



# WRHN

## R-407C

WATER TO WATER HEAT PUMP REVERSIBLE  
ON THE REFRIGERANT CIRCUIT FOR  
INDOOR INSTALLATION



| Size | Cooling<br>[kW] | Heating<br>[kW] |
|------|-----------------|-----------------|
| 102  | 27.2            | 32.1            |
| 142  | 36.2            | 42.7            |
| 162  | 39.4            | 47.3            |
| 182  | 46.8            | 57.2            |
| 202  | 54.8            | 66.4            |
| 222  | 61.1            | 74              |
| 242  | 67.3            | 81.5            |

REPLACE: BT02F003GB-01

The WRHN series water-water heat pumps with hermetic compressors are suitable for indoor installation, designed for medium and low cooling and heating capacity requirements. They can be used in modern civil and industrial systems, with compact dimensions and low sound levels, and only require the electrical and water connections for installation: the units in fact are completely assembled and tested in the factory. They are fitted with reverse-cycle valve on the refrigerant circuit, so as to significantly reduce the installation and maintenance costs.

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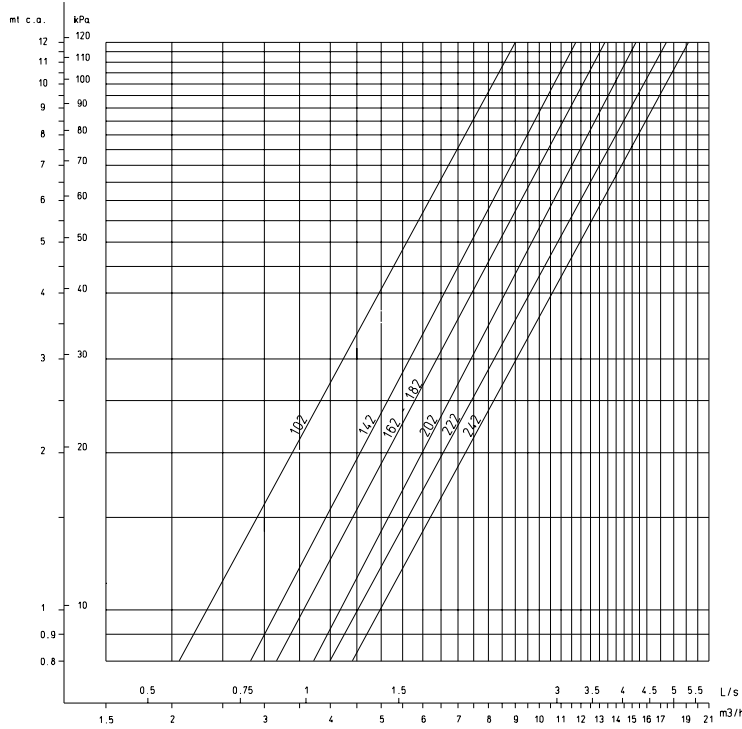
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CERTIFIED QUALITY SYSTEM ISO 9001 : 2008



**EXCHANGER PRESSURE DROP**



**CORRECTION FACTOR FOR ANTIFREEZE SOLUTIONS**

| % ethylene glycol by weight            |    | 5%    | 10%   | 15%   | 20%   | 25%   | 30%   | 35%   | 40%   |
|--|----|-------|-------|-------|-------|-------|-------|-------|-------|
| Freezing temperature                   | °C | -2.0  | -3.9  | -6.5  | -8.9  | -11.8 | -15.6 | -19.0 | -23.4 |
| Safety temperature                     | °C | 3.0   | 1.0   | -1.0  | -4.0  | -6.0  | -10.0 | -14.0 | -19.0 |
| Cooling Capacity Factor                | Nr | 0.995 | 0.990 | 0.985 | 0.981 | 0.977 | 0.974 | 0.971 | 0.968 |
| Compressor input Factor                | Nr | 0.997 | 0.993 | 0.990 | 0.988 | 0.986 | 0.984 | 0.982 | 0.981 |
| Evaporator Glycol solution flow Factor | Nr | 1.003 | 1.010 | 1.020 | 1.033 | 1.050 | 1.072 | 1.095 | 1.124 |
| Pressure drop Factor                   | Nr | 1.029 | 1.060 | 1.090 | 1.118 | 1.149 | 1.182 | 1.211 | 1.243 |

The correction factors shown refer to water and glycol ethylene mixes used to prevent the formation of frost on the exchangers in the water circuit during inactivity in winter.

