40 (2.80)		20,000 (566)	18,500 (524)	13,000 (368)	7,200 (204)	3,400 (96.3)
				60 (4.10)				17,700 (501)	9,600 (272)	4,500 (127)
				80 (5.50)						5,850 (166)
				100 (6.90)						7,000 (198)
			125 (8.60)						8,400 (238)	

Orifice Size For Models with Blue Holder Without OPSO

Orifice Size For Models with Silver Holder Without OPSO

Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Red Holder With OPSO

	Orifice			Inlet PSIG (bar)	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"
	1 1/4"	1"	7/8"							
SPRING NO. 71424P018 5.5" to 8" W.C. Set: 7" W.C. Droop: 1" W.C. Max. Compound: 2" W.C. (13.7 to 20mbar) Set: 17.4mbar Droop: 2.5 mbar Max. Compound: (5mbar)	1,900 (53.8)	1,600 (45.3)	1,400 (39.6)	1/2" (0.03)	1,300 (36.8)	1,050 (29.7)	1,000 (28.3)	500 (14.2)		
	3,400 (96.3)	2,700 (76.5)	2,300 (65.1)	1 (0.07)	2,100 (59.5)	1,800 (51.0)	1,600 (45.3)	1,050 (29.7)	750 (21.2)	
	5,600 (158)	4,400 (125)	3,800 (108)	2 (0.14)	3,500 (99.1)	2,700 (76.5)	2,400 (68.0)	1,600 (45.3)	1,250 (35.4)	
	8,500 (241)	6,000 (170)	5,000 (142)	3 (0.21)	4,500 (127)	3,600 (102)	3,200 (90.6)	2,100 (59.5)	1,500 (42.5)	
	13,000 (368)	10,000 (283)	8,000 (227)	5 (0.34)	7,000 (198)	5,000 (142)	4,000 (113)	2,900 (82.1)	2,000 (56.6)	1,000 (28.3)
		15,700 (445)	13,000 (368)	10 (0.70)	11,500 (326)	8,300 (235)	6,200 (176)	4,800 (136)	3,000 (84.9)	1,600 (45.3)
		17,500 (496)	16,000 (453)	15 (1.00)	15,000 (425)	11,500 (326)	9,000 (255)	6,400 (181)	4,000 (113)	1,900 (53.8)
			19,200 (544)	20 (1.40)	19,000 (538)	15,500 (439)	11,000 (311)	7,800 (221)	4,600 (130)	2,200 (62.3)
				30 (2.0)	20,000 (566)	20,000 (566)	14,000 (396)	10,300 (292)	5,900 (167)	2,800 (79.3)
				40 (2.80)		20,000 (566)	18,500 (524)	12,500 (354)	7,200 (204)	3,400 (96.3)
				60 (4.10)				17,400 (493)	9,600 (272)	4,500 (127)
				80 (5.50)						5,800 (164)
				100 (6.90)						7,000 (198)
			125 (8.60)						8,300 (235)	

For optimum performance, regulator should be operated above solid line.

1800/2000 Series Industrial Regulator

2" SERIES 1800 CAPACITY DATA - ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

Orifice Size For Models with Blue Holder Without OPSO
Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Silver Holder Without OPSO
Orifice Size For Models with Red Holder With OPSO

	Orifice			Inlet PSIG (bar)	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"
	1 1/4"	1"	7/8"							
SPRING NO. 71424P019 8.5" to 14" W.C. Set: 11" W.C. Droop: 2" W.C. (21 to 35mbar) Set: 27.4mbar Droop: (5mbar Max.)	3,400 (96.3)	2,700 (76.5)	2,200 (62.3)	1 (0.07)	2,000 (56.6)	1,700 (48.1)	1,600 (45.3)	1,000 (28.3)	750 (21.2)	
	5,100 (144)	4,200 (119)	3,800 (108)	2 (0.14)	3,500 (99.1)	2,700 (76.5)	2,400 (68.0)	1,500 (42.5)	1,200 (34.0)	
	7,200 (204)	5,700 (161)	5,000 (142)	3 (0.21)	4,500 (127)	3,600 (102)	3,000 (84.9)	2,000 (56.6)	1,500 (42.5)	
	11,500 (326)	8,500 (241)	7,100 (201)	5 (0.34)	6,400 (181)	4,800 (136)	4,000 (113)	2,600 (73.6)	2,000 (56.6)	1,000 (28.3)
	20,000 (566)	10,000 (283)	12,300 (348)	10 (0.70)	11,200 (317)	8,100 (229)	6,200 (176)	4,300 (122)	2,900 (82.1)	1,600 (45.3)
		19,000 (538)	16,000 (453)	15 (1.00)	15,000 (425)	10,800 (306)	8,000 (227)	5,800 (164)	3,800 (108)	1,900 (53.8)
			20,000 (566)	20 (1.40)	18,000 (510)	13,300 (377)	10,800 (306)	7,400 (210)	4,300 (122)	2,200 (62.3)
			20,000 (566)	30 (2.0)	20,000 (566)	17,900 (507)	14,000 (396)	10,000 (283)	5,700 (161)	2,800 (79.3)
				40 (2.80)		20,000 (566)	18,000 (510)	12,300 (348)	7,000 (198)	3,300 (93.4)
				60 (4.10)			20,000 (566)	17,300 (490)	9,000 (355)	4,500 (127)
				80 (5.50)				20,000 (566)	11,800 (334)	5,700 (161)
				100 (6.90)						7,000 (198)
			125 (8.60)						8,200 (232)	

Orifice Size For Models with Blue Holder Without OPSO
Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Silver Holder Without OPSO
Orifice Size For Models with Red Holder With OPSO

	Orifice			Inlet PSIG (bar)	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"
	1 1/4"	1"	7/8"							
SPRING NO. 71424P019 8.5" to 14" W.C. Set: 14" W.C. Droop: 2" W.C. (21 to 35mbar) Set: 35mbar Droop: (5mbar Max.)	2,700 (76.5)	2,200 (62.3)	2,000 (56.6)	1 (0.07)	1,800 (51.0)	1,500 (52.5)	1,500 (52.5)	900 (25.5)	750 (21.2)	
	4,500 (127)	3,800 (108)	3,100 (87.8)	2 (0.14)	3,000 (84.9)	2,300 (65.1)	2,100 (59.5)	1,400 (39.6)	1,100 (31.1)	
	6,000 (170)	5,300 (150)	4,200 (119)	3 (0.21)	3,800 (108)	3,200 (90.6)	2,700 (76.5)	1,800 (51.0)	1,400 (39.6)	
	10,600 (300)	7,600 (215)	6,200 (176)	5 (0.34)	5,600 (158)	4,400 (125)	3,600 (102)	2,500 (70.8)	1,800 (51.0)	1,000 (28.3)
	19,000 (538)	14,100 (399)	11,600 (328)	10 (0.70)	9,800 (278)	7,400 (210)	5,800 (164)	4,000 (113)	2,800 (79.3)	1,600 (45.3)
		19,000 (538)	16,300 (461)	15 (1.00)	14,300 (405)	10,000 (283)	7,900 (224)	5,500 (156)	3,700 (105)	1,900 (53.8)
			20,000 (566)	20 (1.40)	17,700 (501)	12,300 (348)	9,500 (269)	7,200 (204)	4,300 (122)	2,200 (62.3)
				30 (2.0)	20,000 (566)	17,400 (493)	15,000 (425)	9,800 (277)	5,600 (158)	2,800 (79.3)
				40 (2.80)		20,000 (566)	18,000 (510)	12,200 (345)	7,000 (198)	3,300 (93)
				60 (4.10)			20,000 (566)	17,300 (490)	9,000 (255)	4,500 (127)
				80 (5.50)				20,000 (566)	11,800 (334)	5,700 (161)
				100 (6.90)						7,000 (198)
			125 (8.60)						8,100 (229)	

For optimum performance, regulator should be operated above solid line.

Regulators

1800/2000 Series Industrial Regulator

2" SERIES 1800 CAPACITY DATA - ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

Orifice Size For Models with Blue Holder Without OPSO
Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Silver Holder Without OPSO
Orifice Size For Models with Red Holder With OPSO

Orifice			Inlet PSIG (bar)						
1 1/4"	1"	7/8"		7/8"	3/4"	5/8"	1/2"	3/8"	1/4"
7,000 (198)	5,500 (156)	4,600 (130)	3 (0.21)	4,500 (127)	3,500 (99.1)	3,000 (84.9)	2,000 (56.6)	1,500 (42.5)	
10,000 (283)	7,700 (218)	6,900 (195)	5 (0.34)	6,400 (181)	5,000 (142)	4,100 (116)	2,700 (76.5)	2,000 (56.6)	1,100 (31.1)
18,000 (510)	13,600 (385)	10,900 (309)	10 (0.70)	10,600 (300)	7,900 (224)	6,500 (184)	4,500 (127)	2,800 (79.3)	1,600 (45.3)
	18,000 (510)	15,300 (433)	15 (1.00)	14,000 (396)	10,500 (297)	8,600 (244)	6,100 (173)	3,700 (105)	1,900 (53.8)
	20,000 (566)	20,000 (566)	20 (1.40)	17,200 (487)	13,000 (368)	10,500 (297)	7,600 (215)	4,300 (122)	2,300 (65.1)
		20,000 (566)	30 (2.0)	20,000 (566)	18,000 (510)	14,000 (396)	10,300 (292)	5,600 (159)	2,800 (79.3)
			40 (2.80)	20,000 (566)	20,000 (566)	18,000 (510)	12,600 (357)	6,700 (190)	3,400 (96.3)
			60 (4.10)		20,000 (566)	20,000 (566)	17,400 (493)	9,300 (263)	4,700 (133)
			80 (5.50)				20,000 (566)	11,500 (326)	5,800 (164)
			100 (6.90)					13,800 (391)	7,000 (198)
			125 (8.60)						8,400 (238)

SPRING NO.
71424P020
14.5" to 28" W.C.
Set: 1 PSIG
Droop: 6" W.C.

(36 to 70mbar)
Set: 69mbar
Droop: (15mbar
Max.)

Orifice Size For Models with Blue Holder Without OPSO
Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Silver Holder Without OPSO
Orifice Size For Models with Red Holder With OPSO

Orifice			Inlet PSIG (bar)						
1 1/4"	1"	7/8"		7/8"	3/4"	5/8"	1/2"	3/8"	1/4"
7,600 (215)	6,000 (170)	5,300 (150)	5 (0.34)	5,200 (147)	4,600 (130)	3,600 (102)	2,600 (73.6)	1,800 (51.0)	1,000 (28.3)
14,100 (399)	10,800 (306)	8,900 (252)	10 (0.70)	8,400 (238)	7,600 (215)	5,900 (167)	4,200 (119)	2,800 (79.3)	1,600 (45.3)
20,000 (566)	15,100 (428)	12,600 (357)	15 (1.00)	11,800 (334)	10,300 (292)	7,600 (215)	5,800 (164)	3,700 (105)	1,900 (53.8)
20,000 (566)	19,100 (541)	15,800 (447)	20 (1.40)	14,500 (411)	12,500 (354)	9,500 (269)	7,200 (204)	4,300 (122)	2,200 (62.3)
	20,000 (566)	20,000 (566)	30 (2.0)	20,000 (566)	16,800 (476)	13,100 (371)	9,800 (278)	5,600 (159)	2,800 (79.3)
		20,000 (566)	40 (2.80)	20,000 (566)	20,000 (566)	17,300 (490)	12,200 (345)	6,700 (190)	3,400 (96.3)
			60 (4.10)	20,000 (566)	20,000 (566)	20,000 (566)	17,200 (487)	9,000 (255)	4,600 (130)
			80 (5.50)		20,000 (566)	20,000 (566)	20,000 (566)	11,500 (326)	5,800 (164)
			100 (6.90)					13,800 (391)	7,000 (198)
			125 (8.60)						8,400 (238)

SPRING NO.
71424P021
1 PSIG to 2 PSIG
Set: 2 PSIG
Droop: 0.4 PSIG

(69 to 138mbar)
Set: 138mbar
Droop: (27.6mbar
Max.)

