

# CHAPTER 3

WATERCOOLED & CONDENSERLESS LIQUID CHILLERS  
AND HEAT PUMPS FOR COMMERCIAL & INDUSTRIAL  
APPLICATION. REMOTE CONDENSERS

| Unit                     | Page      |
|--------------------------|-----------|
| CWW/K 15÷151             | 128 - 129 |
| CWW/K 182-P÷604-P        | 130 - 131 |
| CWW/K 182÷604            | 132 - 133 |
| MEA/K 15÷151             | 134 - 135 |
| MEA/K 182-P÷604-P        | 136 - 137 |
| RCA/K 4111÷8222          | 138 - 139 |
| RCA/K/SL 4111÷8222       | 140 - 141 |
| RCA/K/SSL 5111÷8222      | 142 - 143 |
| CWW/K 726-P÷36012-P      | 144 - 145 |
| CWW/K 726÷36012          | 146 - 147 |
| CWW/K/A 901÷6202         | 148 - 149 |
| CWW/IY/WP 1352÷4402      | 150 - 151 |
| CWW/Y/A 1302÷4802        | 152 - 153 |
| CWW/K 901÷5802           | 154 - 155 |
| CWW/Y 1302-B÷9003-B      | 156 - 157 |
| MEA/Y 1302-B÷9003-B      | 158 - 159 |
| RCA/Y 8141÷9282          | 160 - 161 |
| RCA/Y/SL 8231÷9282       | 162 - 163 |
| RCA/Y/SSL 8151÷9281      | 164 - 165 |
| CWW/TTH 1701-1÷6606-1    | 166 - 167 |
| CWW/TTH/DR 1701-1÷6606-1 | 168 - 169 |
| CWW/TTY 1601-1÷14406-1   | 170 - 171 |
| CWW/TTY/DR 1601-1÷6204-1 | 172 - 173 |
| CWW/CCY 4031÷11682       | 174 - 175 |

1

2

3

4

5

6

7

FROM 4,6 KW TO 49 KW.

# CWW/K 15÷151

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH ROTARY/ SCROLL COMPRESSOR AND PLATE EXCHANGERS.**



The CWW/K 15÷151 liquid Chillers and Heat Pumps, with R410A refrigerant, are designed for small and medium domestic or industrial systems which require medium-low power, space-saving units and quiet operation. These units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

These units can be combined with terminal units or with intermediate heat exchangers for process cooling applications.

Equipped with prepainted plate structure, Rotary/Scroll compressor and plate-type exchangers, these units have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency, even in the version with tank and pump.

A wide range of accessories, factory fitted or supplied separately, completes the outstanding versatility and functionality of the series.



## VERSION

### CWW/K

Cooling only

### CWW/K/SP

Cooling only with tank and pump

### CWW/K/WP

Reversible Heat Pump

### CWW/K/WP/SP

Reversible Heat Pump with tank and pump

## FEATURES

- Self-supporting prepainted steel frame.
- Rotary/Scroll compressor with internal overheat protection and crankcase heater, if needed.
- Condenser AISI 316 stainless steel braze welded plates type, with pressostatic valve.
- Evaporator AISI 316 stainless steel braze welded plates type, complete with water differential pressure switch.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch (51÷151).
- Water circuit for SP version includes: insulated tank, circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|    |                                  |
|----|----------------------------------|
| BT | Low water temperature Kit        |
| PS | Single circulating pump          |
| FE | Antifreeze heater for evaporator |
| FA | Antifreeze heater for tank       |

### LOOSE ACCESSORIES

|    |   |
|----|---|
| CR | Remote control panel                                |
| IS | Modbus RTU protocol, RS485 serial interface         |
| PV | Pressure valve (for cooling only versions)          |
| VV | Pressure valve and solenoid valve (for WP versions) |
| AG | Rubber shock absorbers                              |

