

ADSORPTION CHILLER

ADC Series C-FRAME

FEATURE HIGHLIGHTS

- * Ultra low electricity consumption
 - * Zero ozone depletion potential
 - * No dangerous chemicals
 - * Very few moving parts
- * Ease of maintenance
 - * Advanced microprocessor control
 - * Designed for outdoor installation
 - * Wide temperature ranges allowed

MODEL	C-40	C-30	C-20	C-10
Rated Capacity (Tons)	41	30	20	10

Chilled Water

Inlet Temperature (°C)	12.8	12.8	12.8	12.8
Outlet Temperature (°C)	7.2	7.2	7.2	7.2
Flow Rate (l/min)	371	273	182	91
Pressure Drop (mtr. H ₂ O)	8.5	5.8	3.4	1.2
Connection Size: (mm)	65	65	65	65

Condenser Water

Inlet Temperature (°C)	29	29	29	29
Outlet Temperature (°C)	35	35	35	35
Flow Rate (l/min)	1120	821	549	273
Pressure Drop (mtr. H ₂ O)	11.9	7.9	4.6	1.8
Connection Size: (mm)	100	80	65	65

Hot Water:

Inlet Temperature (°C)	90.6	90.6	90.6	90.6
Outlet Temperature (°C)	84	84	84	84
Flow Rate (l/min)	621	454	303	151
Pressure Drop (mtr. H ₂ O)	4.3	2.7	1.8	0.6
Connection Size: (mm)	80	65	65	65

*Rated for maximum capacity mode. Higher efficiencies are available at reduced capacities.

*All data is preliminary and subject to change without notice.

Electrical

Voltage..... 415-3-50/60
 Frequency.....50/60 Hz
 Operating kW Consumption.....0.6 kW
 Maximum kW Consumption.....1.7 kW

Air Supply

Air Pressure (bar).....4.89
 Air Consumption (cfm).....0.34

Unit Dimensions*

Width (mm).....2032
 Length (mm).....4826
 Height (mm).....2388

*with cabinets mounted on the side as shown

Weight

Empty (kg).....7250
 Operating (kg).....8165

Refrigerant type.....Water (H₂O)

Operating Range

Chilled Water (°C).....3 to 20
 Hot Water (°C).....52 to 93
 Condenser Water (°C).....10 to 39
 Maximum Pressure (bar).....4.82

*Maximum pressure 4.82 for hot, chilled,& condenser water



ADSORPTION CHILLER

ADC Series D-FRAME

FEATURE HIGHLIGHTS

- * Ultra low electricity consumption
- * Ease of maintenance
- * Zero ozone depletion potential
- * Advanced microprocessor control
- * No dangerous chemicals
- * Designed for outdoor installation
- * Very few moving parts
- * Wide temperature ranges allowed

MODEL	D-75	D-60	D-50
Rated Capacity (Tons)	76	61	51

Chilled Water

Inlet Temperature (°C)	12.8	12.8	12.8
Outlet Temperature (°C)	7.2	7.2	7.2
Flow Rate (l/min)	689	553	462
Pressure Drop (mtr. H ₂ O)	8.5	6.4	5.2
Connection Size: (mm)	100	100	100

Condenser Water

Inlet Temperature (°C)	29	29	29
Outlet Temperature (°C)	35	35	35
Flow Rate (l/min)	2078	1669	1397
Pressure Drop (mtr. H ₂ O)	11.9	8.8	7.0
Connection Size: (mm)	125	125	125

Hot Water

Inlet Temperature (°C)	90.6	90.6	90.6
Outlet Temperature (°C)	84	84	84
Flow Rate (l/min)	1151	924	772
Pressure Drop (mtr. H ₂ O)	4.3	3.4	2.4
Connection Size: (mm)	100	100	100

*Rated for maximum capacity mode. Higher efficiencies are available at reduced capacities.

*All data is preliminary and subject to change without notice.