For optimum performance, regulator should be operated above solid line.

1800/2000 Series Industrial Regulator

2" SERIES 1800 CAPACITY DATA - ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

Orifice Size For Models with Blue Holder Without OPSO
Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Silver Holder Without OPSO
Orifice Size For Models with Red Holder With OPSO

Orifice			Inlet PSIG (bar)							
1 1/4"	1"	7/8"		7/8"	3/4"	5/8"	1/2"	3/8"	1/4"	
5,400 (153)	3,600 (102)	2,900 (82.1)	5 (0.34)	3,200 (90.6)	2,700 (76.5)	2,500 (70.8)	1,600 (45.3)	1,200 (34.0)	800 (22.7)	SPRING NO. 71424P026 1.5 PSIG to 2.5 PSIG Set: 2.5 PSIG Droop: 0.4 PSIG (103 to 172mbar) Set: 172mbar Droop: (27mbar Max)
9,000 (255)	7,400 (210)	6,300 (178)	10 (0.70)	6,500 (184)	5,800 (164)	4,100 (116)	2,900 (82.1)	2,100 (59.5)	1,300 (36.8)	
13,100 (371)	10,300 (292)	9,400 (266)	15 (1.00)	9,000 (255)	6,300 (178)	5,800 (164)	4,000 (113)	3,100 (87.8)	1,600 (45.3)	
18,500 (524)	12,800 (362)	11,200 (317)	20 (1.40)	11,200 (317)	8,300 (235)	7,000 (198)	5,200 (147)	3,600 (102)	2,000 (56.6)	
	19,300 (547)	17,500 (496)	30 (2.0)	15,500 (439)	13,100 (371)	10,400 (294)	7,600 (215)	5,100 (144)	2,600 (73.6)	
		22,700 (643)	40 (2.80)	22,700 (643)	17,800 (504)	13,000 (368)	9,200 (261)	6,400 (181)	3,200 (90.6)	
			60 (4.10)	22,700 (643)	25,900 (733)	21,600 (612)	14,400 (408)	8,900 (252)	4,400 (125)	
			80 (5.50)		18,400 (521)	24,100 (682)	19,100 (541)	11,600 (328)	5,600 (159)	
			100 (6.90)					13,400 (379)	6,800 (193)	
			125 (8.60)						8,200 (232)	

Regulators

Orifice Size For Models with Blue Holder Without OPSO
Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Silver Holder Without OPSO
Orifice Size For Models with Red Holder With OPSO

Orifice			Inlet PSIG (bar)							
1 1/4"	1"	7/8"		7/8"	3/4"	5/8"	1/2"	3/8"	1/4"	
4,100 (116)	3,400 (96.3)	3,200 (90.6)	5 (0.34)	3,000 (84.9)	3,000 (84.9)	2,000 (56.6)	2,000 (56.6)	1,300 (36.8)	750 (21.2)	SPRING NO. 71424P022 2 PSIG to 3 PSIG Set: 3 PSIG Droop: 0.6 PSIG (138 to 207mbar) Set: 207mbar Droop: (41.4mbar Max.)
7,600 (215)	5,800 (164)	5,000 (142)	10 (0.70)	5,000 (142)	5,000 (142)	3,500 (99.1)	3,500 (99.1)	2,200 (62.3)	1,400 (39.6)	
10,800 (306)	8,000 (227)	6,600 (187)	15 (1.00)	6,600 (187)	6,600 (187)	4,800 (136)	4,800 (136)	2,000 (56.6)	1,800 (51.0)	
13,800 (391)	10,500 (297)	8,600 (244)	20 (1.40)	8,100 (229)	8,100 (229)	5,800 (164)	5,800 (164)	3,600 (102)	2,200 (62.3)	
	14,200 (402)	12,800 (362)	30 (2.0)	10,800 (306)	10,800 (306)	8,000 (227)	8,000 (227)	4,800 (136)	2,900 (82.1)	
		17,000 (481)	40 (2.80)	14,300 (405)	14,300 (405)	10,000 (283)	10,000 (283)	6,000 (170)	3,500 (99.1)	
			60 (4.10)	20,000 (566)	20,000 (566)	14,500 (411)	14,500 (411)	8,400 (238)	4,800 (136)	
			80 (5.50)		20,000 (566)	19,300 (547)	19,300 (547)	10,900 (309)	6,200 (176)	
			100 (6.90)					13,300 (377)	7,500 (212)	
			125 (8.60)						8,100 (299)	

For optimum performance, regulator should be operated above solid line.

1800/2000 Series Industrial Regulator

2" SERIES 1800 CAPACITY DATA - ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

Orifice Size For Models with Blue Holder Without OPSO
Orifice Size For Models with Silver Holder With OPSO

Orifice Size For Models with Silver Holder Without OPSO
Orifice Size For Models with Red Holder With OPSO

Orifice			Inlet PSIG (bar)							
1 1/4"	1"	7/8"		7/8"	3/4"	5/8"	1/2"	3/8"	1/4"	
8,000 (227)	6,300 (178)	5,100 (144)	10 (0.70)	5,100 (144)	5,000 (142)	3,800 (108)	3,100 (87.8)	2,200 (62.3)	1,200 (34.0)	SPRING NO. 71424P023 3 PSIG to 5 PSIG Set: 5 PSIG Droop: 1 PSIG (207 to 345mbar) Set: 345mbar Droop: (69mbar Max.)
11,300 (320)	8,600 (244)	7,400 (210)	15 (1.00)	7,000 (198)	7,000 (198)	5,100 (144)	4,300 (122)	3,000 (84.9)	1,800 (51.0)	
14,500 (411)	11,000 (311)	9,200 (261)	20 (1.40)	8,700 (246)	8,700 (246)	6,500 (184)	5,300 (150)	3,800 (108)	2,200 (62.3)	
	15,100 (427)	12,800 (362)	30 (2.0)	12,100 (343)	12,100 (343)	8,800 (249)	7,400 (210)	5,000 (142)	2,900 (82.1)	
		17,000 (481)	40 (2.80)	15,600 (442)	15,600 (442)	11,000 (311)	9,500 (269)	6,500 (184)	3,500 (99.1)	
			60 (4.10)	20,000 (566)	20,000 (566)	15,500 (439)	13,200 (374)	8,900 (252)	4,900 (139)	
			80 (5.50)		20,000 (566)	20,000 (566)	17,000 (481)	11,200 (317)	6,200 (176)	
			100 (6.90)					13,700 (388)	7,500 (212)	
			125 (8.60)						8,100 (299)	

Regulators

For optimum performance, regulator should be operated above solid line.

1800/2000 Series Industrial Regulator

1 1/2" SERIES 2000 CAPACITY DATA
ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

All Models With Silver Holder
 Orifice Size

2" SERIES 2000 CAPACITY DATA
ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

All Models With Blue Holder
 Orifice Size

All Models With Silver Holder
 Orifice Size

Regulators

	Orifice							Inlet PSIG (bar)	Orifice								
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"	
SPRING NO. 71411P020 1/2 PSIG to 1 PSIG Set: 1 PSIG Droop: 6"W.C. (34.5 to 69mbar) Set: 69mbar Droop: (15mbar Max.)	7,000 (198)	5,900 (167)	4,350 (123)	4,350 (123)	4,000 (113)	2,900 (82.1)	1,900 (53.8)	1,000 (28.3)	5 (0.34)	10,700 (303)	7,500 (212)	6,400 (181)	4,700 (133)	4,100 (116)	2,500 (70.8)	1,900 (53.8)	1,000 (28.3)
	11,200 (317)	8,700 (246)	7,300 (207)	6,800 (193)	5,900 (167)	4,500 (127)	2,700 (76.5)	1,500 (42.5)	10 (0.70)	18,100 (513)	12,900 (365)	10,300 (292)	7,400 (210)	6,500 (184)	4,100 (116)	2,800 (79.3)	1,500 (42.5)
	12,200 (345)	10,600 (300)	7,900 (224)	7,900 (224)	7,650 (217)	5,800 (164)	3,700 (105)	1,800 (51.0)	15 (1.00)	20,000 (566)	17,500 (496)	14,200 (402)	9,900 (280)	8,800 (249)	5,500 (156)	3,700 (105)	1,800 (51.0)
		13,200 (374)	11,750 (333)	10,000 (283)	9,500 (269)	7,000 (198)	4,500 (127)	2,200 (62.3)	20 (1.40)		20,000 (566)	18,100 (513)	12,000 (340)	10,800 (306)	6,800 (193)	4,500 (127)	2,200 (62.3)
		15,800 (447)	14,200 (402)	12,300 (348)	10,100 (286)	9,000 (255)	5,700 (161)	2,800 (79.3)	30 (2.0)		20,000 (566)	20,000 (566)	17,000 (481)	15,100 (428)	9,400 (266)	5,700 (161)	2,800 (79.3)
			15,600 (442)	13,900 (394)	14,200 (402)	10,600 (300)	7,100 (201)	3,300 (93.4)	40 (2.80)			20,000 (566)	20,000 (566)	19,200 (544)	11,800 (334)	7,100 (201)	3,400 (96.3)
				16,400 (464)	16,200 (459)	13,500 (382)	9,300 (263)	4,600 (130)	60 (4.10)				20,000 (566)	20,000 (566)	16,800 (476)	9,300 (263)	4,600 (130)
				18,200 (515)	18,000 (510)	15,400 (436)	12,000 (340)	5,900 (167)	80 (5.50)				20,000 (566)	20,000 (566)	20,000 (566)	12,100 (343)	5,900 (167)
							14,000 (396)	7,200 (204)	100 (6.90)							14,900 (422)	7,200 (204)
								8,500 (241)	125 (8.60)								8,500 (241)