# CWW/K 15÷151



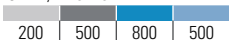
| MODEL                      |                                | 15      | 18       | 21   | 25   | 31   | 41     | 51   |            |  |
|----------------------------|--------------------------------|---------|----------|------|------|------|--------|------|------------|--|
| Cooling                    | Cooling capacity (1)           | kW      | 4.6      | 5.8  | 7.1  | 8.3  | 9.6    | 11.6 | 14.3       |  |
|                            | Absorbed power (1)             | kW      | 1.1      | 1.4  | 1.8  | 2.0  | 2.3    | 2.9  | 3.4        |  |
|                            | EER (1)                        |         | 4.18     | 4.14 | 3.94 | 4.15 | 4.17   | 4.00 | 4.21       |  |
| Cooling (EN14511)          | Cooling capacity (1)           | kW      | 4.6      | 5.7  | 7.0  | 8.2  | 9.5    | 11.5 | 14.2       |  |
|                            | Absorbed power (1)             | kW      | 1.2      | 1.5  | 2.0  | 2.2  | 2.5    | 3.2  | 3.7        |  |
|                            | EER (1)                        |         | 3.83     | 3.70 | 3.47 | 3.80 | 3.78   | 3.58 | 3.80       |  |
|                            | ESEER                          |         | 4.45     | 4.25 | 4.16 | 4.40 | 4.45   | 4.26 | 4.51       |  |
| Heating                    | Heating capacity (2)           | kW      | 5.9      | 7.2  | 8.8  | 10.4 | 12.5   | 14.9 | 17.5       |  |
|                            | Absorbed power (2)             | kW      | 1.4      | 1.7  | 2.2  | 2.5  | 3.0    | 3.5  | 4.3        |  |
|                            | COP (2)                        |         | 4.21     | 4.24 | 4.00 | 4.16 | 4.17   | 4.26 | 4.07       |  |
| Heating (EN14511)          | Heating capacity (2)           | kW      | 5.1      | 6.7  | 8.4  | 9.8  | 11.9   | 13.7 | 17.1       |  |
|                            | Absorbed power (2)             | kW      | 1.5      | 1.8  | 2.5  | 2.8  | 3.7    | 3.9  | 4.5        |  |
|                            | COP (2)                        |         | 3.38     | 3.64 | 3.31 | 3.51 | 3.25   | 3.56 | 3.81       |  |
|                            | SCOP (3)                       |         | 4.32     | 4.27 | 3.93 | 4.26 | 4.39   | 4.45 | 4.39       |  |
|                            | Energy Efficiency (3)          | %       | 165      | 163  | 149  | 162  | 168    | 170  | 168        |  |
|                            | Energy Class (3)               |         | A++      | A++  | A+   | A++  | A++    | A++  | A++        |  |
| Compressor                 | Type                           |         | Rotary   |      |      |      | Scroll |      |            |  |
|                            | Quantity                       | n°      | 1        | 1    | 1    | 1    | 1      | 1    | 1          |  |
| Evaporator                 | Water flow                     | l/s     | 0.22     | 0.28 | 0.34 | 0.40 | 0.46   | 0.55 | 0.68       |  |
|                            | Pressure drops                 | kPa     | 21       | 30   | 44   | 26   | 30     | 45   | 42         |  |
|                            | Water connections              | "G      | 1"       | 1"   | 1"   | 1"   | 1"     | 1"   | 1"         |  |
| Condenser                  | Water flow                     | l/s     | 0.07     | 0.09 | 0.11 | 0.12 | 0.14   | 0.17 | 0.21       |  |
|                            | Pressure drops                 | kPa     | 3        | 4    | 5    | 6    | 8      | 10   | 5          |  |
|                            | Water connections              | "G      | 1"       | 1"   | 1"   | 1"   | 1"     | 1"   | 1"         |  |
| Electrical characteristics | Power supply                   | V/Ph/Hz | 230/1/50 |      |      |      |        |      | 400/3+N/50 |  |
|                            | Max. running current           | A       | 8        | 10   | 13   | 14   | 16     | 22   | 9          |  |
|                            | Max. starting current          | A       | 37       | 43   | 62   | 62   | 75     | 86   | 50         |  |
| Unit with tank and pump    | Pump available static pressure | kPa     | 40       | 33   | 38   | 55   | 50     | 35   | 128        |  |
|                            | Tank water volume              | l       | 50       | 50   | 50   | 150  | 150    | 150  | 150        |  |
|                            | Water connections              | "G      | 1"       | 1"   | 1"   | 1"   | 1"     | 1"   | 1"         |  |
| Sound pressure             | STD/SP version (4)             | dB(A)   | 36       | 36   | 36   | 36   | 37     | 39   | 39         |  |
| Weights                    | Transport weight (5)           | Kg      | 77       | 78   | 80   | 84   | 87     | 90   | 93         |  |
|                            | Operating weight (5)           | Kg      | 78       | 79   | 81   | 85   | 88     | 91   | 95         |  |

