


## ENVISION

For nearly 25 years, WaterFurnace has led the way in the design and manufacture of water-source heat pumps for use in geothermal closed loop applications. In 2003 WaterFurnace developed the first R410A water-source heat pump product line. Now the Envision Series has broken ground again by providing the first 30 EER and 5 COP (ISO 13256-1 GLHP) water-source heat pump on the market.

The Envision Series Console provides cutting edge technology in heating and cooling for commercial applications, using the latest in component and design technology. Single speed, R-410A LG rotary compressors are the heart of the system. Also included are oversized coaxial water-to-refrigerant heat exchangers and large faced, rifled tube air coils with high efficiencies at low face velocities. Envision Console units are capable of operating at extreme loop temperatures and have the options and flexibility for any application. The cabinet footprint is designed to match "legacy" consoles for easy retrofitting.

As a leader in the industry, WaterFurnace International is dedicated to innovation, quality and customer satisfaction. Our team of engineers, customer support and skilled assembly technicians are dedicated to providing the highest quality products with the most extensive support network in the industry. By specifying WaterFurnace 0.75-1.5 ton Envision Series Consoles, you can rest assured your customers are investing in a product with superior quality and performance.



WaterFurnace has raised the bar again.  
The Envision Series is the first water-source  
heat pump to reach 30 EER  
(ISO/ARI 13256-1 GLHP)

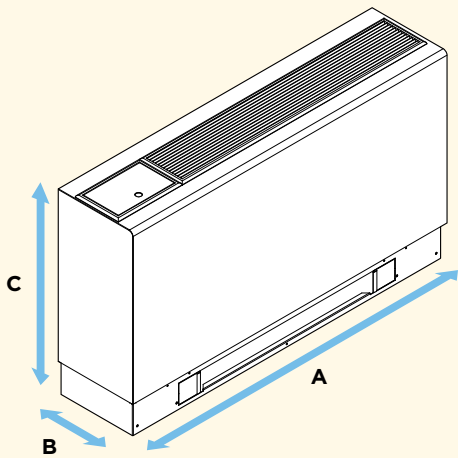
## KEY FEATURES

- 1 COMPRESSOR:** Single speed rotary compressors. Available in commercial single phase voltages.
- 2 WATER LINES:** 1/2" Copper FPT waterline connections protrude out the end of the chassis for ease of installation.
- 3 COAXIAL HEAT EXCHANGER:** Oversized and convoluted with copper inner tube (optional cupronickel) and steel outer tube, designed for maximum heat transfer at normal and low water flow rates to minimize pressure drop.
- 4 AIR COIL:** Large face, rifled copper tubes and enhanced corrugated lanced aluminum fins to provide high efficiencies at low face velocities. Optional FormiShield™ coating for added protection against formicary corrosion.
- 5 MOTORIZED OUTSIDE AIR DAMPER:** Optional field installed motorized outside air damper allows for the introduction of 25% outside (fresh) air into the conditioned space. Powered on by a 24V signal to the damper motor and spring-closed upon a loss of signal.
- 6 ELECTRIC HEAT:** Internally mounted Nickel-Cadmium (Ni-Cad) electric heat elements with ceramic insulators and thermal switches. Available in 2 kW for NC09-12 and 3 kW for NC15-18.
- 7 ELECTRICAL DISCONNECTORS:** Optional, field installed fused or non-fused electrical disconnect available. Fused sizes available in 10, 12, 15, 20 and 25 amp fuses.
- 9 CABINET:** Constructed of heavy gauge environmentally-responsible galvanized steel for maximum corrosion resistance. All cabinets finished with beige textured epoxy powder coating on both sides for added protection. Fits "legacy" console footprints.
- 10 REFRIGERANT CIRCUIT:** Units utilize R-410A refrigerant in sealed circuits. Metering accomplished with thermostatic expansion valve to deliver optimum refrigerant flow over a wide range of conditions without troublesome check valves. Four-way solenoid activated reversing valve faults to heating, and is "cool brazed" at the factory.
- 11 CONTROLS:** The Compressor Control Module (CCM) comes standard as a more reliable replacement for electro-mechanical systems or an optional full featured Versatec Microprocessor Control with expanded unit sensors is also available. Both can be applied with unit or wall mounted thermostats. The optional FX10 Control adds N2, Modbus, LON & BACnet compatibility along with unit or wall mounted sensors or wall mounted thermostat options (thermostat/sensors sold separately).
- 12 FAN MOTOR:** High efficiency, dual shaft, 2 speed PSC.