All Models With Silver Holder
 Orifice Size

All Models With Blue Holder
 Orifice Size

All Models With Silver Holder
 Orifice Size

	Orifice							Inlet PSIG (bar)	Orifice								
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"	
SPRING NO. 71411P021 1 PSIG to 2 1/2 PSIG Set: 2 1/2 PSIG Droop: 1/2 PSIG (69 to 172mbar) Set: 172mbar Droop: (34mbar Max.)	6,300 (178)	5,000 (142)	4,400 (125)	3,800 (108)	3,250 (92.0)	2,400 (68.0)	1,700 (48.1)	900 (25.5)	5 (0.34)	7,500 (213)	5,800 (165)	4,900 (139)	3,800 (108)	3,300 (93.4)	2,200 (62.3)	1,700 (48.1)	900 (25.5)
	10,500 (297)	8,400 (238)	7,150 (202)	6,500 (184)	5,350 (151)	4,100 (116)	2,700 (76.5)	1,400 (39.6)	10 (0.70)	13,800 (391)	10,200 (289)	8,300 (235)	6,800 (193)	5,400 (153)	3,800 (108)	2,700 (76.5)	1,400 (39.6)
	13,300 (377)	10,600 (300)	9,400 (266)	8,400 (238)	7,250 (206)	5,500 (157)	3,600 (102)	1,800 (51.0)	15 (1.00)	19,100 (541)	13,700 (388)	11,700 (331)	9,000 (255)	7,500 (212)	5,200 (147)	3,600 (102)	1,800 (51.0)
	15,200 (433)	13,500 (384)	11,200 (319)	10,000 (285)	8,900 (253)	6,800 (194)	4,350 (124)	2,200 (62.3)	20 (1.40)	20,000 (566)	17,400 (493)	14,300 (405)	10,800 (306)	9,500 (269)	6,400 (181)	4,350 (123)	2,200 (62.3)
		16,500 (470)	14,600 (416)	13,000 (370)	11,250 (320)	9,000 (256)	5,700 (161)	2,800 (79.3)	30 (2.0)		20,000 (566)	20,000 (566)	15,200 (430)	13,100 (371)	8,900 (252)	5,700 (161)	2,800 (79.3)
			17,700 (504)	15,000 (427)	14,000 (398)	10,900 (310)	7,100 (201)	3,400 (97)	40 (2.80)			20,000 (566)	19,300 (547)	16,700 (473)	11,100 (314)	7,100 (201)	3,400 (96.3)
				18,300 (521)	17,500 (498)	13,700 (390)	9,600 (273)	4,600 (130)	60 (4.10)				20,000 (566)	20,000 (566)	16,000 (453)	9,600 (272)	4,600 (130)
				20,000 (566)	20,000 (566)	16,800 (478)	12,100 (344)	5,900 (168)	80 (5.50)				20,000 (566)	20,000 (566)	20,000 (566)	12,100 (343)	5,900 (167)
							14,200 (404)	7,200 (204)	100 (6.90)							14,300 (405)	7,200 (204)
								8,500 (241)	125 (8.60)								8,500 (241)

For optimum performance, regulator should be operated above solid line.

1800/2000 Series Industrial Regulator

1 1/2" SERIES 2000 CAPACITY DATA ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

All Models With Silver Holder
Orifice Size

2" SERIES 2000 CAPACITY DATA ALL CAPACITIES IN SCFH (SCMH) 0.60 S.G.

All Models With Blue Holder All Models With Silver Holder
Orifice Size Orifice Size

	Orifice							Inlet PSIG (bar)	Orifice								
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1/4"	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"
SPRING NO. 71411P022 2 1/2 PSIG to 5 PSIG Set: 5 PSIG Droop: 1 PSIG (172 to 345mbar) Set: 345mbar Droop: (69mbar Max.)	10,400 (294)	8,000 (227)	6,600 (187)	6,200 (176)	4,800 (136)	4,000 (113)	2,400 (68.0)	1,300 (36.8)	10 (0.70)	11,700 (331)	9,200 (261)	7,500 (212)	6,200 (176)	4,800 (136)	3,600 (102)	2,400 (68.0)	1,300 (36.8)
	13,800 (391)	11,100 (314)	9,000 (255)	8,800 (249)	6,700 (190)	5,500 (156)	3,200 (90.6)	1,800 (51.0)	15 (1.00)	16,800 (476)	13,000 (368)	10,800 (306)	8,800 (249)	6,700 (190)	5,000 (142)	3,200 (90.6)	1,800 (51.0)
	16,300 (462)	14,200 (402)	11,200 (317)	10,700 (303)	8,300 (235)	7,000 (198)	4,000 (113)	2,200 (62.3)	20 (1.40)	20,000 (566)	16,700 (473)	13,600 (385)	11,200 (317)	8,700 (246)	6,400 (181)	4,000 (113)	2,200 (62.3)
		18,300 (518)	15,000 (425)	14,300 (405)	11,300 (320)	9,500 (269)	5,500 (156)	2,800 (79.3)	30 (2.0)		20,000 (566)	18,900 (535)	15,500 (439)	12,000 (340)	9,000 (255)	5,500 (156)	2,800 (79.3)
			19,500 (552)	17,200 (487)	14,900 (422)	11,800 (334)	6,700 (190)	3,400 (96.3)	40 (2.80)			20,000 (566)	19,600 (555)	15,700 (445)	11,400 (323)	6,700 (190)	3,400 (96.3)
			20,000 (566)	20,000 (566)	19,000 (538)	15,800 (447)	9,200 (261)	4,600 (130)	60 (4.10)			20,000 (566)	20,000 (566)	20,000 (566)	16,000 (453)	9,200 (261)	4,600 (130)
				20,000 (566)	20,000 (566)	19,000 (538)	12,000 (340)	5,900 (167)	80 (5.50)				20,000 (566)	20,000 (566)	20,000 (566)	12,000 (340)	5,900 (167)
							14,200 (402)	7,200 (204)	100 (6.90)							14,700 (416)	7,200 (204)
							8,500 (241)	125 (8.60)								8,500 (241)	

All Models With Silver Holder
Orifice Size

All Models With Blue Holder
Orifice Size

All Models With Silver Holder
Orifice Size

	Orifice							Inlet PSIG (bar)	Orifice								
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1/4"	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"
SPRING NO. 71411P023 5 PSIG to 10 PSIG Set: 10 PSIG Droop: 2 PSIG (345 to 689mbar) Set: 689mbar Droop: (138mbar Max.)	10,000 (283)	8,250 (234)	7,000 (198)	6,300 (178)	5,000 (142)	4,000 (113)	2,800 (79.3)	1,500 (42.5)	15 (1.00)	10,700 (303)	8,700 (246)	7,400 (210)	6,200 (176)	5,000 (142)	3,700 (105)	2,800 (79.3)	1,500 (42.5)
	13,000 (368)	11,500 (326)	9,400 (266)	8,400 (238)	6,600 (187)	5,400 (153)	3,500 (99.1)	2,100 (59.5)	20 (1.40)	13,800 (391)	12,000 (340)	10,100 (286)	8,400 (238)	6,700 (190)	5,000 (142)	3,500 (99.1)	2,100 (59.5)
		16,100 (456)	13,350 (378)	12,000 (340)	9,700 (275)	7,700 (218)	5,200 (147)	2,800 (79.3)	30 (2.0)		17,700 (501)	15,000 (425)	12,300 (348)	9,800 (278)	7,300 (207)	5,200 (147)	2,800 (79.3)
			17,600 (498)	15,000 (427)	12,000 (340)	10,000 (283)	6,600 (187)	3,400 (97)	40 (2.80)			19,400 (549)	15,700 (445)	12,000 (340)	9,500 (269)	6,600 (187)	3,400 (96.3)
			20,000 (566)	20,000 (566)	17,800 (504)	13,800 (391)	9,100 (258)	4,600 (130)	60 (4.10)			20,000 (566)	20,000 (566)	18,300 (518)	13,400 (379)	9,100 (258)	4,600 (130)
				20,000 (566)	20,000 (566)	17,300 (490)	11,700 (331)	5,900 (168)	80 (5.50)				20,000 (566)	20,000 (566)	17,400 (493)	11,700 (331)	5,900 (167)
							14,200 (404)	7,200 (204)	100 (6.90)							14,400 (408)	7,200 (204)
								8,500 (241)	125 (8.60)								8,500 (241)

All Models With Silver Holder
Orifice Size

All Models With Blue Holder
Orifice Size

All Models With Silver Holder
Orifice Size

	Orifice							Inlet PSIG (bar)	Orifice									
	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"		1/4"	1 1/4"	1"	7/8"	3/4"	5/8"	1/2"	3/8"	1/4"	
SPRING NO. 71411P024 10 PSIG to 15 PSIG Set: 15 PSIG Droop: 3 PSIG (689 to 1034mbar) Set: 1034mbar Droop: (207mbar Max.)	12,900 (365)	10,200 (289)	8,500 (241)	7,800 (221)	5,900 (167)	5,000 (142)	3,100 (87.8)	1,800 (51.0)	20 (1.40)	13,900 (0)	11,000 (311)	8,900 (252)	7,500 (212)	6,000 (170)	4,500 (127)	3,100 (87.8)	1,800 (51.0)	
		15,800 (447)	12,900 (365)	12,300 (348)	9,250 (262)	7,800 (221)	4,900 (139)	2,800 (79.3)	30 (2.0)			17,600 (498)	14,600 (413)	12,000 (340)	9,700 (275)	7,100 (201)	4,900 (139)	2,800 (79.3)
			17,900 (507)	15,800 (447)	13,000 (368)	10,000 (283)	6,300 (178)	3,400 (97)	40 (2.80)				19,200 (544)	15,500 (439)	13,000 (268)	9,500 (269)	6,300 (178)	3,400 (96.3)
			20,000 (566)	20,000 (566)	18,300 (518)	14,800 (419)	9,100 (258)	4,600 (130)	60 (4.10)				20,000 (566)	20,000 (566)	18,400 (521)	13,500 (382)	9,100 (258)	4,600 (130)
				20,000 (566)	20,000 (566)	19,500 (552)	11,700 (331)	5,900 (168)	80 (5.50)				20,000 (566)	20,000 (566)	17,600 (498)	11,700 (331)	5,900 (167)	
							14,500 (411)	7,200 (204)	100 (6.90)							14,500 (411)	7,200 (204)	
								8,500 (241)	125 (8.60)								8,500 (241)	

For optimum performance, regulator should be operated above solid line.

1800/2000 Series Industrial Regulator

Regulator Springs and Orifices

1800 SERIES REGULATOR PRESSURE SPRINGS

Outlet Pressure Range		Part Number	Color Code
3.5" to 6" W.C.	8.7 to 15mbar	71424P017	Red
5.5" to 8" W.C.	13.7 to 20mbar	71424P018	Orange
8.5" to 14" W.C.	21 to 35mbar	71424P019	Yellow
14.5" to 28" W.C.	36 to 70mbar	71424P020	Green
1 to 2 PSIG	69 to 138mbar	71424P021	Blue
1.5 to 2.5 PSIG	103 to 172mbar	71424P026	Brown and Blue
2 to 3 PSIG	138 to 207mbar	71424P022	Brown and Green
3 to 5 PSIG	207 to 345mbar	71424P023	Black and Green
5 to 7 PSIG	345 to 483mbar	71424P027	Red and Green

OPSO SHUTOFF SPRINGS

Shut Off Pressure Range		Part Number	Color Code
14" to 28" W.C.	35 to 70mbar	70017P075	Red and Purple
1 to 2 PSIG	69 to 138mbar	70017P076	Red and Brown
2 to 3 PSIG	138 to 207mbar	70017P077	Purple
3 to 5 PSIG	207 to 345mbar	70017P078	Orange & Yellow
5 to 8 PSIG	345 to 552mbar	70017P079	Orange & Green
8 to 14 PSIG*	552 – 965mbar*	70017P078	Orange & Yellow
14 to 20 PSIG*	965– 1379mbar*	70017P079	Orange & Green

*To achieve these ranges, diaphragm reducing ring 72646P001 must be used.

2000 SERIES REGULATOR PRESSURE SPRINGS

Outlet Pressure Range		Part Number	Color Code
0.5 to 1 PSIG	34.5 to 69mbar	71411P020	Brown and White
1 to 2.5 PSIG	69 to 172mbar	71411P021	Purple and White
2.5 to 5 PSIG	172 to 345mbar	71411P022	Orange and Black
5 to 10 PSIG	345 to 689mbar	71411P023	Black
10 to 15 PSIG	689 to 1034mbar	71411P024	Yellow and Green

USSA SLAM SHUT - OVERPRESSURE SPRINGS

Shut Off Pressure Range		Part Number	Color Code
7.5 to 24 "W.C.	18 to 60mbar	70017P123	Black
20 to 32 "W.C.	50 to 80mbar	70017P124	Orange
24 to 44 "W.C.	60 to 110mbar	70017P125	Red
40 to 84 "W.C.	100 to 210mbar	70017P126	Dark Green
3 to 5 PSIG	200 to 350mbar	70017P127	Yellow
4 to 7 PSIG	280 to 500mbar	70017P128	White

1800/2000 SERIES REGULATOR ORIFICE SIZES

Valve Head Size	Orifice Size	Part Number
7/8" x 1 1/4", 1 1/2" and 2"	1/4"	72983P010
7/8" x 1 1/4", 1 1/2" and 2"	3/8"	72983P018
7/8" x 1 1/4", 1 1/2" and 2"	1/2"	72983P012
7/8" x 1 1/4", 1 1/2" and 2"	5/8"	72983P013
7/8" x 1 1/4", 1 1/2" and 2"	3/4"	72983P014
1 1/4", 1 1/2" and 2"	7/8"	72983P015
1 1/4", 1 1/2" and 2"	1"	72983P016
1 1/4", 1 1/2" and 2"	1 1/4"	72983P017

USSA SLAM SHUT - UNDERPRESSURE SPRINGS

Shut Off Pressure Range		Part Number	Color Code
3 to 6 "W.C.	8 to 16mbar	70017P133	Light Blue
6 to 24 "W.C.	16 to 60mbar	70017P134	Brown
24 to 60 "W.C.	60 to 150mbar	70017P135	Purple

Other Gas Capacities

To determine the capacity of these regulators for gases other than natural gas, multiply the values within the capacity tables by a Specific Gravity Conversion Factor (Fg). The table below lists this factor for some of the more common gases.

GAS TYPE	SPECIFIC GRAVITY	CONVERSION FACTOR (Fg)
Air	1.00	0.77
Butane	2.01	0.55
Carbon Dioxide	1.52	0.63
Nitrogen	0.97	0.79
Propane	1.53	0.63

To calculate the Conversion Factor for other gases:

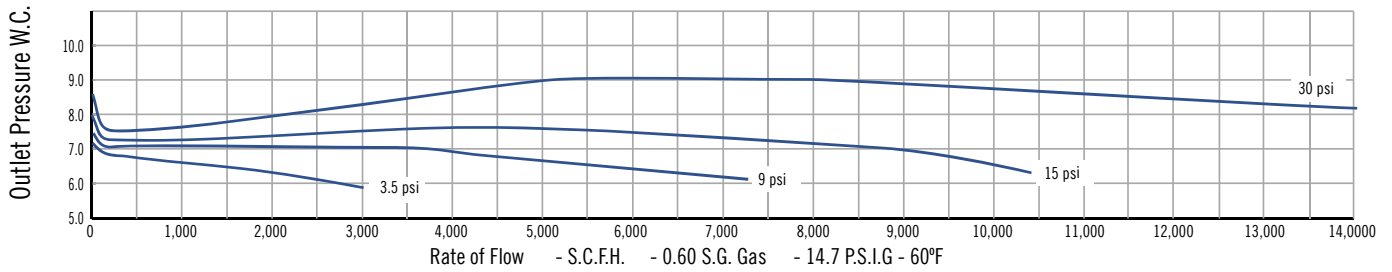
$$\sqrt{\frac{\text{Specific gravity of natural gas (0.6)}}{\text{Specific gravity of gas being used}}}$$

1800/2000 Series Industrial Regulator

Capacity Data

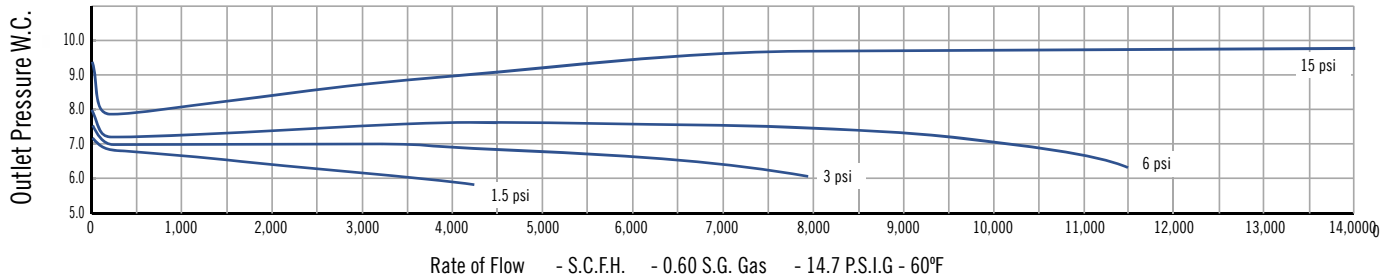
5/8" Orifice - Set pressure 7.0" W.C. at 200 SCFH

Spring Range: 5.5" to 8.0"



1" Orifice - Set pressure 7.0" W.C. at 200 SCFH

Spring Range: 5.5" to 8.0"



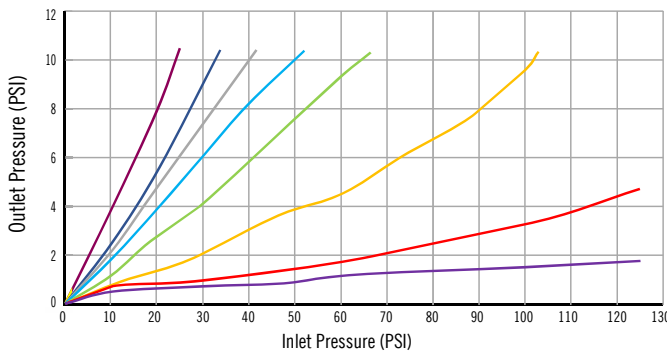
Model 1813B Regulator (1-1/2" and 2" sizes)

Full Relief Valve Characteristics

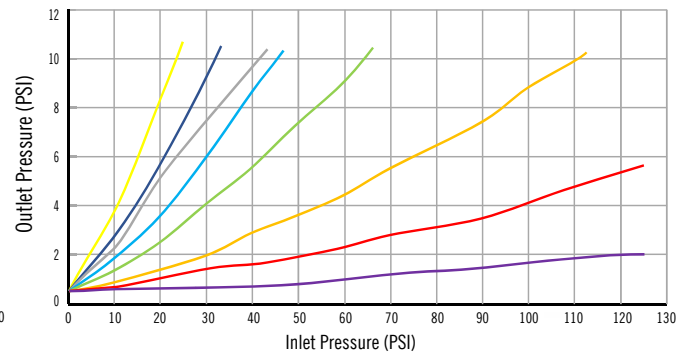
Test performed with orifice valve blocked in wide open position. 2" screened vent-no vent pipe. Numbers indicate orifice size.

- 1/4"
- 3/8"
- 1/2"
- 5/8"
- 3/4"
- 7/8"
- 1"
- 1 1/4"

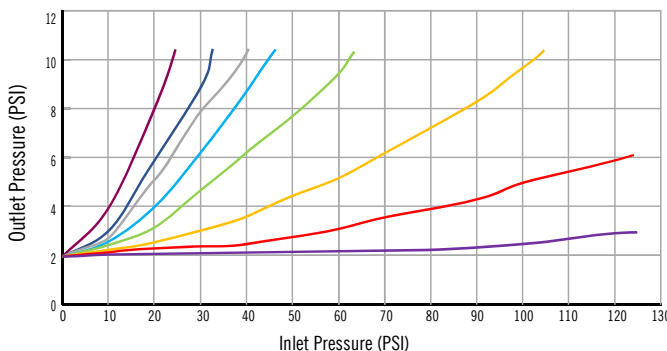
7" W.C. - Set Press



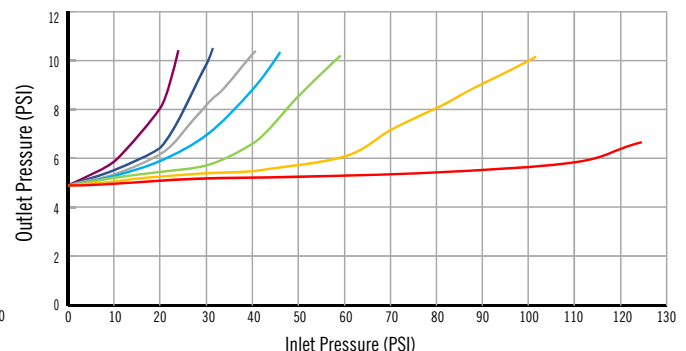
14" W.C. - Set Press



2 PSIG - Set Press

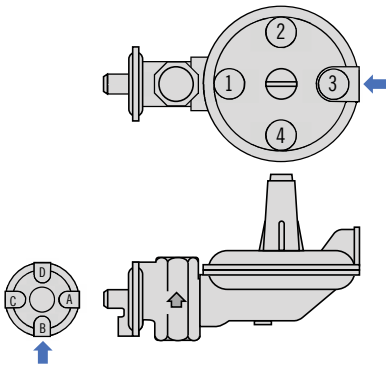


5 PSIG - Set Press

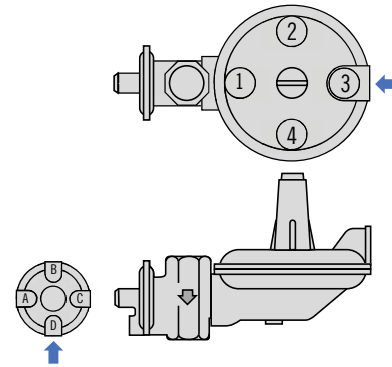


1800/2000 Series Industrial Regulator

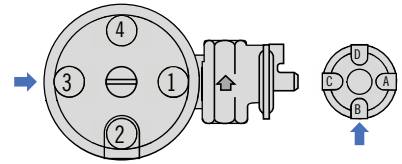
Valve Head Position A



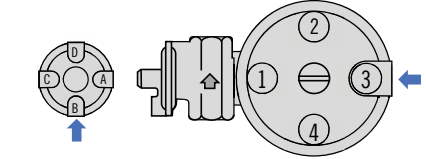
Valve Head Position B



Valve Head Position C



Valve Head Position D



↑ = Standard Vent Position

Regulators

Regulator Assembly Number

A B C D 1 2** 3 4 A B** C D**

* FOR MODELS USING OPSO ONLY.