| MODEL                      |                                | 61      | 71         | 81   | 91   | 101  | 131  | 151  |      |
|----------------------------|--------------------------------|---------|------------|------|------|------|------|------|------|
| Cooling                    | Cooling capacity (1)           | kW      | 17.1       | 20.0 | 23.0 | 27.7 | 33.6 | 39.7 | 49.2 |
|                            | Absorbed power (1)             | kW      | 4.1        | 4.8  | 5.5  | 6.8  | 7.9  | 9.3  | 11.5 |
|                            | EER (1)                        |         | 4.17       | 4.17 | 4.18 | 4.07 | 4.25 | 4.27 | 4.28 |
| Cooling (EN14511)          | Cooling capacity (1)           | kW      | 17.0       | 19.8 | 22.8 | 27.5 | 33.3 | 39.4 | 48.8 |
|                            | Absorbed power (1)             | kW      | 4.4        | 5.2  | 6.0  | 7.4  | 8.7  | 10.1 | 12.1 |
|                            | EER (1)                        |         | 3.86       | 3.79 | 3.79 | 3.72 | 3.83 | 3.92 | 4.03 |
|                            | ESEER                          |         | 4.39       | 4.48 | 4.42 | 4.40 | 4.64 | 4.65 | 4.67 |
| Heating                    | Heating capacity (2)           | kW      | 20.8       | 24.3 | 28.4 | 33.8 | 39.8 | 47.0 | 59.5 |
|                            | Absorbed power (2)             | kW      | 5.4        | 6.1  | 7.0  | 8.2  | 10.1 | 11.7 | 14.4 |
|                            | COP (2)                        |         | 3.85       | 3.98 | 4.06 | 4.12 | 3.94 | 4.02 | 4.13 |
| Heating (EN14511)          | Heating capacity (2)           | kW      | 19.7       | 22.5 | 26.3 | 31.8 | 37.9 | 44.5 | 56.4 |
|                            | Absorbed power (2)             | kW      | 5.6        | 6.3  | 7.2  | 8.9  | 10.8 | 12.4 | 15.2 |
|                            | COP (2)                        |         | 3.50       | 3.59 | 3.67 | 3.56 | 3.50 | 3.58 | 3.71 |
|                            | SCOP (3)                       |         | 3.99       | 4.08 | 4.08 | 4.34 | 3.96 | 4.20 | 4.30 |
|                            | Energy Efficiency (3)          | %       | 152        | 155  | 155  | 166  | 150  | 160  | 164  |
|                            | Energy Class (3)               |         | A++        | A++  | A++  | A++  | A+   | A++  | A++  |
| Compressor                 | Type                           |         | Scroll     |      |      |      |      |      |      |
|                            | Quantity                       | n°      | 1          | 1    | 1    | 1    | 1    | 1    | 1    |
| Evaporator                 | Water flow                     | l/s     | 0.82       | 0.96 | 1.10 | 1.32 | 1.61 | 1.90 | 2.35 |
|                            | Pressure drops                 | kPa     | 29         | 40   | 47   | 48   | 60   | 49   | 54   |
|                            | Water connections              | "G      | 1"         | 1"   | 1"   | 1"   | 1"   | 1"   | 1"   |
| Condenser                  | Water flow                     | l/s     | 0.25       | 0.30 | 0.34 | 0.41 | 0.50 | 0.58 | 0.73 |
|                            | Pressure drops                 | kPa     | 8          | 10   | 13   | 20   | 21   | 22   | 22   |
|                            | Water connections              | "G      | 1"         | 1"   | 1"   | 1"   | 1"   | 1"   | 1"   |
| Electrical characteristics | Power supply                   | V/Ph/Hz | 400/3+N/50 |      |      |      |      |      |      |
|                            | Max. running current           | A       | 11         | 14   | 15   | 18   | 20   | 23   | 29   |
|                            | Max. starting current          | A       | 71         | 74   | 74   | 142  | 142  | 147  | 197  |
| Unit with tank and pump    | Pump available static pressure | kPa     | 131        | 100  | 93   | 187  | 160  | 131  | 155  |
|                            | Tank water volume              | l       | 50         | 50   | 50   | 150  | 150  | 150  | 150  |
|                            | Water connections              | "G      | 1"         | 1"   | 1"   | 1"   | 1"   | 1"   | 1"   |
| Sound pressure             | STD/SP version (4)             | dB(A)   | 40         | 41   | 43   | 43   | 43   | 44   | 44   |
| Weights                    | Transport weight (5)           | Kg      | 96         | 98   | 100  | 190  | 198  | 204  | 218  |
|                            | Operating weight (5)           | Kg      | 98         | 100  | 102  | 193  | 201  | 207  | 221  |

| DIMENSIONS |        | 15 | 18   | 21   | 25   | 31   | 41   | 51   | 61   | 71   | 81   | 91   | 101  | 131  | 151  |
|------------|--------|----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD    | mm | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  |
|            | SP     | mm | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 1100 | 1100 | 1100 | 1100 |
| W          | STD/SP | mm | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  |
| H          | STD/SP | mm | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 |

## CLEARANCE AREA

CWW/K 15÷151



CWW/K/SP 91÷151



## NOTES

- Chilled water from 12 to 7 °C, water temperature at the condenser from 15 to 35 °C.
  - Heated water from 40 to 45 °C, water temperature at the evaporator from 15 to 10 °C.
  - Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
  - Unit without tank and pump.
- N.B. Weights of WP versions are specified on technical brochure.

Electrical board side



FROM 55 KW TO 195 KW.

# CWW/K 182-P÷604-P

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND PLATE EXCHANGERS.**



The CWW/K 182-P÷604-P liquid Chillers and Heat Pumps, with R410A refrigerant, are designed for medium-sized domestic or industrial systems which require medium power, space-saving units and quiet operation. This range is ideal for indoor installation and, equipped with a self-contained structure, it reduces the overall dimensions to a minimum while at the same time making installation and maintenance operations easier. These units are used to remove the heat developed during industrial processes or, combined with terminal units, for the air conditioning of the rooms. They can be supplied with Modbus RTU protocol through RS485 serial interface. Equipped with polyester powder plate painting structure, Scroll compressors and plate-type exchangers, these units have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency, even in the version with tank and pump; a series of accessories factory fitted or supplied separately, like desuperheater and total heat recovery, rounds off the variety of equipment in this product range.



## VERSION

### CWW/K

Cooling only

### CWW/K/WP

Reversible Heat Pump

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side in 182-P ÷ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P÷604-P models.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side in 182-P ÷ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P÷604-P models, complete with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|     |  |
|-----|--|
| IM  | Automatic circuit breakers                       |
| SL  | Unit silencing                                   |
| RFM | Cooling circuit shut-off valve on discharge line |
| RFL | Cooling circuit shut-off valve on liquid line    |
| BT  | Low water temperature Kit                        |
| DS  | Desuperheater                                    |
| RT  | Total heat recovery                              |
| FE  | Antifreeze heater for evaporator                 |
| FA  | Antifreeze heater for tank                       |
| SS  | Soft start                                       |
| IS  | Modbus RTU protocol, RS485 serial interface      |

### LOOSE ACCESSORIES

|     |   |
|-----|---|
| MN  | High and low pressure gauges              |
| CR  | Remote control panel                      |
| SPU | Inertial tank and single circulating pump |
| SPD | Inertial tank and double circulating pump |
| PV2 | 2-Way electronic pressostatic valve       |
| PV3 | 3-Way electronic pressostatic valve       |
| AG  | Rubber shock absorbers                    |
| AM  | Spring shock absorbers                    |

# CWW/K 182-P÷604-P

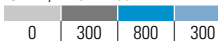


| MODEL                      |                                |         | 182-P    | 202-P  | 242-P  | 262-P  | 302-P  | 363-P  | 393-P  | 453-P  | 524-P  | 604-P  |   |
|----------------------------|--------------------------------|---------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| Cooling                    | Cooling capacity (1)           | kW      | 55.4     | 62.5   | 72.1   | 82.5   | 97.2   | 112    | 130    | 149    | 170    | 195    |   |
|                            | Absorbed power (1)             | kW      | 12.8     | 14.3   | 16.6   | 18.7   | 21.8   | 25.7   | 28.5   | 32.8   | 37.7   | 43.7   |   |
|                            | EER (1)                        |         | 4.33     | 4.37   | 4.34   | 4.41   | 4.46   | 4.36   | 4.56   | 4.54   | 4.51   | 4.46   |   |
| Cooling (EN14511)          | Cooling capacity (1)           | kW      | 55.0     | 62.1   | 71.6   | 82.0   | 96.7   | 111    | 129    | 148    | 169    | 194    |   |
|                            | Absorbed power (1)             | kW      | 13.6     | 15.3   | 17.6   | 19.9   | 22.9   | 27.3   | 29.9   | 34.3   | 39.3   | 45.6   |   |
|                            | EER (1)                        |         | 4.04     | 4.06   | 4.06   | 4.13   | 4.22   | 4.08   | 4.33   | 4.32   | 4.31   | 4.26   |   |
|                            | ESEER                          |         | 5.06     | 4.95   | 5.03   | 5.20   | 5.58   | 4.90   | 5.26   | 5.47   | 5.27   | 5.49   |   |
| Heating                    | Heating capacity (2)           | kW      | 72.5     | 80.1   | 93.3   | 105    | 121    | 140    | 159    | 180    | 205    | 237    |   |
|                            | Absorbed power (2)             | kW      | 18.0     | 20.0   | 23.2   | 25.7   | 28.8   | 33.2   | 38.4   | 42.7   | 51.7   | 56.7   |   |
|                            | COP                            |         | 4.03     | 4.01   | 4.02   | 4.09   | 4.20   | 4.22   | 4.14   | 4.22   | 3.97   | 4.18   |   |
| Heating (EN14511)          | Heating capacity (2)           | kW      | 66.5     | 73.5   | 86.6   | 98.7   | 110    | 126    | 143    | 170    | 184    | 223    |   |
|                            | Absorbed power (2)             | kW      | 18.7     | 20.7   | 24.2   | 27.6   | 29.8   | 34.6   | 39.5   | 44.9   | 50.8   | 58.2   |   |
|                            | COP (2)                        |         | 3.56     | 3.55   | 3.58   | 3.58   | 3.69   | 3.64   | 3.62   | 3.78   | 3.62   | 3.83   |   |
|                            | SCOP (3)                       |         | 4.26     | 4.15   | 4.47   | 4.62   | 4.65   | 4.61   | 4.90   | 4.71   | 4.63   | 4.67   |   |
|                            | Energy Efficiency (3)          | %       | 162      | 158    | 170    | 176    | 178    | 176    | 188    | 180    | 177    | 179    |   |
| Compressor                 | Quantity                       | n°      | 2        | 2      | 2      | 2      | 2      | 3      | 3      | 3      | 4      | 4      |   |
|                            | Refrigerant circuits           | n°      | 1        | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 2      | 2      |   |
|                            | Capacity steps                 | n°      |          |        |        |        | 2      |        |        | 3      |        |        | 4 |
| Evaporator                 | Water flow                     | l/s     | 2.65     | 2.99   | 3.44   | 3.94   | 4.64   | 5.38   | 6.23   | 7.14   | 8.12   | 9.33   |   |
|                            | Pressure drops                 | kPa     | 54       | 48     | 49     | 51     | 44     | 57     | 53     | 59     | 49     | 48     |   |
|                            | Water connections              | "G      | 1 1/4"   | 1 1/4" | 1 1/4" | 1 1/4" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" |   |
| Condenser                  | Water flow                     | l/s     | 3.26     | 3.67   | 4.24   | 4.84   | 5.69   | 6.60   | 7.59   | 8.71   | 9.92   | 11.41  |   |
|                            | Pressure drops                 | kPa     | 47       | 51     | 52     | 43     | 46     | 54     | 36     | 39     | 43     | 48     |   |
|                            | Water connections              | "G      | 1 1/4"   | 1 1/4" | 1 1/4" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" |   |
| Electrical characteristics | Power supply                   | V/Ph/Hz | 400/3/50 |        |        |        |        |        |        |        |        |        |   |
|                            | Max. running current           | A       | 33       | 39     | 43     | 49     | 60     | 64     | 73     | 90     | 98     | 120    |   |
|                            | Max. starting current          | A       | 128      | 137    | 139    | 164    | 204    | 161    | 189    | 234    | 213    | 264    |   |
| Unit with tank and pump    | Pump available static pressure | kPa     | 105      | 110    | 100    | 135    | 120    | 130    | 120    | 110    | 120    | 100    |   |
|                            | Tank water volume              | l       | 300      | 300    | 300    | 300    | 300    | 300    | 300    | 300    | 300    | 300    |   |
|                            | Water connections              | "G      | 2 1/2"   | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" |   |
| Sound pressure             | STD version (4)                | dB(A)   | 55       | 56     | 56     | 57     | 58     | 57     | 57     | 59     | 59     | 60     |   |
|                            | With SL accessory (4)          | dB(A)   | 50       | 51     | 51     | 52     | 53     | 52     | 52     | 54     | 54     | 55     |   |
| Weights                    | Transport weight (5)           | Kg      | 384      | 393    | 411    | 423    | 453    | 622    | 658    | 681    | 767    | 803    |   |
|                            | Operating weight (5)           | Kg      | 390      | 400    | 420    | 435    | 470    | 640    | 680    | 705    | 790    | 830    |   |

| DIMENSIONS     |   |    | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|----------------|---|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| UNIT           | L | mm | 1200  | 1200  | 1200  | 1200  | 1200  | 2285  | 2285  | 2285  | 2285  | 2285  |
|                | W | mm | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   |
|                | H | mm | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  |
| UNIT + SPU/SPD | L | mm | 2310  | 2310  | 2310  | 2310  | 2310  | 3395  | 3395  | 3395  | 3395  | 3395  |
|                | W | mm | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   |
|                | H | mm | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  |

## CLEARANCE AREA

CWW/K 182-P÷604-P



## NOTES

- Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
  - Heated water from 40 to 45 °C, water temperature at the evaporator from 15 to 10 °C.
  - Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
  - Unit without tank and pump.
- N.B.** Weights of WP version are specified on technical brochure.

Electrical board side

# CWW/K 182÷604

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



The CWW/K 182÷604 liquid Chillers and Heat Pumps, with R410A refrigerant, are designed for medium-sized domestic or industrial systems which require medium power, space-saving units and quiet operation. This range is ideal for indoor installation and, equipped with a self-contained structure, it reduces the overall dimensions to a minimum while at the same time making installation and maintenance operations easier. These units are used to remove the heat developed during industrial processes or, combined with terminal units, for the air conditioning of the rooms. They can be supplied with Modbus RTU protocol through RS485 serial interface. Equipped with Scroll compressors and shell and tube exchangers, these units have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency, even in the version with tank and pump; a series of accessories, factory fitted or supplied separately, like desuperheater and total heat recovery, rounds off the variety of equipment in this product range.



## VERSION

| CWW/K                       | CWW/K/WP                            |
|-----------------------------|-------------------------------------|
| Cooling only                | Reversible Heat Pump                |
| CWW/K/SSL                   | CWW/K/WP/SSL                        |
| Super silenced cooling only | Super silenced reversible Heat Pump |

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Shell and tube type condenser with one circuit on the refrigerant side and one on the water side in 182 ÷ 453 models; with two independent circuits on the refrigerant side and one on the water side in 524÷604 models.
- Shell and tube type evaporator with one circuit on the refrigerant side and one on the water side in 182 ÷ 453 models; with two independent circuits on the refrigerant side and one on the water side in 524÷604 models, complete with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|     |  |
|-----|--|
| IM  | Automatic circuit breakers                       |
| SL  | Unit silencement                                 |
| RFM | Cooling circuit shut-off valve on discharge line |
| RFL | Cooling circuit shut-off valve on liquid line    |
| BT  | Low water temperature Kit                        |
| HR  | Desuperheater                                    |
| HRT | Total heat recovery                              |
| SP  | Inertial tank                                    |
| SPU | Inertial tank and single circulating pump        |
| SPD | Inertial tank and double circulating pump        |

|    |   |
|----|---|
| FE | Antifreeze heater for evaporator            |
| FB | Antifreeze heater for evaporator and tank   |
| SS | Soft start                                  |
| IS | Modbus RTU protocol, RS485 serial interface |

### LOOSE ACCESSORIES

|     |                                     |
|-----|-------------------------------------|
| MN  | High and low pressure gauges        |
| CR  | Remote control panel                |
| PV2 | 2-Way electronic pressostatic valve |
| PV3 | 3-Way electronic pressostatic valve |
| AG  | Rubber shock absorbers              |
| AM  | Spring shock absorbers              |
| FL  | Flow switch                         |

# CWW/K 182÷604

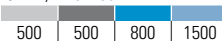


| MODEL                      |                                |         | 182      | 202    | 242    | 262    | 302    | 363    | 393    | 453    | 524    | 604    |
|----------------------------|--------------------------------|---------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)           | kW      | 57.0     | 62.6   | 70.9   | 82.9   | 98.3   | 111    | 129    | 151    | 172    | 196    |
|                            | Absorbed power (1)             | kW      | 13.2     | 14.3   | 16.4   | 18.9   | 22.0   | 25.7   | 28.2   | 33.1   | 38.2   | 44.1   |
|                            | EER (1)                        |         | 4.32     | 4.38   | 4.32   | 4.39   | 4.47   | 4.32   | 4.57   | 4.56   | 4.50   | 4.44   |
| Cooling (EN14511)          | Cooling capacity (1)           | kW      | 56.7     | 62.2   | 70.4   | 82.2   | 97.6   | 110    | 128    | 150    | 171    | 195    |
|                            | Absorbed power (1)             | kW      | 13.7     | 14.9   | 17.2   | 19.9   | 23.1   | 26.9   | 29.4   | 34.5   | 39.7   | 45.7   |
|                            | EER (1)                        |         | 4.14     | 4.17   | 4.10   | 4.14   | 4.23   | 4.10   | 4.36   | 4.36   | 4.31   | 4.27   |
| Heating                    | ESEER                          |         | 5.19     | 5.03   | 4.93   | 5.12   | 5.57   | 4.87   | 5.19   | 5.54   | 5.19   | 5.48   |
|                            | Heating capacity (2)           | kW      | 74.6     | 80.3   | 91.7   | 106    | 122    | 139    | 158    | 182    | 208    | 238    |
|                            | Absorbed power (2)             | kW      | 18.6     | 20.0   | 22.9   | 26.0   | 29.1   | 33.2   | 38.0   | 43.1   | 52.3   | 57.3   |
| Heating (EN14511)          | COP                            |         | 4.01     | 4.02   | 4.00   | 4.08   | 4.19   | 4.19   | 4.16   | 4.22   | 3.98   | 4.15   |
|                            | Heating capacity (2)           | kW      | 75.1     | 80.9   | 92.5   | 106    | 123    | 140    | 159    | 183    | 210    | 239    |
|                            | Absorbed power (2)             | kW      | 19.3     | 20.9   | 24.0   | 27.1   | 30.6   | 34.8   | 39.6   | 44.8   | 54.4   | 59.4   |
|                            | COP (2)                        |         | 3.89     | 3.88   | 3.86   | 3.92   | 4.03   | 4.03   | 4.02   | 4.08   | 3.85   | 4.03   |
|                            | SCOP (3)                       |         | 4.26     | 4.46   | 4.45   | 4.61   | 4.68   | 4.62   | 4.91   | 4.69   | 4.76   | 4.87   |
| Compressor                 | Energy Efficiency (3)          | %       | 162      | 170    | 170    | 176    | 179    | 176    | 188    | 179    | 182    | 187    |
|                            | Quantity                       | n°      | 2        | 2      | 2      | 2      | 2      | 3      | 3      | 3      | 4      | 4      |
|                            | Refrigerant circuits           | n°      | 1        | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 2      | 2      |
|                            | Capacity steps                 | n°      |          |        | 2      |        |        | 3      |        |        | 4      |        |
| Evaporator                 | Water flow                     | l/s     | 2.72     | 2.99   | 3.39   | 3.96   | 4.70   | 5.30   | 6.16   | 7.21   | 8.22   | 9.36   |
|                            | Pressure drops                 | kPa     | 32       | 42     | 55     | 74     | 62     | 55     | 57     | 49     | 63     | 49     |
|                            | Water connections              | "G      | 1 1/2"   | 1 1/2" | 2"     | 2"     | 2"     | 2 1/2" | 2 1/2" | 3"     | 3"     | 3"     |
| Condenser                  | Water flow                     | l/s     | 3.35     | 3.67   | 4.17   | 4.86   | 5.75   | 6.53   | 7.51   | 8.80   | 10.04  | 11.47  |
|                            | Pressure drops                 | kPa     | 15       | 17     | 18     | 20     | 27     | 33     | 23     | 30     | 20     | 27     |
|                            | Water connections              | "G      | 2 1/2"   | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" |
| Electrical characteristics | Power supply                   | V/Ph/Hz | 400/3/50 |        |        |        |        |        |        |        |        |        |
|                            | Max. running current           | A       | 33       | 39     | 43     | 49     | 60     | 64     | 73     | 90     | 98     | 120    |
|                            | Max. starting current          | A       | 128      | 137    | 139    | 164    | 204    | 161    | 189    | 234    | 213    | 264    |
| Unit with tank and pump    | Pump available static pressure | kPa     | 125      | 115    | 95     | 110    | 100    | 130    | 115    | 100    | 105    | 100    |
|                            | Tank water volume              | l       | 470      | 470    | 470    | 470    | 470    | 470    | 470    | 470    | 670    | 670    |
|                            | Water connections              | "G      | 2"       | 2"     | 2"     | 2"     | 2"     | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" |
| Sound pressure             | STD version (4)                | dB(A)   | 57       | 57     | 58     | 59     | 60     | 60     | 61     | 62     | 62     | 63     |
|                            | With SL accessory (4)          | dB(A)   | 54       | 54     | 55     | 56     | 57     | 57     | 58     | 59     | 59     | 60     |
|                            | SSL version (4)                | dB(A)   | 52       | 52     | 53     | 54     | 55     | 55     | 56     | 57     | 57     | 58     |
| Weights                    | Transport weight (5)           | Kg      | 465      | 470    | 478    | 488    | 504    | 590    | 606    | 657    | 840    | 856    |
|                            | Operating weight (5)           | Kg      | 495      | 500    | 510    | 520    | 540    | 630    | 650    | 710    | 900    | 920    |

| DIMENSIONS |         |    | 182  | 202  | 242  | 262  | 302  | 363  | 393  | 453  | 524  | 604  |
|------------|---------|----|------|------|------|------|------|------|------|------|------|------|
| L          | STD/SSL | mm | 2100 | 2100 | 2300 | 2100 | 2700 | 2400 | 2400 | 2400 | 2400 | 2600 |
| W          | STD/SSL | mm | 830  | 830  | 830  | 830  | 830  | 830  | 830  | 830  | 830  | 830  |
| H          | STD/SSL | mm | 1300 | 1300 | 1300 | 1300 | 1300 | 1300 | 1300 | 1300 | 1450 | 1450 |

## CLEARANCE AREA

CWW/K 182÷604



Electrical board side

## NOTES

1. Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
2. Heated water from 40 to 45 °C, water temperature at the evaporator from 15 to 10 °C.
3. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.
4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
5. Unit without tank and pump.
- N.B. Weights of SSL and WP versions are specified on technical brochure.



FROM 4,0 KW TO 42 KW.

# MEA/K 15÷151

**CONDENSERLESS LIQUID CHILLERS AND HEAT PUMPS WITH ROTARY/ SCROLL COMPRESSOR AND PLATE EXCHANGER.**



The liquid Chillers and Heat Pumps for remote condensation of the MEA/K 15÷151, with R410A refrigerant, series are designed for domestic or service sector systems which require medium power, space-saving units and quiet operation. Combined with remote condenser, these units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

Equipped with prepainted plate structure, Rotary/Scroll compressor and plate-type exchanger, these units have cooling and hydraulic circuits designed for quick installation and high energy efficiency, even in the version with tank and pump.

A wide range of accessories, factory fitted or supplied separately, completes the outstanding versatility and functionality of the series.



## VERSION

### MEA/K

Cooling only

### MEA/K/SP

Cooling only with tank and pump

### MEA/K/WP

Reversible Heat Pump

### MEA/K/WP/SP

Reversible Heat Pump with tank and pump

## FEATURES

- Self-supporting prepainted steel frame.
- Rotary/Scroll compressor with internal overheat protection and crankcase heater, if needed.
- Evaporator AISI 316 stainless steel braze welded plates type, complete with water differential pressure switch.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch (51÷151).
- Water circuit for SP version includes: insulated tank, circulator or pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|    |                                  |
|----|----------------------------------|
| BT | Low water temperature Kit        |
| PS | Single circulating pump          |
| RL | Liquid receiver                  |
| FE | Antifreeze heater for evaporator |
| FA | Antifreeze heater for tank       |

### LOOSE ACCESSORIES

|    |   |
|----|---|
| CR | Remote control panel                        |
| IS | Modbus RTU protocol, RS485 serial interface |
| AG | Rubber shock absorbers                      |



# MEA/K 15÷151

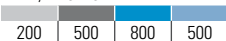
| MODEL                      |                                |         | 15       | 18   | 21   | 25   | 31     | 41   | 51         |  |
|----------------------------|--------------------------------|---------|----------|------|------|------|--------|------|------------|--|
| Cooling                    | Cooling capacity (1)           | kW      | 4.0      | 5.1  | 6.2  | 7.3  | 8.5    | 10.1 | 12.1       |  |
|                            | Absorbed power (1)             | kW      | 1.4      | 1.8  | 2.1  | 3.0  | 3.3    | 3.7  | 3.3        |  |
| Heating                    | Heating capacity (2)           | kW      | 5.1      | 6.4  | 8.2  | 9.4  | 10.7   | 13.2 | 15.5       |  |
|                            | Absorbed power (2)             | kW      | 1.5      | 1.9  | 2.4  | 2.7  | 3.0    | 4.2  | 4.5        |  |
| Compressor                 | Type                           |         | Rotary   |      |      |      | Scroll |      |            |  |
|                            | Quantity                       | n°      | 1        | 1    | 1    | 1    | 1      | 1    | 1          |  |
| Evaporator                 | Water flow                     | l/s     | 0.19     | 0.24 | 0.30 | 0.35 | 0.41   | 0.48 | 0.58       |  |
|                            | Pressure drops                 | kPa     | 15       | 15   | 20   | 18   | 20     | 25   | 35         |  |
|                            | Water connections              | "G      | 1"       | 1"   | 1"   | 1"   | 1"     | 1"   | 1"         |  |
| Connections                | Delivery line                  | Ø mm    | 12       | 12   | 12   | 12   | 12     | 12   | 16         |  |
|                            | Liquid line                    | Ø mm    | 10       | 10   | 10   | 10   | 10     | 10   | 12         |  |
| Electrical characteristics | Power supply                   | V/Ph/Hz | 230/1/50 |      |      |      |        |      | 400/3+N/50 |  |
|                            | Max. running current           | A       | 8        | 10   | 13   | 14   | 16     | 22   | 9          |  |
|                            | Max. starting current          | A       | 37       | 43   | 62   | 62   | 75     | 86   | 50         |  |
| Unit with tank and pump    | Pump available static pressure | kPa     | 50       | 45   | 75   | 70   | 70     | 60   | 180        |  |
|                            | Tank water volume              | l       | 50       | 50   | 50   | 50   | 50     | 50   | 50         |  |
|                            | Water connections              | "G      | 1"       | 1"   | 1"   | 1"   | 1"     | 1"   | 1"         |  |
| Sound pressure             | STD version (3)                | dB(A)   | 36       | 36   | 36   | 36   | 37     | 39   | 39         |  |
|                            | Transport weight (4)           | Kg      | 74       | 75   | 77   | 81   | 84     | 87   | 86         |  |
| Weights                    | Operating weight (4)           | Kg      | 75       | 76   | 78   | 82   | 85     | 88   | 88         |  |

| MODEL                      |                                |         | 61         | 71   | 81   | 91   | 101  | 131  | 151  |
|----------------------------|--------------------------------|---------|------------|------|------|------|------|------|------|
| Cooling                    | Cooling capacity (1)           | kW      | 14.5       | 17.0 | 20.0 | 24.1 | 28.8 | 33.9 | 41.5 |
|                            | Absorbed power (1)             | kW      | 5.2        | 6.0  | 7.1  | 7.8  | 9.3  | 10.9 | 13.3 |
| Heating                    | Heating capacity (2)           | kW      | 18.5       | 22.0 | 25.9 | 30.4 | 36.4 | 43.0 | 53.2 |
|                            | Absorbed power (2)             | kW      | 5.5        | 6.5  | 7.7  | 8.3  | 10.1 | 11.7 | 14.2 |
| Compressor                 | Type                           |         | Scroll     |      |      |      |      |      |      |
|                            | Quantity                       | n°      | 1          | 1    | 1    | 1    | 1    | 1    | 1    |
| Evaporator                 | Water flow                     | l/s     | 0.69       | 0.81 | 0.96 | 1.15 | 1.38 | 1.62 | 1.98 |
|                            | Pressure drops                 | kPa     | 28         | 35   | 39   | 40   | 45   | 40   | 40   |
|                            | Water connections              | "G      | 1"         | 1"   | 1"   | 1"   | 1"   | 1"   | 1"   |
| Connections                | Delivery line                  | Ø mm    | 16         | 16   | 16   | 22   | 22   | 22   | 22   |
|                            | Liquid line                    | Ø mm    | 12         | 12   | 12   | 12   | 12   | 12   | 16   |
| Electrical characteristics | Power supply                   | V/Ph/Hz | 400/3+N/50 |      |      |      |      |      |      |
|                            | Max. running current           | A       | 11         | 14   | 15   | 18   | 20   | 23   | 29   |
|                            | Max. starting current          | A       | 71         | 74   | 74   | 142  | 142  | 147  | 197  |
| Unit with tank and pump    | Pump available static pressure | kPa     | 170        | 140  | 110  | 215  | 130  | 155  | 235  |
|                            | Tank water volume              | l       | 50         | 50   | 50   | 150  | 150  | 150  | 150  |
|                            | Water connections              | "G      | 1"         | 1"   | 1"   | 1"   | 1"   | 1"   | 1"   |
| Sound pressure             | STD version (3)                | dB(A)   | 40         | 41   | 43   | 43   | 43   | 44   | 44   |
|                            | Transport weight (4)           | Kg      | 89         | 91   | 93   | 183  | 189  | 195  | 206  |
| Weights                    | Operating weight (4)           | Kg      | 91         | 93   | 95   | 186  | 192  | 198  | 209  |

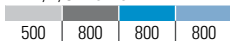
| DIMENSIONS |        | 15 | 18   | 21   | 25   | 31   | 41   | 51   | 61   | 71   | 81   | 91   | 101  | 131  | 151  |
|------------|--------|----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD    | mm | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  |
|            | SP     | mm | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 1100 | 1100 | 1100 |
| W          | STD/SP | mm | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  | 550  |
| H          | STD/SP | mm | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 |

## CLEARANCE AREA

MEA/K 15÷151



MEA/K/SP 15÷151



## NOTES

1. Chilled water from 12 to 7 °C, condensing temperature 50 °C.
  2. Heated water from 40 to 45 °C, evaporating temperature 0 °C.
  3. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
  4. Unit without tank and pump.
- N.B. Weights of WP versions are specified on technical brochure.

FROM 51 KW TO 176 KW.

# MEA/K 182-P÷604-P

**CONDENSERLESS LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND PLATE EXCHANGER.**



MEA/K 182-P÷604-P series liquid Chillers and Heat Pumps for remote condensation, with R410A refrigerant, are designed to meet the needs of residential or industrial-type systems requiring high power together with space-saving and quiet operation. These units are ideal for indoor installation and, equipped with a self-contained structure, minimise overall dimensions while also facilitating installation and maintenance operations. Equipped with polyester plate powder painting structure, Scroll compressors and plate-type exchanger they have refrigerant and hydraulic circuits, even in the version with tank, with pump or tank and pump, complete with everything necessary for quick installation operations and for high energy efficiencies. A number of accessories, factory fitted or supplied separately, such as the desuperheater or the total heat recuperator, enhance and complete the equipment of this range.



## VERSION

### MEA/K

Cooling only

### MEA/K/WP

Reversible Heat Pump

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side in 182-P ÷ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P÷604-P models, complete with water differential pressure switch.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|     |  |
|-----|--|
| IM  | Automatic circuit breakers                       |
| SL  | Unit silencing                                   |
| RFM | Cooling circuit shut-off valve on discharge line |
| RFL | Cooling circuit shut-off valve on liquid line    |
| BT  | