

Johnson Controls Heat Pumps

Johnson Controls offers heat pumps for a wide range of applications. The small Commercial Heat Pumps can be applied in buildings such as K-12 schools and hotels, while the large Chiller Heat Pumps are often utilized in facilities such as universities and district-energy plants.

The Commercial Heat Pumps are equipped with a valve which can reverse their refrigerant flow, allowing the units to alternate between air-conditioning and heat pump operation. Three model types are available.

- Water-to-water – Heat is moved between an indoor water circuit and either a geothermal or cooling-tower water circuit.
- Water-to-air – Heat is moved between the indoor air and either a geothermal or cooling-tower water circuit.
- Air-to-air – Heat is moved between the indoor air and the outdoor air.

The Chiller Heat Pumps are water chillers that are also capable of operating as water-to-water heat pumps. During heat pump operation, these units remove heat from a water source and raise the temperature of the heat to a level that can be used for beneficial heating.



CHILLER HEAT PUMPS

AND



COMMERCIAL HEAT PUMPS

Chiller Heat Pumps

(Heating and Cooling Capacities listed are at maximum lift.)

LOW-LIFT HEAT PUMPS

MAX. HEATING
CAPACITY

MODEL and DESCRIPTION

30000 MBH
(8800 kW)

Model YK – centrifugal compressor

Refrigerant: HFC-134a

Max. Hot Water Temperature: 155°F

Unique Features: OptiSpeed™ variable-speed drive

Cooling Capacity*: 250 – 2800 TR (880 – 9850 kW)

* Not recommended for simultaneous heating and cooling systems



MEDIUM LIFT HEAT PUMPS

MAX. HEATING
CAPACITY

MODEL and DESCRIPTION

3200 MBH
(940 kW)

Model YCWL – scroll compressor

Refrigerant: HFC-410a

Max. Hot Water Temperature: 135°F

Unique Features: Simultaneous heating and cooling,
Standard BAS communications

Cooling Capacity: 50 – 200 TR (175 – 705 kW)



2100 MBH
(610 kW)

Model YLPA – scroll compressor

Refrigerant: HFC-410a

Max. Hot Water Temperature: 117°F at 14°F ambient

Unique Features: Reversible air-to-water heat pump,
Standard BAS communications

Cooling Capacity*: 100 – 175 TR (350 – 610 kW)

* Not capable of simultaneous heating and cooling



5600 MBH
(1600 kW)

Model YS – screw compressor

Refrigerant: HFC-134a

Max. Hot Water Temperature: 140°F

Unique Features: Simultaneous heating and cooling, Controlled
variable orifice, OptiView™ control panel, AutoMode control

Cooling Capacity: 100 – 330 TR (350 – 1160 kW)



38000 MBH
(11000 kW)

Model CYK – externally compounded centrifugal compressors

Refrigerant: HFC-134a

Max. Hot Water Temperature: 170°F

Unique Features: Simultaneous heating and cooling,
QuantumLX™ control panel

Cooling Capacity: 600 – 2200 TR (2115 – 7740 kW)



75000 MBH
(22000 kW)

Titan Model OM – centrifugal compressor with electric motor, steam-turbine, or gas-engine drive

Refrigerant: HFC-134a

Max. Hot Water Temperature: 185°F

Unique Features: Simultaneous heating and cooling

Cooling Capacity: 3000 – 5500 TR (10550 – 19350 kW)



Commercial Heat Pumps

INDOOR PACKAGE UNITS

COOLING
CAPACITY

MODEL and DESCRIPTION

0.5 - 6 TR

6 - 72 MBH
(1.8 - 21 kW)

Model R - rotary (0.5 - 1 TR), reciprocating (1.5 - 3 TR), scroll (3.5 - 6 TR)

Refrigerant: HFC-410a

Entering Water Temperature Limits: 30°F - 110°F (Cooling),
20°F - 90°F (Heating)

Configurations: Horizontal (ceiling installation), Vertical (closet installation)

Unique Features: Reversing valve, Compact footprint,
Standard efficiency, Geothermal application, Microprocessor controls



0.75 - 6 TR

9 - 72 MBH
(2.6 - 21 kW)

Model RG - rotary (0.5 - 1.5 TR), scroll (2 - 6 TR)

Refrigerant: HFC-410a

Entering Water Temperature Limits: 30°F - 120°F (Cooling),
20°F - 90°F (Heating)

Configurations: Horizontal (ceiling installation), Vertical (closet installation)

Unique Features: Reversing valve, Compact footprint, High efficiency,
Geothermal application, ECM motor, Hot gas bypass, Hot water generation,
BAS controls, Internal autoflow and motorized isolation valves, MERV 13 filters



0.75 - 6 TR

9 - 72 MBH
(2.6 - 21 kW)

Model RJ - rotary (0.5 - 1.5 TR), scroll (2 - 6 TR)

Refrigerant: HFC-410a

Entering Water Temperature Limits: 30°F - 120°F (Cooling),
20°F - 90°F (Heating)

Configurations: Horizontal (ceiling installation), Vertical (closet installation)

Unique Features: Reversing valve, Premium efficiency, 2-stage compressor,
Geothermal application, ECM motor, Hot gas bypass, Hot water generation,
BAS controls, Internal autoflow and motorized isolation valves, MERV 13 filters



7 - 25 TR

84 - 300 MBH
(24.7 - 88.2 kW)

Model RL - scroll compressor

Refrigerant: HFC-410a

Entering Water Temperature Limits: 30°F - 120°F (Cooling),
20°F - 90°F (Heating)

Configurations: Horizontal (ceiling installation), Vertical (closet installation)

Unique Features: Reversing valve, High efficiency, Geothermal application,
Hot gas bypass, BAS controls, Internal autoflow valves, Internal pump,
MERV 13 filters



0.5 - 6 TR

6 - 72 MBH
(1.8 - 21 kW)

Model RC - rotary compressor

Refrigerant: HFC-410a

Entering Water Temperature Limits: 30°F - 120°F (Cooling), 20°F - 90°F (Heating)

Configuration: Console (floor installation)

Unique Features: Reversing valve, High efficiency, Geothermal
application, BAS controls, Auxiliary electric heat



0.75 - 3 TR

9 - 36 MBH
(2.6 - 10.5 kW)

Model VSCS - rotary (0.75 - 1.5 TR), scroll (2 - 6 TR)

Refrigerant: HFC-410a

Entering Water Temperature Limits: 30°F - 110°F (Cooling), 20°F - 90°F (Heating)

Configuration: Vertical stacked (copper risers attached)

Unique Features: Reversing valve, High efficiency, Geothermal application,
Microprocessor controls, ECM motor



Commercial Heat Pumps

INDOOR PACKAGE UNITS

COOLING
CAPACITY

MODEL and DESCRIPTION

2 - 6 TR

Model RH - scroll compressor

Refrigerant: HFC-410a

Entering Water Temperature Limits: 30°F - 120°F (Cooling), 20°F - 90°F (Heating)

Max Hot Water Temperature: 130°F

Unique Features: Reversing valve, 6 model sizes, Stand-alone or BAS communications, Hot water generation

93 MBH
(27.4 kW)



8 - 45 TR

Model RW - scroll compressor

Refrigerant: HFC-410a

Entering Water Temperature Limits: 30°F - 120°F (Cooling), 20°F - 90°F (Heating)

Max Hot Water Temperature: 130°F

Unique Features: Modular reversible chiller, Modules can be combined to provide simultaneous heating and cooling, 9 model sizes, Optional acoustical cabinet, Stand-alone or BAS communications

690 MBH
(202 kW)



OUTDOOR PACKAGE UNITS

COOLING
CAPACITY

MODEL and DESCRIPTION

3 - 20 TR

Model J**XP - reciprocating (3 TR), scroll (4 - 20 TR)

Refrigerant: HFC-410a

Outside Ambient Limits: 0°F - 125°F (Cooling), -10°F - 60°F (Heating)

Configuration: Down Flow (field convertible to horizontal)

Unique Features: Reversing valve, High efficiency, Dual Compressor (6 - 20 TR), Microprocessor controls, BAS control options, Auxiliary electric heat

36 - 261 MBH
(10.6 - 76.8 kW)



SPLIT-SYSTEM UNITS

COOLING
CAPACITY

MODEL and DESCRIPTION

7.5 - 20 TR

Model J**PC - scroll compressor

Refrigerant: HFC-410a

Outside Ambient Limits: 0°F - 125°F (Cooling), 0°F - 70°F (Heating)

Configuration: Vertical Air Handler (field convertible to horizontal)

Unique Features: Reversing valve, High efficiency, Dual Circuit Option (10 - 20 TR), Microprocessor controls, CCS control, Auxiliary electric heat

92 - 238 MBH
(27 - 70 kW)