### OTHER OPTIONS:

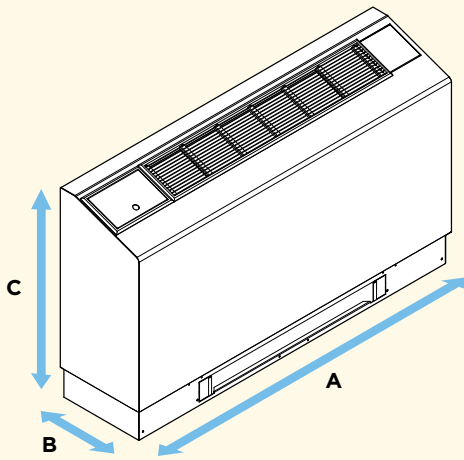
- Extended range coaxial heat exchanger and piping insulation.
- Corrosion resistant FormiShield™ air coil coating.
- Cabinets available in flat, slope top, or extended slope top.
- Left or Right Controls

# ENVISION SERIES CONSOLES 0.75 - 1.5 TON



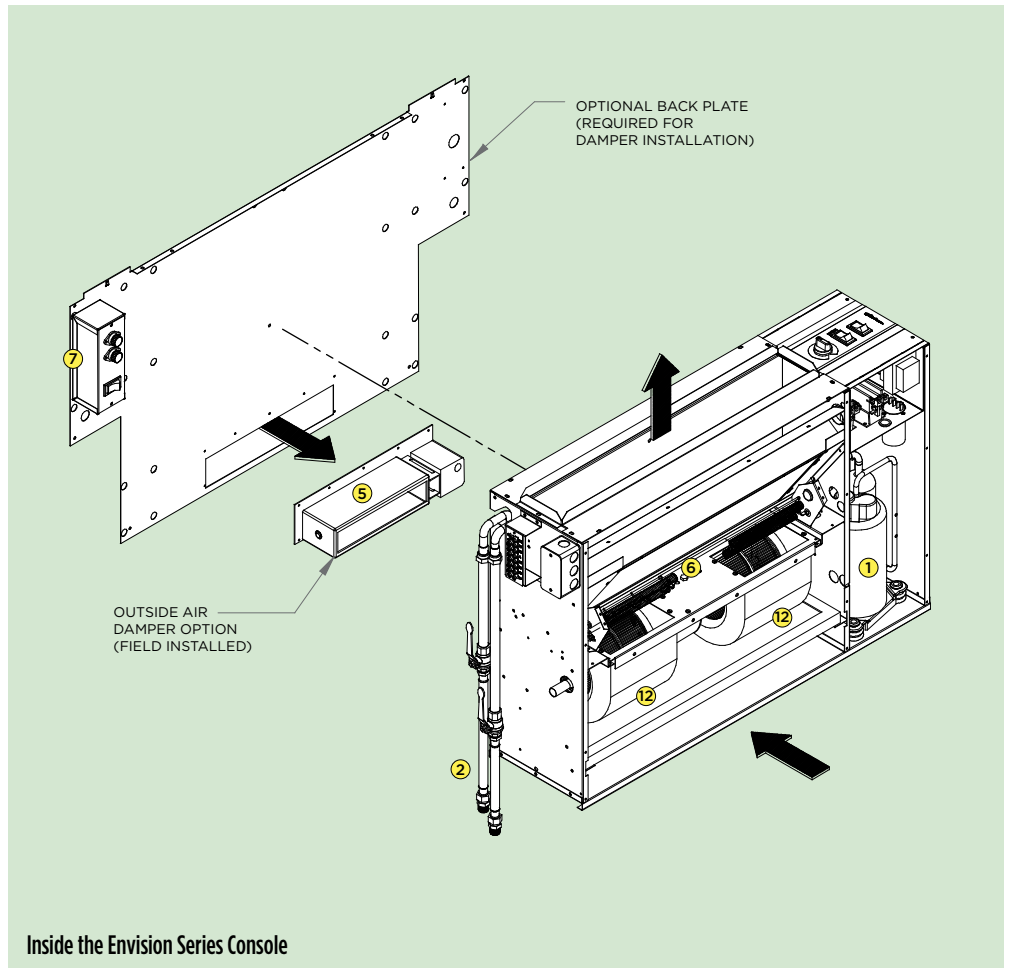
Flat Top

| Model     | A     | B     | C     |
|-----------|-------|-------|-------|
| 09 - 12   | 45.0" | 10.8" | 25.7" |
| 015 - 018 | 50.0" | 12.3" | 25.7" |



Slope Top

| Model     | A     | B     | C     |
|-----------|-------|-------|-------|
| 09 - 12   | 50.0" | 12.6" | 29.1" |
| 015 - 018 | 55.0" | 12.6" | 29.1" |



Inside the Envision Series Console

# ARI/ISO 13256-1 PERFORMANCE RATINGS

## PSC Motors

ARI/ASHRAE/ISO 13256-1

English (IP) Units

| Model     | Flow Rate |     | Water Loop Heat Pump |               |                     |     | Ground Water Heat Pump |               |                     |     | Ground Loop Heat Pump |               |                     |     |
|-----------|-----------|-----|----------------------|---------------|---------------------|-----|------------------------|---------------|---------------------|-----|-----------------------|---------------|---------------------|-----|
|           |           |     | Cooling<br>EWT 86°F  |               | Heating<br>EWT 68°F |     | Cooling<br>EWT 59°F    |               | Heating<br>EWT 50°F |     | Cooling<br>EWT 77°F   |               | Heating<br>EWT 32°F |     |
|           | gpm       | cfm | Capacity<br>Btuh     | EER<br>Btuh/W | Capacity<br>Btuh    | COP | Capacity<br>Btuh       | EER<br>Btuh/W | Capacity<br>Btuh    | COP | Capacity<br>Btuh      | EER<br>Btuh/W | Capacity<br>Btuh    | COP |
| <b>09</b> | 2.5       | 300 | 8,500                | 13.4          | 10,500              | 4.4 | 10,200                 | 22.5          | 8,700               | 3.8 | 9,000                 | 16.0          | 6,700               | 3.1 |
| <b>12</b> | 3.5       | 350 | 10,500               | 12.3          | 14,400              | 4.3 | 12,400                 | 19.5          | 11,800              | 3.7 | 11,000                | 14.2          | 9,500               | 3.5 |
| <b>15</b> | 4.5       | 450 | 13,500               | 13.6          | 17,000              | 4.9 | 16,200                 | 22.0          | 14,000              | 4.1 | 14,200                | 15.9          | 10,500              | 3.4 |
| <b>18</b> | 5.5       | 500 | 16,200               | 12.5          | 21,000              | 4.4 | 19,000                 | 19.6          | 17,000              | 3.7 | 16,600                | 15.1          | 13,300              | 3.1 |

3/3/08

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature

Heating capacities based upon 68°F DB, 59°F WB entering air temperature

All ratings based upon 208V operation

## PSC Motors

ARI/ASHRAE/ISO 13256-1

Metric (SI) Units

| Model     | Flow Rate    |            | Water Loop Heat Pump |              |                     |     | Ground Water Heat Pump |              |                     |     | Ground Loop Heat Pump |              |                    |     |
|-----------|--------------|------------|----------------------|--------------|---------------------|-----|------------------------|--------------|---------------------|-----|-----------------------|--------------|--------------------|-----|
|           |              |            | Cooling<br>EWT 30°C  |              | Heating<br>EWT 20°C |     | Cooling<br>EWT 15°C    |              | Heating<br>EWT 10°C |     | Cooling<br>EWT 25°C   |              | Heating<br>EWT 0°C |     |
|           | water<br>L/S | air<br>L/S | Capacity<br>Watts    | EER<br>(W/W) | Capacity<br>Watts   | COP | Capacity<br>Watts      | EER<br>(W/W) | Capacity<br>Watts   | COP | Capacity<br>Watts     | EER<br>(W/W) | Capacity<br>Watts  | COP |
| <b>09</b> | 0.2          | 141.6      | 2,491                | 3.9          | 3,077               | 4.4 | 2,989                  | 6.6          | 2,550               | 3.8 | 2,638                 | 4.7          | 1,964              | 3.1 |
| <b>12</b> | 0.2          | 165.2      | 3,077                | 3.6          | 4,220               | 4.3 | 3,634                  | 5.7          | 3,458               | 3.7 | 3,224                 | 4.2          | 2,784              | 3.5 |
| <b>15</b> | 0.3          | 212.4      | 3,957                | 4.0          | 4,982               | 4.9 | 4,748                  | 6.4          | 4,103               | 4.1 | 4,162                 | 4.7          | 3,077              | 3.4 |
| <b>18</b> | 0.3          | 236.0      | 4,748                | 3.7          | 6,155               | 4.4 | 5,569                  | 5.7          | 4,982               | 3.7 | 4,865                 | 4.4          | 3,898              | 3.1 |



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