Electrical

Voltage..... 415-3-50/60
 Frequency.....50/60 Hz
 Operating kW Consumption.....0.8 kW
 Maximum kW Consumption.....1.9 kW

Air Supply

Air Pressure (bar).....4.89
 Air Consumption (cfm).....0.34

Unit Dimensions*

Width (mm).....2159
 Length (mm).....5055
 Height (mm).....2921

*with cabinets mounted on the side as shown

Weight

Empty (kg).....11793
 Operating (kg).....13154

Refrigerant type.....Water (H₂O)

Operating Range

Chilled Water (°C).....3 to 20
 Hot Water (°C).....52 to 93
 Condenser Water (°C).....10 to 39
 Maximum Pressure (bar).....4.82

*Maximum pressure 4.82 for hot, chilled, & condenser water



ADSORPTION CHILLER

ADC Series E-FRAME

FEATURE HIGHLIGHTS

- * Ultra low electricity consumption
- * Zero ozone depletion potential
- * No dangerous chemicals
- * Very few moving parts
- * Ease of maintenance
- * Advanced microprocessor control
- * Designed for outdoor installation
- * Wide temperature ranges allowed

MODEL	E-150	E-140	E-120	E-100
Rated Capacity (Tons)	152	142	124	104

Chilled Water

Inlet Temperature (°C)	12.8	12.8	12.8	12.8
Outlet Temperature (°C)	7.2	7.2	7.2	7.2
Flow Rate (l/min)	1382	1291	1128	946
Pressure Drop (mtr. H ₂ O)	9.1	8.2	7.0	5.5
Connection Size: (mm)	100	100	100	100

Condenser Water

Inlet Temperature (°C)	29	29	29	29
Outlet Temperature (°C)	35	35	35	35
Flow Rate (l/min)	4164	3887	3395	2846
Pressure Drop (mtr. H ₂ O)	13.7	12.5	10.7	8.2
Connection Size: (mm)	150	150	150	150

Hot Water

Inlet Temperature (°C)	90.6	90.6	90.6	90.6
Outlet Temperature (°C)	84	84	84	84
Flow Rate (l/min)	2301	2150	1877	1575
Pressure Drop (mtr. H ₂ O)	6.7	6.1	5.2	4.0
Connection Size: (mm)	100	100	100	100

*Rated for maximum capacity mode. Higher efficiencies are available at reduced capacities.

*All data is preliminary and subject to change without notice.

Electrical

Voltage..... 415-3-50/60
 Frequency.....50/60 Hz
 Operating kW Consumption.....0.8 kW
 Maximum kW Consumption.....1.9 kW

Air Supply

Air Pressure (bar).....4.89
 Air Consumption (cfm).....0.34

Unit Dimensions*

Width (mm).....2489
 Length (mm).....5080
 Height (mm).....2921

*with cabinets mounted on the side as shown

Weight

Empty (kg).....14969
 Operating (kg).....16366

Refrigerant type.....Water (H₂O)

Operating Range

Chilled Water (°C).....3 to 20
 Hot Water (°C).....52 to 93
 Condenser Water (°C).....10 to 39

Maximum Pressure (bar)..... 4.82

*Maximum pressure 4.82 for hot, chilled,& condenser water



ADSORPTION CHILLER

ADC Series -Ext E-FRAME

FEATURE HIGHLIGHTS

- * Ultra low electricity consumption
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- * Designed for outdoor installation
- * Wide temperature ranges allowed

MODEL	E-190
Rated Capacity (Tons)	190

Chilled Water

Inlet Temperature (°C)	12.8
Outlet Temperature (°C)	7.2
Flow Rate (l/min)	1726
Pressure Drop (mtr. H ₂ O)	10.7
Connection Size: (mm)	100

Condenser Water

Inlet Temperature (°C)	29
Outlet Temperature (°C)	35
Flow Rate (l/min)	5201
Pressure Drop (mtr. H ₂ O)	13.7
Connection Size: (mm)	150

Hot Water

Inlet Temperature (°C)	90.6
Outlet Temperature (°C)	84
Flow Rate (l/min)	2877
Pressure Drop (mtr. H ₂ O)	9.1
Connection Size: (mm)	100

*Rated for maximum capacity mode. Higher efficiencies are available at reduced capacities.

*All data is preliminary and subject to change without notice.