** UNLESS OTHERWISE SPECIFIED,

VALVE HEAD POSITION "C" WILL BE SUPPLIED

Full-Open Regulator Capacity

For sizing downstream relief valves, use the following formulas to determine the regulator full-open capacity:

For critical flow rates –

$$Q = 0.5 C \times \sqrt{\frac{P_1}{G}}$$

sub-critical flows –

$$Q=C$$

Shipping Weights

Description	(LBS.)
1 1/2" x 1 1/2" Screwed 1800*	19 3/4
1 1/2" x 1 1/2" Screwed 1883	21 3/4
1 1/2" x 1 1/2" Screwed 2000*	25 1/2
1 1/2" x 1 1/2" Screwed 2083	27 1/2
2" x 2" Screwed† 1800*	19 1/2
2" x 2" Screwed† 1883	21 1/2
2" x 2" Screwed† 2000*	25 1/4
2" x 2" Screwed† 2083	27 1/4

* All Models except OPSO

† for Flanged Models add 13 1/2 lbs.

Please enquire for weights of 1 1/4" size.

Key
Q = Maximum capacity of regulator
C = Orifice constant, see table
P1 = Inlet absolute pressure (psia)
P2 = Outlet absolute pressure (psia)
h = Differential pressure (P1 - P2)
G = Specific gravity of gas

Orifice	C
1/4"	110
3/8"	226
1/2"	400
5/8"	600
3/4"	840
7/8"	1,100
1"	1,425
1 1/4"	2,150

Ordering Information

1. Model number.
2. Size of connection: screwed or flanged.
3. Inlet and outlet pressures.
4. Volume in scfh.
5. Kind of gas and specific gravity.
6. Assembly position.
7. Orifice size.
8. OPSO spring part numbers, if required.

Part Number	SIZE
72983P010	Orifice 7/8" x 1/4" 1800/2000
72983P012	Orifice 7/8" x 1/2" 1800/2000
72983P013	Orifice 7/8" x 5/8" 1800/2000
72983P014	Orifice 7/8" x 3/4" 1800/2000

3000 Series Industrial Regulator

Application:

The 3000 Series pressure regulators are designed to control natural gas, air, nitrogen, carbon dioxide, propane vapor, and other noncorrosive gases in light commercial and industrial applications.

Control:

A comprehensive range of springs is available. The outlet pressure can be easily and accurately adjusted by turning the spring adjustment unit located under the top cap. Full lockup capability provides assurance that downstream pressure will not build up during no-flow situations.



Model Number	Description
3000	Basic regulator, non-relieving, internally sensed
3010	Basic regulator, non-relieving, remotely sensed

Technical Data:

Inlet Pressures up to 30 PSIG

Outlet Pressures: 3.5" W.C. to 10 PSIG.

Maximum capacity: 65,000 SCFH (1840 m³/h)

Regulator Pressure Rating

30 PSIG (2.07 bar) = Maximum recommended inlet pressure for normal service.

60 PSIG (4.14 bar) = Maximum inlet pressure for abnormal or emergency service, without causing damage to regulator case.

2 PSIG (138 mbar) = Maximum outlet pressure for normal service.

- 1 1/4", 1 1/2", 2" Low Pressure, 3", 4" Models

10 PSIG (689 mbar) = Maximum outlet pressure for normal service.

- 2" High Pressure Model Only

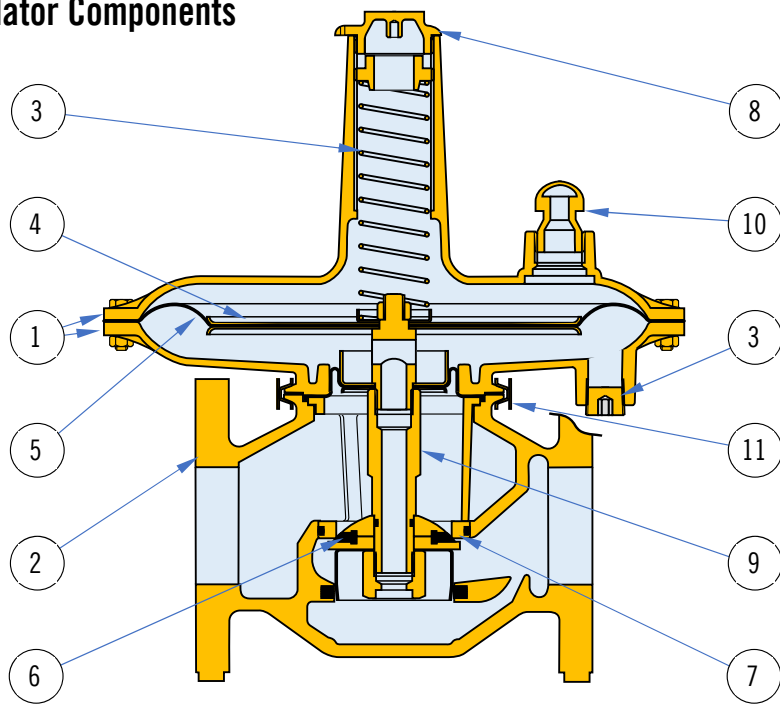
Features & Benefits

Main Features

- Temperature range: -20°F to +150°F (-30°C to 65°C).
- Balanced valve design offers excellent response and high accuracy
- Large primary diaphragm provides superior lockup
- Body clamp allows valve body to remain in line for maintenance.
- Internal or external sensing options.
- Field convertible.
- Wide range of valve body connection sizes: 1 1/4", 1 1/2", 2" NPT, 2", 3" and 4" ASME Class 125 Flanged
- For HP MODEL ONLY, a 3/4" 90° vent elbow/ screen assembly (part #78041G002) may be screwed into the vent for added protection from environmental conditions when the regulator is installed in the horizontal position.

3000 Series Industrial Regulator

Regulator Components



Regulators

Item No.	Description	Material	Notes
1	Diaphragm Case	Precision Diecast Aluminum	With an exclusive 11 step advanced conversion coating, single-coat polyester primer and high solids polyurethane topcoat.
2	Valve Body	Gray Cast Iron	Undercoated, single coat polyester primer and high solid polyurethane topcoat.
3	Loading Spring	Spring Steel	Zinc plated and chromate. Color coded for identification.
4	Diaphragm Plate	Steel	Zinc plated and yellow chromate
5	Diaphragm	Buna N	Fabric reinforced
6	Seat Disc	Buna N	Replaceable
7	Orifice	Aluminum	High strength, corrosion resistant.
8	Seal Plug	Aluminum	High strength, corrosion resistant.
9	Main Stem	Steel	Zinc plated and yellow chromate. Hollow stem communicates downstream pressure for internal sensing.
10	Vent	UV resistant ABS	Weather-and bug-proof cap. Connection threaded 3/4" or 1" NPT dependent on body size.
11	Body Clamp	Steel	Zinc plated
12	External Sense Port	Reinforced Nylon	Threaded 1/2" NPT for remote sensing. Supplied with steel, zinc plated plug for standard internal sensed product. Conversion to external sense requires modification of lower main stem.

Outlet Pressure	Color Code	Part Number
1 1/4" & 1 1/2" connections		
1" - 3" W.C.	Yellow/Purple	70157P033
3" - 7" W.C.	Yellow/Brown	70157P034
7" - 14" W.C.	Yellow/Red	70157P035
14" - 28" W.C.	Lt Blue/Purple	70157P036
1-2 PSIG	Blue/Brown	70157P037
2" Connections		
1" - 3" W.C.	Purple/Black	70157P025
3" - 7" W.C.	Orange/White	70157P027
7" - 14" W.C.	Red/Blue	70157P006
14" - 28" W.C.	Green/Silver	70157P017
1-2 PSIG	Black/White	70157P024
2-2.5 PSIG	Purple/White*	71411P021
2-5 PSIG	Orange/Black*	71411P022
6-7 PSIG	Yellow*	71411P044
8-10 PSIG	Black*	71411P023
3" Connections		
1" - 3" W.C.	No Code	70157P028
3" - 7" W.C.	Red/White	70157P029
7" - 14" W.C.	Yellow/Blue	70157P030
14" - 28" W.C.	Red/Purple	70157P031
1-2 PSIG	Green/Purple	70157P032
4" Connections		
4" - 8" W.C.	Blue/Black	71411P036
7" - 14" W.C.	Green/White	71411P034
14" - 28" W.C.	Red/Green	71411P037
1-2 PSIG	Silver/Black	71411P038



** A vent line terminating at an external location must be installed for any regulators installed indoors or in enclosures to safely evacuate vented gas. Comply with applicable Federal, State and local codes.

3000 Series Industrial Regulator

3000 Series Regulator Capacity Data

1 1/4" 3000 SERIES REGULATOR SCFH (SCMH m3/h) 0.60 specific gravity gas at 60 °F and 14.7PSIA

Spring No.	70157P033	70157P034			70157P035		70157P036			70157P037		
Inlet Pressure	2" W.C. .5% Droop	4" W.C. 1% Droop	6" W.C. 1% Droop	9" W.C. 1% Droop	12" W.C. 2% Droop	16" W.C. 2% Droop	20" W.C. 2% Droop	24" W.C. 2.5% Droop	28" W.C. 3% Droop	42" W.C. 4% Droop	56" W.C. 5% Droop	
8" WC (20 mbar)	2,700 (76.5)	2,300 (65.1)	1,700 (48.1)									
14" WC (35mbar)	3,800 (107.6)	3,500 (99.1)	2,900 (82.1)	1,900 (53.8)	2,000 (56.6)							
21" WC (52 mbar)	4,800 (136)	4,600 (130)	3,900 (110)	2,700 (76.5)	3,400 (96.3)	2,200 (62.3)						
1 PSIG (69 mbar)	5,600 (159)	5,400 (153)	4,800 (136)	3,800 (108)	4,200 (119)	3,200 (90.6)	2,400 (68.0)	2,100 (59.5)				
1.5 PSIG (103 mbar)	6,800 (193)	6,800 (193)	6,100 (173)	5,300 (150)	5,700 (161)	4,400 (125)	3,300 (93.4)	3,600 (102)	3,600 (102)			
2 PSIG (138 mbar)	8,000 (226)	7,900 (224)	7,200 (204)	6,500 (184)	6,600 (187)	5,700 (161)	4,600 (130)	4,700 (133)	4,700 (133)	2,900 (82.1)		
3 PSIG (207 mbar)	8,000 (226)	9,000 (255)	9,000 (255)	8,500 (241)	8,400 (238)	7,000 (198)	6,500 (184)	6,000 (170)	6,000 (170)	4,400 (125)	4,300 (122)	
5 PSIG (345 mbar)	10,000 (283)	11,000 (311)	9,200 (261)	9,100 (258)	9,000 (255)	9,100 (258)	8,400 (238)	8,400 (238)	8,400 (23w8)	7,000 (198)	6,500 (184)	
10 PSIG (690 mbar)				9,500 (269)	9,300 (263)	9,500 (269)	9,200 (261)	9,200 (261)	9,300 (263)	9,400 (266)	8,800 (249)	9,000 (255)
15 PSIG (1.03 Bar)				9,600 (272)	9,500 (269)	10,000 (283)	10,000 (283)	10,000 (283)	10,000 (283)	10,100 (286)	10,100 (286)	10,400 (294)
20 PSIG (1.38 Bar)				11,500 (326)	11,000 (311)	12,000 (340)	12,000 (340)	12,000 (340)	12,500 (354)	12,500 (354)	13,000 (368)	14,000 (396)
25 PSIG (1.72 Bar)				11,500 (326)	11,000 (311)	12,000 (340)	12,000 (340)	12,000 (340)	12,500 (354)	12,500 (354)	13,000 (368)	14,000 (396)
30 PSIG (2.07 Bar)				11,500 (326)	11,000 (311)	12,000 (340)	12,000 (340)	12,000 (340)	12,500 (354)	12,500 (354)	13,000 (368)	14,000 (396)