**FOULING CORRECTION FACTOR**

| m <sup>2</sup> °C/W     | F1   | FK1  |
|-------------------------|------|------|
| 0.44 x 10 <sup>-4</sup> | 1.00 | 1.00 |
| 0.88 x 10 <sup>-4</sup> | 0.97 | 0.99 |
| 1.76 x 10 <sup>-4</sup> | 0.94 | 0.98 |

F1 = Cooling capacity correction factors  
FK1 = Compressor power input correction factor

**EXCHANGER OPERATING LIMITS**

|          | EVAPORATOR |      |              |    | CONDENSER |      |      |
|----------|------------|------|--------------|----|-----------|------|------|
|          | DPr        | DPw  | Dteo (S - B) |    | Dtei      | Dtci | Dtco |
|          | kPa        | kPa  | °C           |    | °C        | °C   | °C   |
| PED (CE) | 3000       | 3000 | 5            | -7 | 24        | 10   | 56   |

DPr = Maximum operating pressure on refrigerant side  
DPw = Maximum operating pressure on water side  
DTeo = Minimum water temperature at evaporator outlet  
DTei = Maximum water temperature at evaporator inlet  
DTci = Minimum water temperature at condenser inlet  
DTco = Maximum water temperature at condenser outlet

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**GENERAL TECHNICAL SPECIFICATIONS**

| Size                         |   |     | 102    | 142    | 162    | 182    | 202    | 222    | 242    |
|------------------------------|---|-----|--------|--------|--------|--------|--------|--------|--------|
| <b>COOLING</b>               |   |     |        |        |        |        |        |        |        |
| Cooling capacity             | 1 | kW  | 27.2   | 36.2   | 39.4   | 46.8   | 54.8   | 61.1   | 67.3   |
| Compressor power input       | 1 | kW  | 7.13   | 9.34   | 11     | 13.7   | 15.6   | 17.4   | 19.3   |
| Total power input            | 1 | kW  | 7.54   | 10     | 11.6   | 14.8   | 16.8   | 18.8   | 20.8   |
| EER                          | 1 | Nr  | 3.61   | 3.62   | 3.4    | 3.16   | 3.26   | 3.25   | 3.24   |
| <b>HEATING</b>               |   |     |        |        |        |        |        |        |        |
| Heat output                  | 2 | kW  | 32.1   | 42.7   | 47.3   | 57.2   | 66.4   | 74     | 81.5   |
| Compressor power input       | 2 | kW  | 9.4    | 12.3   | 14.4   | 18.4   | 20.7   | 23.1   | 25.4   |
| <b>COMPRESSOR</b>            |   |     |        |        |        |        |        |        |        |
| Type of compressors          |   |     | SCROLL | SCROLL | SCROLL | SCROLL | SCROLL | SCROLL | SCROLL |
| No. of Compressors           |   | Nr  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| Std Capacity control steps   |   | Nr  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| Oil charge (C1)              |   | l   | 1.55   | 1.65   | 4      | 4      | 4      | 4      | 4      |
| Oil charge (C2)              |   | l   | 1.55   | 1.65   | 4      | 4      | 4      | 4      | 4      |
| Refrigerant charge (C1)      |   | kg  | 1.7    | 1.9    | 2      | 2.1    | 2.4    | 2.5    | 2.5    |
| Refrigerant charge (C2)      |   | kg  | 1.7    | 1.9    | 2      | 2.1    | 2.4    | 2.4    | 2.5    |
| Refrigerant circuits         |   | Nr  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| <b>INTERNAL EXCHANGER</b>    |   |     |        |        |        |        |        |        |        |
| Type of internal exchanger   | 3 |     | PHE    | PHE    | PHE    | PHE    | PHE    | PHE    | PHE    |
| No. of internal exchangers   |   | Nr  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| Water flow-rate              | 1 | l/s | 1.3    | 1.73   | 1.88   | 2.24   | 2.62   | 2.92   | 3.22   |
| Pressure drop                |   | kPa | 35     | 36     | 33     | 46     | 47     | 49     | 48     |
| Water content                |   | l   | 2.4    | 3      | 3.6    | 3.6    | 4.3    | 4.8    | 5.3    |
| <b>EXTERNAL EXCHANGER</b>    |   |     |        |        |        |        |        |        |        |
| Water flow-rate              | 2 | l/s | 1.3    | 1.7    | 1.9    | 2.2    | 2.6    | 2.9    | 3.2    |
| Pressure drop                |   | kPa | 35     | 36     | 33     | 46     | 47     | 49     | 48     |
| Quantity                     |   | Nr  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| <b>CONNECTIONS</b>           |   |     |        |        |        |        |        |        |        |
| Water fittings               |   |     | 1"     | 1"     | 1"     | 1"     | 1"     | 1"     | 1"     |
| <b>DIMENSIONS</b>            |   |     |        |        |        |        |        |        |        |
| Length                       |   | mm  | 802    | 802    | 802    | 802    | 802    | 802    | 802    |
| Depth                        |   | mm  | 602    | 602    | 652    | 652    | 652    | 652    | 652    |
| Height                       |   | mm  | 790    | 790    | 915    | 915    | 915    | 915    | 915    |
| Packing volume               |   | m3  | 0.49   | 0.49   | 0.6    | 0.6    | 0.6    | 0.6    | 0.6    |
| <b>STANDARD UNIT WEIGHTS</b> |   |     |        |        |        |        |        |        |        |
| Shipping weight              |   | kg  | 187    | 207    | 255    | 257    | 269    | 275    | 280    |

(1) data refers to the following conditions :  
internal exchanger = source side exchanger  
internal exchanger water = 12/7°C  
exchanger water outlet 35°C

(2) data refers to the following conditions :  
internal exchanger = source side exchanger  
internal exchanger water = 12/7°C  
external exchanger water outlet temperature 45°C

(3) PHE = plates

**OPERATING LIMITS (Cooling)**

| Size                           |   |    | 102    | 142    | 162    | 182    | 202    | 222    | 242    |
|--------------------------------|---|----|--------|--------|--------|--------|--------|--------|--------|
| <b>CONDENSER</b>               |   |    |        |        |        |        |        |        |        |
| Max water inlet temperature    |   | °C | 48     | 48     | 48     | 48     | 48     | 48     | 48     |
| Min. water inlet temperature   | 1 | °C | 10     | 10     | 10     | 10     | 10     | 10     | 10     |
| Min. water inlet temperature   | 2 | °C | 18     | 18     | 18     | 18     | 18     | 18     | 18     |
| Max water outlet temperature   |   | °C | 56     | 56     | 56     | 56     | 56     | 56     | 56     |
| Min. water outlet temperature  | 1 | °C | 26     | 26     | 26     | 26     | 26     | 26     | 26     |
| Min. water outlet temperature  | 2 | °C | 28     | 28     | 28     | 28     | 28     | 28     | 28     |
| <b>EVAPORATOR</b>              |   |    |        |        |        |        |        |        |        |
| Water thermal head (min / max) |   | °C | 8 / 16 | 8 / 16 | 8 / 16 | 8 / 16 | 8 / 16 | 8 / 16 | 8 / 16 |
| Max water inlet temperature    |   | °C | 24     | 24     | 24     | 24     | 24     | 24     | 24     |
| Min. water outlet temperature  | 3 | °C | 6      | 6      | 6      | 6      | 6      | 6      | 6      |

(1) water well  
(2) tower water  
(3) data refers to units in capacity-controlled operation

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**ELECTRICAL DATA**

| Size  |    |  | 102      | 142      | 162      | 182      | 202      | 222      | 242      |
|---|----|--|----------|----------|----------|----------|----------|----------|----------|
| <b>F.L.A. - FULL LOAD CURRENT AT MAX ADMISSIBLE CONDITIONS</b>  |    |  |          |          |          |          |          |          |          |
| Compressor 1 (230/3/50)   | A  |  | 19.7     | 25.3     | 24.1     | 31.2     | 35.8     | 35.8     | 45.2     |
| Compressor 2 (230/3/50)   | A  |  | 19.7     | 25.3     | 24.1     | 31.2     | 35.8     | 45.2     | 45.2     |
| Compressor 1 (400/3/50)   | A  |  | 9.8      | 13.6     | 14.2     | 17.5     | 20       | 23       | 24.3     |
| Compressor 2 (400/3/50)   | A  |  | 9.8      | 13.6     | 14.2     | 17.5     | 20       | 20       | 24.3     |
| Total (230/3/50 )   | A  |  | 39.3     | 50.7     | 48.2     | 62.4     | 71.6     | 81       | 90.4     |
| Total (400/3/50 )   | A  |  | 19.5     | 27.1     | 28.4     | 34.9     | 40.1     | 42       | 48.6     |
| Total (400/3/50+N )   | A  |  | 19.5     | 27.1     | 28.4     | 34.9     | 40.1     | 42       | 48.6     |
| <b>L.R.A. LOCKED ROTOR AMPERES</b>                              |    |  |          |          |          |          |          |          |          |
| Compressor 2 (230/3/50)   | A  |  | 132.5    | 171      | 166      | 210.5    | 224      | 279.5    | 279.5    |
| Compressor 1 (400/3/50)   | A  |  | 62       | 96       | 90.5     | 116.5    | 127.5    | 168      | 168      |
| Compressor 2 (400/3/50)   | A  |  | 62       | 96       | 90.5     | 116.5    | 127.5    | 127.5    | 168      |
| <b>F.L.I. FULL LOAD POWER INPUT AT MAX ADMISSIBLE CONDITION</b> |    |  |          |          |          |          |          |          |          |
| Compressor 1 (230/3/50)   | kW |  | 5.7      | 7.6      | 8.8      | 10.4     | 11.9     | 11.9     | 14.6     |
| Compressor 2 (230/3/50)   | kW |  | 5.7      | 7.6      | 8.8      | 10.4     | 11.9     | 14.6     | 14.6     |
| Compressor 1 (400/3/50)   | kW |  | 5.7      | 7.6      | 8.8      | 10.4     | 11.9     | 14.6     | 14.6     |
| Compressor 2 (400/3/50)   | kW |  | 5.7      | 7.6      | 8.8      | 10.4     | 11.9     | 11.9     | 14.6     |
| Total (230/3/50 )   | kW |  | 11.3     | 15.2     | 17.6     | 20.7     | 23.8     | 25.7     | 29.2     |
| Total (400/3/50 )   | kW |  | 11.3     | 15.2     | 17.6     | 20.7     | 23.8     | 25.7     | 29.2     |
| Total (400/3/50+N )   | kW |  | 11.3     | 15.2     | 17.6     | 20.7     | 23.8     | 25.7     | 29.2     |
| <b>M.I.C. MAXIMUM INRUSH CURRENT</b>                            |    |  |          |          |          |          |          |          |          |
| Value (230/3/50 )   | A  |  | 152.2    | 196.3    | 190.1    | 241.7    | 259.8    | 315.3    | 324.7    |
| Value (400/3/50 )   | A  |  | 71.8     | 109.6    | 104.7    | 134      | 147.5    | 178      | 192.3    |
| Value (400/3/50+N )   | A  |  | 71.8     | 109.6    | 104.7    | 134      | 147.5    | 178      | 192.3    |
| <b>POWER SUPPLY</b>   |    |  |          |          |          |          |          |          |          |
| power supply  | V  |  | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 |

