



50 HZ WATER-SOURCE HEAT PUMPS



TRANQUILITY COMPACT (TC) BELT DRIVE SERIES

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Available in sizes 21.1 kW through 87.9 kW with multiple cabinet configurations, the Tranquility® Compact (TC) Belt Drive Series offers a wide range of units for most any installation.

The Tranquility® Compact Series has an extended range refrigerant circuit, capable of ground loop (geothermal) applications (may require optional extended range insulation), ground water (geothermal) applications, as well as water loop (boiler-tower) applications.

Standard features are many. Microprocessor controls, galvanized steel cabinet, epoxy powder coat painted front access panel, galvanized steel with epoxy powder coat painted drain pan and TXV refrigerant metering device are just some of the features of the flexible Tranquility® Compact Series.

Dual compressor refrigeration circuit

Large capacity up to 35.2kW for horizontal model and 87.9 kW for vertical model.



Belt drive blower with high efficiency motor and multiple pulley adjustments



Galvanized steel cabinet

Optional insulated water/refrigerant circuits allow extended range operation (ground loop applications)



Condensate overflow is one of the 8 standard safeties provided by the microprocessor controls in all TC Series units



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## UNIT FEATURES

- Horizontal models 072 (21.1 kW), 096 (28.1 kW), 120 (35.2 kW)
- Vertical models 072 (21.1 kW), 096 (28.1 kW), 120 (35.2 kW), 160 (46.9 kW), 192 (56.3kW), 240 (70.3kW), 300 (87.9 kW)
- Horizontal unit configuration can be ordered with left or right return air and straight or back supply air discharge. Discharge is field convertible. Field conversion uses all existing parts including panels and belts.
- Vertical unit configuration can be ordered with front or back return air and top, front, or back supply air discharge. Discharge is field convertible. Field conversion uses all existing parts including panels and belts.
- Electrical box is on right side and can be field converted to left side of unit
- Electric power can enter from either side of front
- Water can be connected to either side
- Copeland scroll compressors
- Dual refrigeration circuits (All Models)
- Exceeds ASHRAE 90.1 efficiencies
- Galvanized steel construction with attractive matte black epoxy powder coat painted front access panel
- Insulated divider and separate compressor/air handler compartments
- TXV metering device
- Extended range (-6.7 to 48.9°C) operation (may require optional extended range insulation)

## PERFORMANCE AND SPECIFICATIONS

AHRI/ISO/ASHRAE 13256-1 Data

| Model    | Water Loop Heat Pump |         |               |     | Ground Water Heat Pump |         |               |     | Ground Loop Heat Pump |         |              |     |
|----------|----------------------|---------|---------------|-----|------------------------|---------|---------------|-----|-----------------------|---------|--------------|-----|
|          | Cooling 30 °C        |         | Heating 20 °C |     | Cooling 15°C           |         | Heating 10 °C |     | Cooling 25 °C         |         | Heating 0 °C |     |
|          | Capacity kW          | EER W/W | Capacity kW   | COP | Capacity kW            | EER W/W | Capacity kW   | COP | Capacity kW           | EER W/W | Capacity kW  | COP |
| TCH/V072 | 16.47                | 3.8     | 22.57         | 5.0 | 19.08                  | 5.9     | 18.32         | 4.3 | 17.42                 | 4.4     | 14.10        | 3.6 |
| TCH/V096 | 24.03                | 4.2     | 31.51         | 5.3 | 27.14                  | 6.4     | 25.82         | 4.6 | 24.62                 | 4.7     | 19.84        | 3.7 |
| TCH/V120 | 29.72                | 4.2     | 39.83         | 4.8 | 33.94                  | 6.2     | 32.80         | 4.2 | 31.36                 | 4.8     | 25.67        | 3.5 |
| TCV160   | 39.27                | 4.4     | 50.26         | 4.9 | 43.08                  | 6.4     | 40.74         | 4.4 | 40.30                 | 4.8     | 30.48        | 3.6 |
| TCV192   | 47.04                | 4.5     | 59.64         | 5.1 | 51.88                  | 6.4     | 48.21         | 4.6 | 47.33                 | 4.9     | 36.34        | 3.7 |
| TCV240   | 57.00                | 4.4     | 77.23         | 5.1 | 65.50                  | 6.3     | 62.43         | 4.5 | 59.06                 | 4.9     | 47.33        | 3.7 |
| TCV300   | 74.74                | 4.3     | 97.01         | 5.1 | 84.11                  | 6.0     | 78.25         | 4.4 | 77.52                 | 4.7     | 59.79        | 3.6 |

Cooling capacities based upon 27°C DB, 19°C WB entering air temperature.

Heating capacities based upon 20°C DB, 15°C WB entering air temperature.

All ratings based upon operation at lower voltage of dual voltage rated models.

### Dimensional Data

| Horizontal Model |    | Overall Cabinet |       |      |
|------------------|----|-----------------|-------|------|
|                  |    | W               | D     | H    |
| 072 - 120        | cm | 92.2            | 215.6 | 54.9 |

### Voltage Options

| Model     | Volts   | Hz | Phase |
|-----------|---------|----|-------|
| 072 - 300 | 380/420 | 50 | 3     |

| Vertical Model |    | Overall Cabinet |      |       |
|----------------|----|-----------------|------|-------|
|                |    | W               | D    | H     |
| 072 - 120      | cm | 104.1           | 73.7 | 177.2 |
| 160 - 300      |    | 208.2           | 73.7 | 177.2 |



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