For optimum performance, use with inlet pressures above line

1 1/2" 3000 SERIES REGULATOR SCFH (SCMH m3/h) 0.60 specific gravity gas at 60 °F and 14.7PSIA

Spring No.	70157P033	70157P034			70157P035		70157P036			70157P037		
Inlet Pressure	2" W.C. .5% Droop	4" W.C. 1% Droop	6" W.C. 1% Droop	9" W.C. 1% Droop	12" W.C. 2% Droop	16" W.C. 2% Droop	20" W.C. 2% Droop	24" W.C. 2.5% Droop	28" W.C. 3% Droop	42" W.C. 4% Droop	56" W.C. 5% Droop	
8" WC (20 mbar)	2,900 (82.1)	2,600 (73.6)	1,700 (48.1)									
14" WC (35mbar)	3,900 (110)	3,700 (105)	3,200 (90.6)	1,900 (53.8)	2,000 (56.6)							
21" WC (52 mbar)	4,800 (136)	4,700 (133)	4,000 (113)	2,700 (76.5)	3,400 (96.3)	2,300 (65.1)						
1 PSIG (69 mbar)	5,300 (150)	5,500 (156)	4,800 (136)	3,200 (90.6)	4,300 (122)	3,100 (87.8)	2,400 (68.0)	2,200 (62.3)				
1.5 PSIG (103 mbar)	5,500 (156)	6,500 (184)	6,200 (176)	3,700 (105)	5,500 (156)	3,700 (105)	3,500 (99.1)	3,500 (105)	3,500 (105)			
2 PSIG (138 mbar)	7,200 (204)	7,300 (207)	7,100 (201)	5,300 (150)	6,000 (170)	4,700 (133)	4,200 (119)	4,200 (119)	4,200 (119)	3,000 (84.9)		
3 PSIG (207 mbar)	8,600 (244)	9,000 (255)	8,000 (227)	8,000 (227)	8,000 (227)	7,300 (207)	6,400 (181)	6,400 (181)	6,400 (181)	4,000 (113)	4,500 (127)	
5 PSIG (345 mbar)	10,000 (283)	11,000 (311)	8,300 (235)	8,100 (229)	8,100 (229)	8,000 (227)	8,000 (227)	8,000 (227)	8,000 (227)	6,500 (184)	7,000 (198)	
10 PSIG (690 mbar)				8,400 (238)	8,200 (232)	8,200 (232)	8,300 (235)	8,300 (235)	8,000 (227)	8,000 (227)	7,500 (212)	8,000 (227)
15 PSIG (1.03 Bar)				8,500 (241)	8,300 (235)	9,000 (255)	8,900 (252)	8,900 (252)	8,900 (252)	9,000 (255)	9,000 (255)	9,400 (266)
20 PSIG (1.38 Bar)				10,000 (283)	9,500 (269)	10,000 (283)	11,000 (311)	10,500 (297)	11,000 (311)	11,000 (311)	11,000 (311)	11,000 (311)
25 PSIG (1.72 Bar)				9,000 (255)	8,500 (241)	10,000 (283)	10,000 (283)	9,500 (269)	10,000 (283)	11,000 (311)	11,000 (311)	12,000 (340)
30 PSIG (2.07 Bar)				4,500 (127) inlet pressures	4,500 (127) above line	4,500 (127)	4,500 (127)	4,500 (127)	4,500 (127)	10,000 (283)	10,500 (297)	11,000 (311)

For optimum performance, use with inlet pressures above line

3000 Series Industrial Regulator

3000 Series Regulator Capacity Data

2" 3000 SERIES REGULATOR SCFH (SCMH m3/h) 0.60 specific gravity gas at 60 °F and 14.7PSIA

Spring No.	70157P025			70157P027			70157P006			70157P017			70157P024	
Inlet Pressure	2" W.C. .5% Droop	4" W.C. 1% Droop	6" W.C. 1% Droop	9" W.C. 1% Droop	12" W.C. 2% Droop	16" W.C. 2% Droop	20" W.C. 2% Droop	24" W.C. 2.5% Droop	28" W.C. 3% Droop	42" W.C. 4% Droop	56" W.C. 5% Droop			
8" WC (20 mbar)	5,000 (198)	4,000 (113)	2,300 (65.1)											
14" WC (35 mbar)	7,000 (198)	6,000 (170)	5,000 (142)	2,800 (79.3)	2,000 (56.6)									
21" WC (52 mbar)	8,000 (227)	8,000 (227)	7,600 (215)	4,000 (113)	5,800 (164)	2,200 (62.3)								
1 PSIG (69 mbar)	10,000 (283)	8,500 (241)	9,200 (261)	5,000 (142)	6,600 (187)	4,000 (113)	2,400 (68.0)	2,100 (59.5)						
1.5 PSIG (103 mbar)	12,500 (354)	11,500 (326)	12,500 (354)	7,400 (210)	10,000 (283)	6,500 (184)	5,000 (142)	5,000 (142)	3,600 (102)					
2 PSIG (138 mbar)	15,000 (425)	13,500 (382)	14,800 (419)	10,500 (297)	13,000 (368)	8,500 (241)	6,500 (184)	7,000 (198)	7,000 (198)	5,000 (142)				
3 PSIG (207 mbar)	18,000 (510)	16,500 (467)	18,500 (524)	16,000 (453)	17,500 (496)	11,500 (326)	9,500 (269)	9,500 (269)	10,000 (283)	8,200 (232)	6,100 (173)			
5 PSIG (345 mbar)	18,500 (524)	19,000 (538)	24,200 (685)	24,000 (680)	24,000 (680)	14,500 (411)	13,000 (368)	13,500 (382)	14,500 (411)	13,000 (368)	12,000 (340)			
10 PSIG (690 mbar)	19,000 (538)	21,000 (595)	21,800 (617)	20,000 (566)	22,000 (623)	21,000 (595)	20,500 (580)	21,000 (595)	20,500 (580)	20,800 (589)	20,500 (580)			
15 PSIG (1.03 Bar)	19,500 (552)	24,000 (680)	26,000 (736)	27,000 (736)	30,000 (849)	29,000 (821)	25,500 (722)	25,000 (708)	27,500 (779)	21,500 (609)	22,000 (623)			
20 PSIG (1.38 Bar)				17,500 (496)	25,000 (708)	26,000 (736)	26,000 (736)	24,000 (680)	25,000 (708)	26,000 (736)	22,000 (623)	24,000 (680)		
25 PSIG (1.72 Bar)				15,500 (439)	22,000 (623)	25,000 (708)	24,000 (680)	24,000 (680)	24,000 (680)	25,000 (708)	23,000 (651)	25,000 (708)		
30 PSIG (2.07 Bar)				14,000 (396)	20,000 (566)	24,000 (680)	22,000 (623)	22,000 (623)	22,000 (623)	23,000 (651)	23,000 (651)	24,500 (694)		

For optimum performance, use with inlet pressures above line

2" 3000 SERIES REGULATOR - HIGH PRESSURE SCFH (SCMH m3/h) 0.60 specific gravity gas at 60 °F and 14.7PSIA

Spring No.	71411P021			71411P022			71411P044			71411P023			71411P021	
Inlet Pressure	2" W.C. .5% Droop	4" W.C. 1% Droop	6" W.C. 1% Droop	9" W.C. 1% Droop	12" W.C. 2% Droop	16" W.C. 2% Droop	20" W.C. 2% Droop	24" W.C. 2.5% Droop	28" W.C. 3% Droop	42" W.C. 4% Droop	56" W.C. 5% Droop			
3 PSIG (207 mbar)	3,900 (110)	2,400 (68.0)	1,600 (45.3)											
4 PSIG (276 mbar)	4,900 (139)	4,600 (130)	3,500 (99.1)	2,600 (73.6)	2,000 (56.6)									
5 PSIG (345 mbar)	9,600 (272)	8,500 (241)	4,800 (136)	5,200 (147)	4,500 (127)	2,300 (65.1)								
6 PSIG (414 mbar)	10,300 (292)	9,700 (275)	5,400 (153)	5,600 (159)	6,700 (190)	4,100 (116)								
7 PSIG (483 mbar)	14,200 (402)	12,600 (357)	6,100 (173)	6,400 (181)	7,100 (201)	7,300 (207)	4,600 (130)							
8 PSIG (552 mbar)	16,200 (459)	16,000 (453)	6,700 (190)	7,900 (224)	9,000 (255)	9,200 (261)	7,300 (207)	6,000 (170)						
9 PSIG (621 mbar)	17,900 (507)	18,400 (521)	7,500 (212)	9,300 (263)	10,400 (294)	11,100 (314)	8,300 (235)	8,500 (241)	5,100 (144)					
10 PSIG (690 mbar)	20,600 (583)	21,400 (610)	8,500 (241)	9,700 (275)	11,500 (326)	12,200 (345)	10,600 (300)	10,500 (297)	4,900 (138)	5,000 (142)				
15 PSIG (1.03 Bar)	29,500 (835)	39,900 (1,130)	9,200 (261)	18,200 (515)	18,500 (524)	19,000 (538)	16,800 (476)	17,800 (504)	15,400 (436)	15,700 (445)	15,800 (447)			
20 PSIG (1.38 Bar)	25,100 (711)	28,600 (810)	36,700 (1,039)	47,300 (1,339)	47,200 (1,337)	46,700 (1,323)	28,900 (818)	29,800 (844)	24,000 (680)	24,300 (688)	26,500 (750)			
25 PSIG (1.72 Bar)	23,700 (671)	27,900 (790)	33,600 (951)	36,600 (1,036)	41,300 (1,169)	51,900 (1,470)	57,900 (1,640)	54,200 (1,535)	41,000 (1,161)	39,300 (1,113)	36,900 (1,045)			
30 PSIG (2.07 Bar)	23,400 (663)	27,000 (765)	31,100 (881)	33,400 (946)	38,800 (1,099)	44,500 (1,260)	52,300 (1,481)	66,500 (1,883)	64,400 (1,824)	64,400 (1,824)	61,600 (1,744)			

For optimum performance, use with inlet pressures above line

3000 Series Industrial Regulator

3000 Series Regulator Capacity Data

3" 3000 SERIES REGULATOR SCFH (SCMH m3/h) 0.60 specific gravity gas at 60 °F and 14.7PSIA

Spring No.	70157P028	70157P029	70157P030	70157P031	70157P032						
Inlet Pressure	2" W.C. .5% Droop	4" W.C. 1% Droop	6" W.C. 1% Droop	9" W.C. 1% Droop	12" W.C. 2% Droop	16" W.C. 2% Droop	20" W.C. 2% Droop	24" W.C. 2.5% Droop	28" W.C. 3% Droop	42" W.C. 4% Droop	56" W.C. 5% Droop
8" WC (20 mbar)	8,400 (238)	8,750 (248)	6,000 (170)								
14" WC (35 mbar)	12,500 (360)	12,800 (362)	8,400 (238)	6,100 (173)							
21" WC (52 mbar)	14,100 (399)	16,300 (462)	10,550 (299)	8,050 (228)	9,900 (280)						
1 PSIG (69 mbar)	15,050 (426)	18,100 (513)	11,900 (337)	10,100 (286)	11,050 (313)	8,300 (235)					
1.5 PSIG (103 mbar)	17,600 (498)	23,000 (651)	18,500 (524)	13,100 (371)	18,000 (507)	12,500 (360)	11,800 (334)	11,800 (334)			
2 PSIG (13.8 mbar)	20,400 (578)	25,000 (708)	20,700 (586)	19,400 (549)	21,000 (595)	16,000 (453)	15,200 (430)	14,850 (421)	14,700 (416)	9,150 (259)	
3 PSIG (207 mbar)	22,500 (637)	28,800 (816)	24,000 (680)	23,500 (665)	24,500 (694)	22,000 (623)	21,000 (595)	21,000 (595)	20,900 (592)	14,600 (413)	13,650 (387)
5 PSIG (345 mbar)	23,400 (663)	33,900 (960)	29,000 (821)	28,750 (814)	29,000 (821)	27,500 (779)	26,300 (745)	26,300 (745)	26,150 (740)	23,950 (678)	23,800 (674)
10 PSIG (690 mbar)		35,100 (994)	33,500 (949)	32,100 (909)	32,300 (915)	30,000 (849)	30,400 (861)	32,000 (906)	32,850 (931)	32,500 (920)	32,500 (920)
15 PSIG (1.03 Bar)			33,500 (949)	33,100 (937)	34,200 (968)	32,900 (932)	33,300 (943)	33,600 (951)	33,850 (959)	34,400 (974)	34,000 (963)
20 PSIG (1.38 Bar)			39,000 (1,104)	35,000 (991)	37,000 (1,048)	35,000 (991)	38,000 (1,076)	40,000 (1,133)	40,000 (1,133)	40,000 (1,133)	40,000 (1,133)
25 PSIG (1.72 Bar)			39,000 (1,104)	35,000 (991)	40,000 (1,133)	40,000 (1,133)	40,000 (1,133)	40,000 (1,133)	42,000 (1,189)	45,000 (1,274)	45,000 (1,274)
30 PSIG (2.07 Bar)			45,000 (1,274)	45,000 (1,274)	45,000 (1,274)	45,000 (1,274)	45,000 (1,274)	45,000 (1,274)	45,000 (1,274)	45,000 (1,274)	45,000 (1,274)

For optimum performance, use with inlet pressures above line

4" 3000 SERIES REGULATOR SCFH (SCMH m3/h) 0.60 specific gravity gas at 60 °F and 14.7PSIA

Spring No.	71411P022	71411P044	71411P023	71411P021						
Inlet Pressure	4" W.C. 1% Droop	6" W.C. 1% Droop	9" W.C. 1% Droop	12" W.C. 2% Droop	16" W.C. 2% Droop	20" W.C. 2% Droop	24" W.C. 2.5% Droop	28" W.C. 3% Droop	42" W.C. 4% Droop	56" W.C. 5% Droop
3 PSIG (207 mbar)	12,500 (354)	8,500 (241)								
4 PSIG (276 mbar)	18,000 (510)	13,000 (368)	14,000 (396)							
5 PSIG (345 mbar)	23,500 (665)	20,000 (566)	21,000 (595)	18,000 (510)						
6 PSIG (414 mbar)	24,000 (680)	22,000 (623)	28,000 (793)	23,000 (651)	21,000 (595)					
7 PSIG (483 mbar)	29,000 (821)	25,000 (708)	34,000 (963)	28,000 (793)	26,000 (736)	24,000 (680)	18,000 (510)			
8 PSIG (552 mbar)	32,000 (906)	28,000 (793)	44,000 (1,246)	37,100 (1,051)	37,500 (1,062)	37,000 (1,048)	26,000 (736)	16,000 (453)	26,000 (736)	
9 PSIG (621 mbar)	40,000 (1,133)	50,000 (1,516)	55,000 (1,557)	56,000 (1,586)	56,000 (1,586)	55,000 (1,557)	44,000 (1,246)	30,000 (849)	43,000 (1,218)	38,000 (1,076)
10 PSIG (690 mbar)	45,000 (1,274)	50,000 (1,516)	55,000 (1,557)	60,000 (1,699)	70,000 (1,982)	72,000 (2,039)	62,000 (1,756)	56,000 (1,586)	60,000 (1,699)	55,000 (1,557)
15 PSIG (1.03 Bar)	45,000 (1,274)	50,000 (1,516)	55,000 (1,557)	60,000 (1,699)	70,000 (1,982)	75,000 (2,124)	75,000 (2,124)	75,000 (2,124)	90,000 (2,548)	90,000 (2,548)
20 PSIG (1.38 Bar)	45,000 (1,274)	50,000 (1,516)	55,000 (1,557)	60,000 (1,699)	70,000 (1,982)	75,000 (2,124)	75,000 (2,124)	75,000 (2,124)	90,000 (2,548)	90,000 (2,548)
25 PSIG (1.72 Bar)		50,000 (1,516)	55,000 (1,557)	55,000 (1,557)	65,000 (1,841)	65,000 (1,841)	65,000 (1,841)	60,000 (1,699)	80,000 (2,265)	75,000 (2,124)
30 PSIG (2.07 Bar)		55,000 (1,557)	57,000 (1,614)	55,000 (1,557)	65,000 (1,841)	65,000 (1,841)	65,000 (1,841)	60,000 (1,699)	80,000 (2,265)	75,000 (2,124)

For optimum performance, use with inlet pressures above line

3000 Series Industrial Regulator

Full-Open Regulator Relief Capacity

For sizing downstream relief valves, use the following formulas to determine the regulator full-open capacity.

For critical flow rate: For sub-critical flows:

$$Q = \frac{(59.64 \times C) \times P_1}{2 \sqrt{G}} \quad Q = 59.64 \times C \times h \sqrt{\frac{P_2}{G}}$$

- Q - Maximum capacity of regulator
- C - Orifice constant (see table)
- P₁ - Inlet absolute pressure (PSIA)
- P₂ - Outlet absolute pressure (PSIA)
- h - Differential pressure (P₁-P₂)
- G - Specific gravity of gas

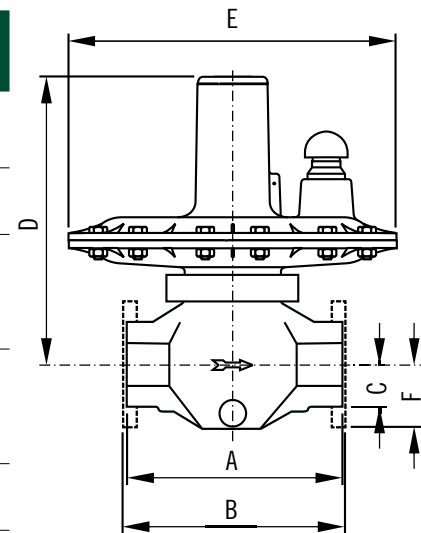
ORIFICE CONSTANTS

SIZE	C
1 1/4"	20
1 1/2"	20
2"	43
3"	86
4"	141

Critical flow occurs when the absolute outlet pressure is less than about 1/2 of the absolute inlet pressure.

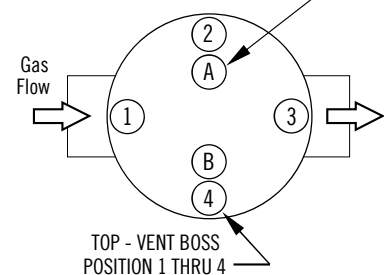
Series 1800 Dimensions

SIZE	DIMENSIONS						SHIPPING WEIGHT
	A	B	C	D	E	F	
1 1/4" NPT	6.25" 158.8mm		1.16" 29.46mm	8.25" 209.6mm	9.38" 283.3mm		9.5 lb 4.3 Kg
1 1/2" NPT	6.25" 158.8mm		1.16" 29.46mm	8.25" 209.6mm	9.38" 283.3mm		9.25 lb 4.2 Kg
2" NPT	7.81" 197.4mm		1.81" 46.0mm	L.P. 10.41" 264.4mm H.P. 17.25" 438.2mm	12.13" 308.1mm		L.P. 22" 10.0Kg H.P. 33" 15 Kg
2" ANSI 125 Flanged		8.75" 222.3mm		L.P. 10.41" 264.4mm H.P. 17.25" 438.2mm	12.13" 308.1mm	3" 76.2mm	L.P. 30" 13.6Kg H.P. 43" 19.5 Kg
3" ANSI 125 Flanged		10.25" 260.4mm		12.88" 327.2mm	15" 318mm	3.75" 95.3mm	47 lb 21.3 Kg
4" ANSI 125 Flanged		12.38" 314.5mm		19.56" 495.6mm	17.25" 438.2mm	4.5" 114.3mm	77 lb 34.9 Kg



REGULATOR ASSEMBLY POSITIONS

LOWER CHAMBER - EXTENDED STATIC BOSS POSITION A or B



TOP - VENT BOSS POSITION 1 THRU 4

Unless otherwise Factory Standard = A2

Other Gas Capacities

To determine the capacity of these regulators for gases other than natural gas, multiply the values within the capacity tables by a Specific Gravity Conversion Factor (Fg). The table below lists this factor for some of the more common gases.

GAS TYPE	SPECIFIC GRAVITY	CONVERSION FACTOR (Fg)
Air	1.00	0.77
Butane	2.01	0.55
Carbon Dioxide	1.52	0.63
Nitrogen	0.97	0.79
Propane	1.53	0.63

To calculate the Conversion Factor for other gases:

$$(Fg) = \sqrt{\frac{\text{Specific gravity of gas on which the capacity table is based}}{\text{Specific gravity of gas being used}}}$$

Example: If using propane and only having tables based on natural gas, the Specific Gravity Conversion Factor is:

$$(Fg) = \sqrt{\frac{\text{Specific gravity of natural gas (0.6)}}{\text{Specific gravity of gas being used}}}$$

$$(Fg) = \sqrt{\frac{0.60}{1.53}}$$

$$(Fg) = 0.626$$



WITHOUT
YOU
THERE IS
NO **US.**



Meter Set Assemblies (MSA)

November 2025



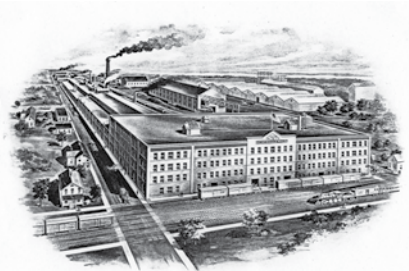
THE NATURAL GAS METER SET ASSEMBLY

YOU SPOKE. WE LISTENED.

Since 1856, A.Y. McDonald Mfg. Co. has had the pleasure of providing quality solutions for the industries we serve. We are a family business that, at our core, believes the customer is the boss. One of the fundamental jobs that A.Y. McDonald Mfg. Co. does for our boss is to listen to their needs. Even more important than listening is to have the wherewithal to act on those needs, such as the decision to produce Natural Gas Meter Set Assemblies (MSA), an idea that stemmed from one of our own Innovation Summits. Adding this solution to our natural gas product line means that the customer will receive consistent timelines and lead times, along with open communication from our team to yours.

DEMAND IN THE MARKET

The natural gas distribution market has seen an increase in demand for meter set assemblies due to utilities looking to have consistency in assembly. Meter set assemblies not only provide time savings but also cost savings in labor for utilities. In addition, there's an added safety factor to meter set assemblies since they are tested prior to being installed. A.Y. McDonald Mfg. Co.'s meter set assemblies in particular are tested electronically, not by water, thus eliminating human error in the process.



CUSTOMER FOCUSED

- Consistent lead times
- Quality meter set assemblies
- Pressure testing for safety and quality
- Top notch customer service
- All parts under one roof - except regulator
- Traceability

TRACEABILITY FOCUSED

In May of 2015, A.Y. McDonald Mfg. Co. introduced traceability tags for all of our natural gas products (excluding accessories), which include critical information such as manufacturer, materials, and date of manufacture.

Not only do traceability tags provide an innovative solution for detecting where underground pipes lie within a gas system, but they also serve as a safety initiative allowing utilities to manage assets.

Like our standalone products, A.Y. McDonald Mfg. Co.'s meter set assemblies also contain traceability tags for utility companies to upload product information into their asset management system (see picture to the right).



QUALITY

We control all components of a customer meter set as they are all A.Y. McDonald Mfg. Co. components, with the exception of the regulator. This includes quality control of thread connections on all components. A.Y. McDonald Mfg. Co. MSA's will include pipe nipples with CNC threads that are cut to length and quality checked before and after bending. As well as a focus on pipe cleanliness. Threads meet the ANPT Standard aeronautical thread measurement, truncation, and thread angle.

THE NATURAL GAS METER SET ASSEMBLY

PRESSURE TESTING

A.Y. McDonald Mfg. Co. meter set assemblies are tested electronically, eliminating the chance of water getting in the regulator or initiating rust prior to painting. Each meter set assembly goes through three tests, including the following steps:

- 1) The regulator is pressurized to ensure it is the correct regulator and is set properly.
 - *Not a flowing set point per regulator specification
- 2) The inlet of the meter set assembly is pressurized according to the customer's required specification so leaks can be detected.
 - *We do detect lockup – not at designated pressure
- 3) Joints after the regulator are tested to ensure all joints are sealed.
- 4) The outlet side of the meter set assembly is tested at about 40 psi.



PAINT

In preparation for the meter set assembly addition, an investment was made for an entirely new paint line. The focus for this new paint line is based on efficiency, quality, and taking into account the vast volume of meter set assemblies that can be completed.

- Paint Specifications (relates to color and gloss, not to paint material):

- Fabrication Paint - 2-part epoxy primer applied by electrostatic air spray, ANSI 49 gray 2-part Urethane topcoat applied by electrostatic air spray, Approximately 6-10 mils total DFT (dry film thickness).
- The paint chosen provides excellent corrosion resistance and durability for MSAs. Salt spray tests have been performed in order to ensure the protection is acceptable. The paint, along with an efficient process, provides a quality meter set assembly.

- Coating Test Documents - Salt Spray Test per ASTM B117, measuring failure at 4% rust



- Cleaning specification

- Pipe will be free of chips and debris using a solvent wash per SSPC-SP1 standards.

- Protection in paint process (masking, etc.)

- Threads and open ends will be plugged or capped to prevent any paint from entering the meter set assembly.
- Custom masks will be applied for tags and other areas that need to remain unpainted.

THE NATURAL GAS METER SET ASSEMBLY

PACKAGING

- Bulk packages are provided in 40" x 48" x 36" gaylords. Foam bags protect the meter sets assemblies with cardboard pads separating the stacked layers. A lid is provided to allow for double stacking of the skids for storage. Custom packaging available upon request.



ELBOWS:

- Schedule 40 black A106 seamless

Meter Set Assemblies

NIPPLES: Machined from 2" up to 36"

- Schedule 40 black A106 seamless
- Schedule 40 galvanized A53 welded
- Schedule 80 black A106 seamless



Pipe	Min	Max
3/4"	5" x 5"	18" x 18"*
1"	5" x 5"	18" x 18"*
1 1/4"	6 2/3" x 6 2/3"	18" x 18"*

All nipples machined using single point CNC machining for quality threads

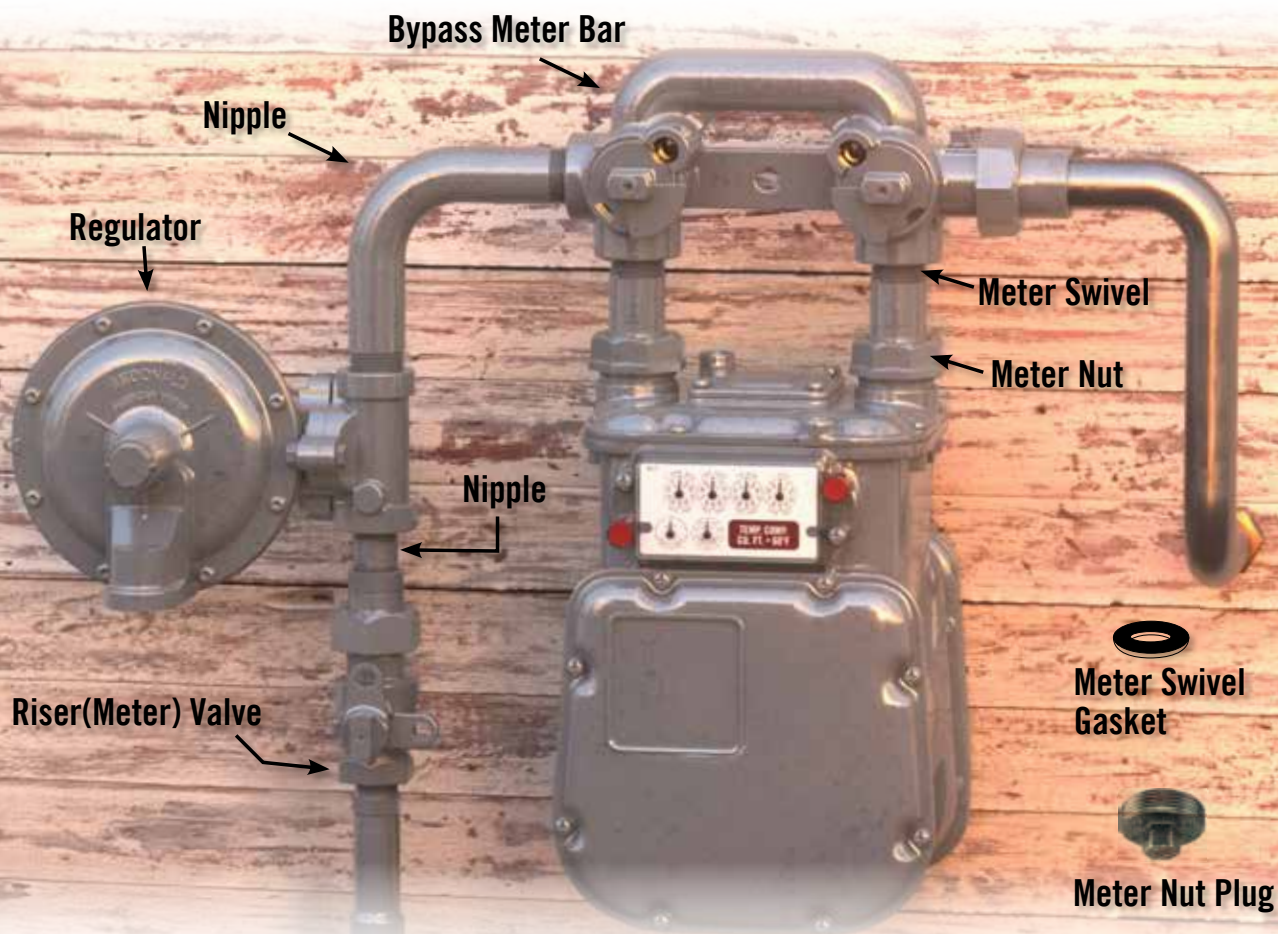
*Individual end lengths may vary, maximum overall length is 36"



STOP YOUR FRUSTRATIONS. HIT THE A.Y. BUTTON TO MAKE YOUR LIFE EASIER!

BYPASS TECHNOLOGY - NOW AVAILABLE IN METER SET ASSEMBLIES

A.Y. McDonald Mfg. Co. has been assembling for a long time and now our Natural Gas Meter Set Assemblies combine safety, testing, innovation, and **BYPASS TECHNOLOGY** in a single solution. With expertise and knowledge that stems all the way back to 1856, you won't be disappointed with the result!



Available as components or as a Meter Set Assembly



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WITHOUT YOU THERE IS NO US.



A.Y. McDonald Mfg. Co. is a leading manufacturer of Water Works, Plumbing, and Natural Gas Products. The Company has distinguished itself with a proud tradition of quality and reliability since its founding in 1856.

The mission of A.Y. McDonald Mfg. Co., in the words of our founder, is “to make good products and sell them honestly.” We, the stockholders and co-workers, accomplish this by extending the McDonald family culture through excellent customer service and by focusing on our customers’ needs.

At A.Y. McDonald Mfg. Co., you aren’t just getting a product; you are getting an innovative solution, access to educational opportunities, and the ability to be treated like family. The customer is the boss and we aim to break the mold on how we reach customer satisfaction. Because in the end, without you, there would be no us.



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MORE THAN A BRAND. WE’RE A FAMILY.

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WARNING: It is unlawful in CALIFORNIA and VERMONT (effective 1/1/2010); MARYLAND (effective 1/1/2012); LOUISIANA (effective 1/1/2013) and the UNITED STATES OF AMERICA (effective 1/4/2014) to use any product in the installation or repair of any public water system or any plumbing in a facility or system that provides water for human consumption if the wetted surface area of the product has a weighted average lead content greater than 0.25%. This prohibition does not extend to service saddles used in California, Louisiana or under USA Public Law 111-380. **WARNING:** This product can expose you to chemicals including lead, which is known to the State of CALIFORNIA to cause cancer and birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov.

11/25 Revised 2/26