**SOUND LEVELS**

| SIZE | Sound Power Level (dB) |    |     |     |     |      |      |      | Sound pressure level | Sound power level |
|------|------------------------|----|-----|-----|-----|------|------|------|----------------------|-------------------|
|      | Octave band (Hz)       |    |     |     |     |      |      |      |                      |                   |
|      | 2000                   | 63 | 250 | 125 | 500 | 8000 | 4000 | 1000 | dB(A)                | dB(A)             |
| 102  | 49                     | 85 | 63  | 81  | 58  | 36   | 38   | 58   | 53                   | 67                |
| 142  | 45                     | 48 | 59  | 63  | 62  | 63   | 75   | 79   | 53                   | 67                |
| 162  | 56                     | 57 | 65  | 69  | 74  | 79   | 86   | 85   | 62                   | 77                |
| 182  | 48                     | 51 | 65  | 66  | 74  | 81   | 82   | 81   | 62                   | 76                |
| 202  | 46                     | 51 | 60  | 70  | 77  | 81   | 79   | 79   | 63                   | 77                |
| 222  | 55                     | 52 | 66  | 69  | 76  | 83   | 85   | 85   | 64                   | 78                |
| 242  | 58                     | 53 | 68  | 67  | 75  | 85   | 88   | 87   | 65                   | 79                |

the sound levels refer to the unit at full load, in the rated test conditions.  
The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field.

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**COOLING PERFORMANCE**

| Size | To (°C) | CONDENSER WATER OUTLET TEMPERATURE (°C) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|---------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |         | 30                                      |      |      | 35   |      |      | 40   |      |      | 45   |      |      | 50   |      |      |
|      |         | kWf                                     | kWe  | kWt  | kWf  | kWe  | kWt  | kWf  | kWe  | kWt  | kWf  | kWe  | kWt  | kWf  | kWe  | kWt  |
| 102  | 5       | 26.5                                    | 6.45 | 33.0 | 25.3 | 7.11 | 32.4 | 23.9 | 7.90 | 31.8 | 22.3 | 8.84 | 31.1 | 20.5 | 9.91 | 30.4 |
|      | 6       | 27.5                                    | 6.47 | 34.0 | 26.2 | 7.12 | 33.3 | 24.8 | 7.92 | 32.7 | 23.2 | 8.86 | 32.1 | 21.3 | 9.93 | 31.2 |
|      | 7       | 28.5                                    | 6.48 | 35.0 | 27.2 | 7.13 | 34.3 | 25.8 | 7.93 | 33.7 | 24.1 | 8.87 | 33.0 | 22.2 | 9.95 | 32.2 |
|      | 8       | 29.6                                    | 6.49 | 36.1 | 28.3 | 7.14 | 35.4 | 26.8 | 7.94 | 34.7 | 25.0 | 8.88 | 33.9 | 23.1 | 9.97 | 33.1 |
|      | 9       | 30.7                                    | 6.50 | 37.2 | 29.3 | 7.15 | 36.5 | 27.8 | 7.95 | 35.8 | 26.0 | 8.89 | 34.9 | 24.0 | 9.97 | 34.0 |
|      | 10      | 31.8                                    | 6.51 | 38.3 | 30.4 | 7.16 | 37.6 | 28.9 | 7.95 | 36.9 | 27.0 | 8.89 | 35.9 | 25.0 | 9.98 | 35.0 |
| 142  | 5       | 35.2                                    | 8.36 | 43.6 | 33.7 | 9.25 | 43.0 | 32.0 | 10.3 | 42.3 | 30.1 | 11.5 | 41.6 | 27.9 | 12.9 | 40.8 |
|      | 6       | 36.4                                    | 8.39 | 44.8 | 34.9 | 9.29 | 44.2 | 33.2 | 10.3 | 43.5 | 31.2 | 11.5 | 42.7 | 29.0 | 12.9 | 41.9 |
|      | 7       | 37.8                                    | 8.43 | 46.2 | 36.2 | 9.34 | 45.5 | 34.4 | 10.4 | 44.8 | 32.4 | 11.6 | 44.0 | 30.1 | 12.9 | 43.0 |
|      | 8       | 39.1                                    | 8.48 | 47.6 | 37.5 | 9.39 | 46.9 | 35.7 | 10.4 | 46.1 | 33.6 | 11.6 | 45.2 | 31.3 | 13.0 | 44.3 |
|      | 9       | 40.6                                    | 8.53 | 49.1 | 38.9 | 9.44 | 48.3 | 37.0 | 10.5 | 47.5 | 34.9 | 11.7 | 46.6 | 32.5 | 13.0 | 45.5 |
|      | 10      | 42.0                                    | 8.58 | 50.6 | 40.3 | 9.50 | 49.8 | 38.4 | 10.6 | 49.0 | 36.2 | 11.8 | 48.0 | 33.8 | 13.1 | 46.9 |
| 162  | 5       | 38.6                                    | 9.84 | 48.4 | 36.8 | 10.9 | 47.7 | 34.7 | 12.1 | 46.8 | 32.5 | 13.5 | 46.0 | 30.2 | 15.1 | 45.3 |
|      | 6       | 40.0                                    | 9.87 | 49.9 | 38.0 | 10.9 | 48.9 | 35.9 | 12.2 | 48.1 | 33.7 | 13.6 | 47.3 | 31.4 | 15.2 | 46.6 |
|      | 7       | 41.4                                    | 9.90 | 51.3 | 39.4 | 11.0 | 50.4 | 37.2 | 12.2 | 49.4 | 35.0 | 13.7 | 48.7 | 32.6 | 15.2 | 47.8 |
|      | 8       | 42.9                                    | 9.94 | 52.8 | 40.8 | 11.0 | 51.8 | 38.5 | 12.3 | 50.8 | 36.2 | 13.7 | 49.9 | 33.9 | 15.3 | 49.2 |
|      | 9       | 44.5                                    | 9.99 | 54.5 | 42.2 | 11.1 | 53.3 | 39.9 | 12.4 | 52.3 | 37.6 | 13.8 | 51.4 | 35.2 | 15.5 | 50.7 |
|      | 10      | 46.2                                    | 10.0 | 56.2 | 43.7 | 11.2 | 54.9 | 41.3 | 12.5 | 53.8 | 39.0 | 13.9 | 52.9 | 36.6 | 15.6 | 52.2 |
| 182  | 5       | 45.9                                    | 12.3 | 58.2 | 43.7 | 13.7 | 57.4 | 41.3 | 15.2 | 56.5 | 38.8 | 16.9 | 55.7 | 36.2 | 18.8 | 55.0 |
|      | 6       | 47.5                                    | 12.3 | 59.8 | 45.2 | 13.7 | 58.9 | 42.8 | 15.2 | 58.0 | 40.2 | 17.0 | 57.2 | 37.5 | 18.9 | 56.4 |
|      | 7       | 49.2                                    | 12.3 | 61.5 | 46.8 | 13.7 | 60.5 | 44.3 | 15.3 | 59.6 | 41.6 | 17.0 | 58.6 | 38.8 | 18.9 | 57.7 |
|      | 8       | 50.9                                    | 12.3 | 63.2 | 48.5 | 13.7 | 62.2 | 45.9 | 15.3 | 61.2 | 43.1 | 17.1 | 60.2 | 40.2 | 19.0 | 59.2 |
|      | 9       | 52.7                                    | 12.3 | 65.0 | 50.2 | 13.7 | 63.9 | 47.6 | 15.3 | 62.9 | 44.7 | 17.1 | 61.8 | 41.7 | 19.0 | 60.7 |
|      | 10      | 54.5                                    | 12.3 | 66.8 | 52.0 | 13.7 | 65.7 | 49.3 | 15.3 | 64.6 | 46.4 | 17.1 | 63.5 | 43.3 | 19.0 | 62.3 |
| 202  | 5       | 53.6                                    | 14.0 | 67.6 | 51.1 | 15.5 | 66.6 | 48.4 | 17.2 | 65.6 | 45.5 | 19.2 | 64.7 | 42.5 | 21.4 | 63.9 |
|      | 6       | 55.5                                    | 14.0 | 69.5 | 52.9 | 15.5 | 68.4 | 50.2 | 17.3 | 67.5 | 47.2 | 19.2 | 66.4 | 44.0 | 21.4 | 65.4 |
|      | 7       | 57.5                                    | 14.1 | 71.6 | 54.8 | 15.6 | 70.4 | 52.0 | 17.3 | 69.3 | 48.9 | 19.3 | 68.2 | 45.7 | 21.5 | 67.2 |
|      | 8       | 59.5                                    | 14.1 | 73.6 | 56.8 | 15.6 | 72.4 | 53.9 | 17.3 | 71.2 | 50.7 | 19.3 | 70.0 | 47.4 | 21.5 | 68.9 |
|      | 9       | 61.5                                    | 14.1 | 75.6 | 58.8 | 15.6 | 74.4 | 55.8 | 17.4 | 73.2 | 52.6 | 19.3 | 71.9 | 49.2 | 21.6 | 70.8 |
|      | 10      | 63.5                                    | 14.2 | 77.7 | 60.8 | 15.6 | 76.4 | 57.9 | 17.4 | 75.3 | 54.6 | 19.4 | 74.0 | 51.1 | 21.6 | 72.7 |
| 222  | 5       | 59.6                                    | 15.7 | 75.3 | 56.9 | 17.3 | 74.2 | 54.0 | 19.2 | 73.2 | 50.8 | 21.3 | 72.1 | 47.3 | 23.7 | 71.0 |
|      | 6       | 61.8                                    | 15.7 | 77.5 | 59.0 | 17.3 | 76.3 | 55.9 | 19.2 | 75.1 | 52.6 | 21.4 | 74.0 | 49.1 | 23.8 | 72.9 |
|      | 7       | 64.0                                    | 15.8 | 79.8 | 61.1 | 17.4 | 78.5 | 57.9 | 19.3 | 77.2 | 54.5 | 21.4 | 75.9 | 50.9 | 23.8 | 74.7 |
|      | 8       | 66.2                                    | 15.8 | 82.0 | 63.2 | 17.5 | 80.7 | 60.0 | 19.4 | 79.4 | 56.5 | 21.5 | 78.0 | 52.8 | 23.9 | 76.7 |
|      | 9       | 68.5                                    | 15.9 | 84.4 | 65.4 | 17.5 | 82.9 | 62.1 | 19.4 | 81.5 | 58.6 | 21.6 | 80.2 | 54.7 | 24.0 | 78.7 |
|      | 10      | 70.8                                    | 15.9 | 86.7 | 67.7 | 17.6 | 85.3 | 64.3 | 19.5 | 83.8 | 60.7 | 21.7 | 82.4 | 56.8 | 24.1 | 80.9 |
| 242  | 5       | 65.7                                    | 17.3 | 83.0 | 62.8 | 19.1 | 81.9 | 59.5 | 21.1 | 80.6 | 56.0 | 23.4 | 79.4 | 52.2 | 26.0 | 78.2 |
|      | 6       | 68.1                                    | 17.4 | 85.5 | 65.0 | 19.2 | 84.2 | 61.6 | 21.2 | 82.8 | 58.0 | 23.5 | 81.5 | 54.1 | 26.1 | 80.2 |
|      | 7       | 70.5                                    | 17.5 | 88.0 | 67.3 | 19.3 | 86.6 | 63.8 | 21.3 | 85.1 | 60.1 | 23.6 | 83.7 | 56.1 | 26.2 | 82.3 |
|      | 8       | 72.9                                    | 17.6 | 90.5 | 69.7 | 19.3 | 89.0 | 66.1 | 21.4 | 87.5 | 62.3 | 23.7 | 86.0 | 58.1 | 26.4 | 84.5 |
|      | 9       | 75.5                                    | 17.7 | 93.2 | 72.1 | 19.4 | 91.5 | 68.4 | 21.5 | 89.9 | 64.5 | 23.8 | 88.3 | 60.3 | 26.5 | 86.8 |
|      | 10      | 78.2                                    | 17.7 | 95.9 | 74.6 | 19.5 | 94.1 | 70.8 | 21.6 | 92.4 | 66.8 | 24.0 | 90.8 | 62.5 | 26.7 | 89.2 |

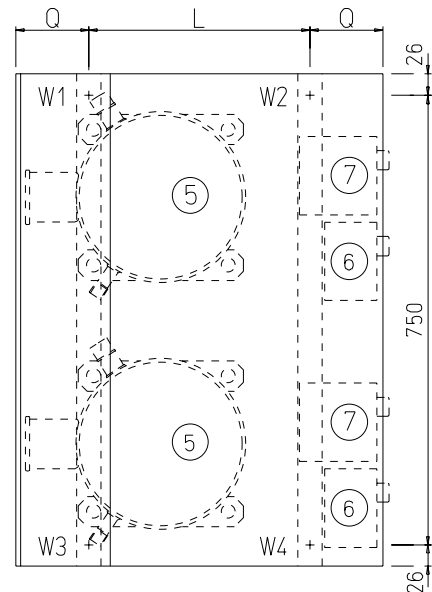
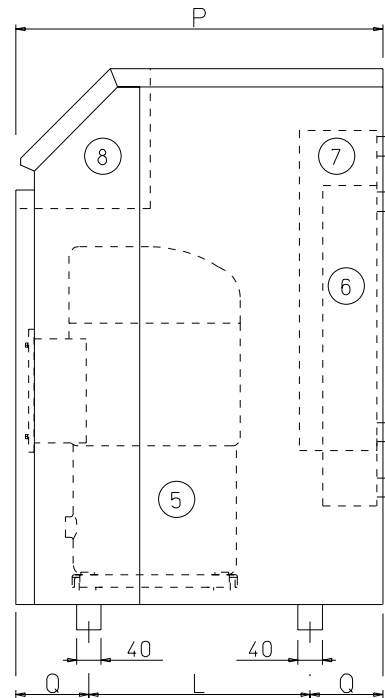
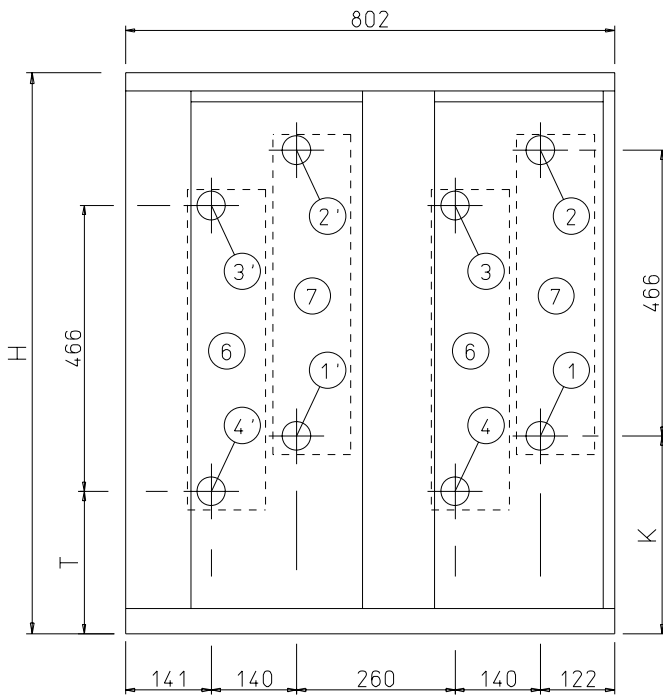
To = Evaporator water outlet temperature in °C  
 kWf = Cooling capacity in kW  
 kWe = Compressor power input in kW  
 kWt = Condenser output in kW  
 With To = 5°C we recommend using 10% glycol solution

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**DIMENSIONAL DRAWING**

| Size |    | 102 | 142 | 162 | 182 | 202 | 222 | 242 |
|------|----|-----|-----|-----|-----|-----|-----|-----|
| H    | mm | 790 | 790 | 915 | 915 | 915 | 915 | 915 |
| K    | mm | 197 | 197 | 322 | 322 | 322 | 322 | 322 |
| L    | mm | 362 | 362 | 412 | 412 | 412 | 412 | 412 |
| P    | mm | 602 | 602 | 652 | 652 | 652 | 652 | 652 |
| Q    | mm | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| T    | mm | 107 | 107 | 232 | 232 | 232 | 232 | 232 |

**DIMENSIONAL DRAWING**



- (1) EVAPORATOR WATER OUTLET
- (2) EVAPORATOR WATER INLET
- (3) CONDENSER WATER INLET
- (4) CONDENSER WATER OUTLET
- (5) COMPRESSOR
- (6) CONDENSER = SOURCE SIDE EXCHANGER
- (7) EVAPORATOR = UTILITY SIDE EXCHANGER
- (8) ELECTRICAL PANEL

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