Electrical

Voltage.....	415-3-50/60
Frequency.....	50/60 Hz
Operating kW Consumption.....	0.8 kW
Maximum kW Consumption.....	1.9 kW

Air Supply

Air Pressure (bar).....	4.89
Air Consumption (cfm).....	0.34

Unit Dimensions*

Width (mm).....	2489
Length (mm).....	5080
Height (mm).....	3251

*with cabinets mounted on the side as shown

Weight

Empty (kg).....	18144
Operating (kg).....	19958

Refrigerant type..... Water (H₂O)

Operating Range

Chilled Water (°C).....	3 to 20
Hot Water (°C).....	52 to 93
Condenser Water (°C).....	10 to 39
Maximum Pressure (bar).....	4.82

*Maximum pressure 4.82 for hot, chilled, & condenser water



ADSORPTION CHILLER

ADC Series F-FRAME

FEATURE HIGHLIGHTS

- * Ultra low electricity consumption
- * Zero ozone depletion potential
- * No dangerous chemicals
- * Very few moving parts
- * Ease of maintenance
- * Advanced microprocessor control
- * Designed for outdoor installation
- * Wide temperature ranges allowed

MODEL	F-330	F-300	F-250	F-200
Rated Capacity (Tons)	335	305	254	203

Chilled Water

Inlet Temperature (°C)	12.8	12.8	12.8	12.8
Outlet Temperature (°C)	7.2	7.2	7.2	7.2
Flow Rate (l/min)	3043	2771	2309	1843
Pressure Drop (mtr. H ₂ O)	8.8	7.9	6.1	4.6
Connection Size: (mm)	200	200	200	200

Condenser Water

Inlet Temperature (°C)	29	29	29	29
Outlet Temperature (°C)	35	35	35	35
Flow Rate (l/min)	9167	8346	6949	5556
Pressure Drop (mtr.H ₂ O)	12.8	11.3	8.8	6.7
Connection Size: (mm)	250	250	250	250

Hot Water:

Inlet Temperature (°C)	90.6	90.6	90.6	90.6
Outlet Temperature (°C)	84	84	84	84
Flow Rate (l/min)	5072	4618	3846	3073
Pressure Drop (mtr. H ₂ O)	6.1	5.5	4.3	3.0
Connection Size: (mm)	200	200	200	200

*Rated for maximum capacity mode. Higher efficiencies are available at reduced capacities.

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Electrical

Voltage..... 415-3-50/60
 Frequency.....50/60 Hz
 Operating kW Consumption.....1.3 kW
 Maximum kW Consumption.....2.4 kW

Air Supply

Air Pressure (bar).....4.89
 Air Consumption (cfm).....0.34

Unit Dimensions*

Width (mm).....3658
 Length (mm).....5334
 Height (mm).....3505

*with cabinets mounted on the side as shown

Weight

Empty (kg).....21319
 Operating (kg).....24040

Refrigerant type.....Water (H₂O)

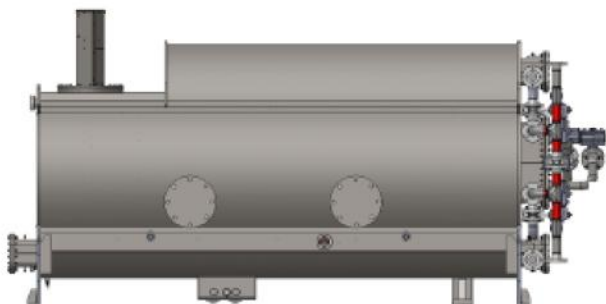
Operating Range

Chilled Water (°C).....3 to 20
 Hot Water (°C).....52 to 93
 Condenser Water (°C).....10 to 39

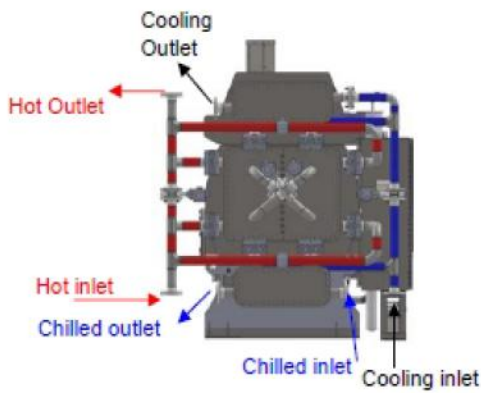
Maximum Pressure (bar)..... 4.82

*Maximum pressure 4.82 for hot, chilled, & Condenser water

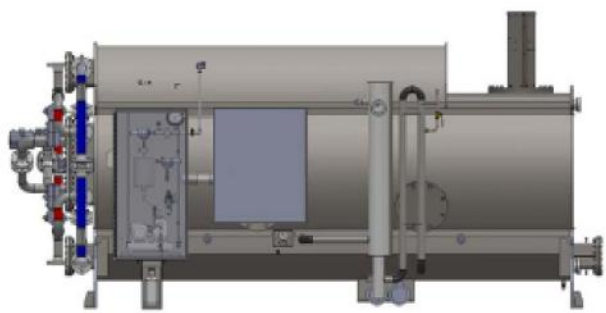




LEFT SIDE



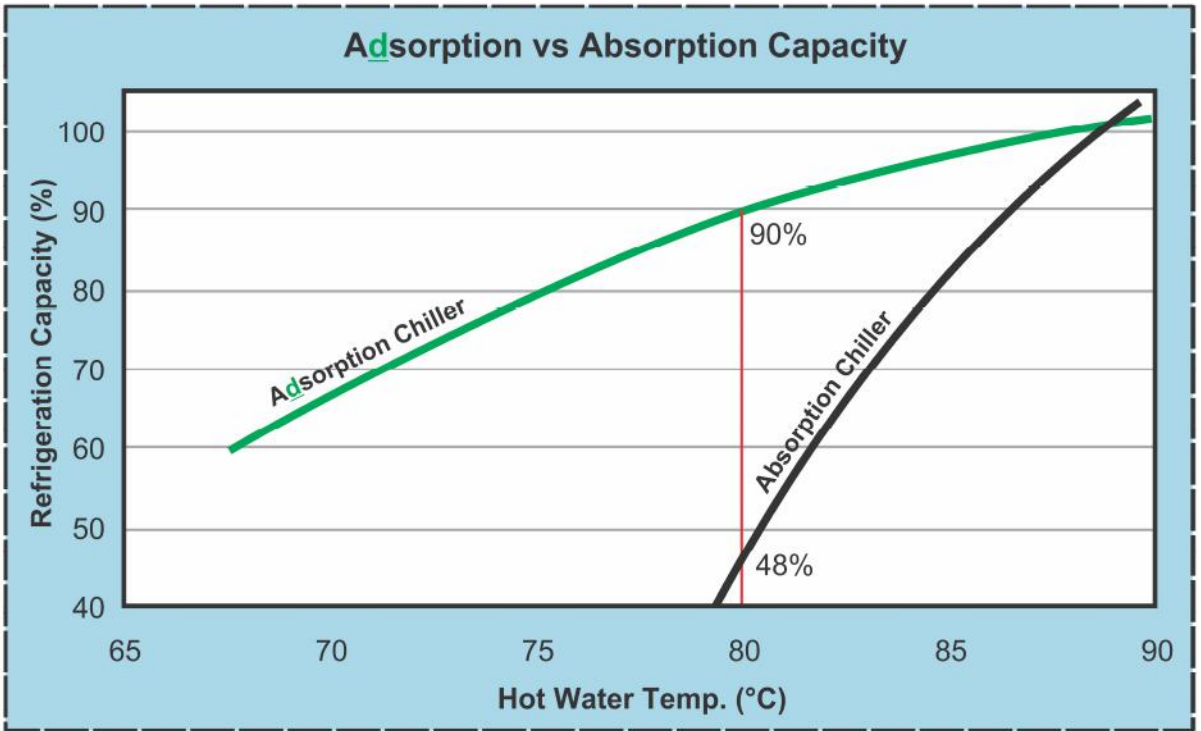
FRONT



RIGHT SIDE

See drawings for specific piping connections and sizes.

Adsorption vs Absorption Capacity



High Efficiency even at Low Hot Water temperature

FEATURE OVERVIEW

Main Benefits

Factors	Adsorption Chillers	Absorption Chillers
Life Expectancy	Greater than 20 Years	7 to 9 Years
Maintenance	Negligible Maintenance	Require High Maintenance
Regeneration Temperature (Hot Water)	Down to 50°C (122°F)	Shuts down at 82°C (180°F), Needs Back-up Heater
Desiccant Used	Silica Gel (Inert)	Lithium Bromide (Highly Corrosive)
Replacement Requirements (Periodic Maintenance)	Not Required	Heat Exchangers, Boilers, Absorbent Replacement Required

Additional Benefits

- Start up Times 5 to 7 Minutes compared to 15 minutes for absorption
- Chilled Water output 4°C-13°C (40°-55°F)
- No crystallization, corrosion, hazardous leaks, or chemical disposal issues
- Vibration or noise & simple and continuous operations
- Quite High COP (Coefficient of Performance)
- Versatile operation – Can be used for a wide range of Industrial and commercial application.

ALL DATA SUBJECT TO CHANGE WITHOUT NOTICE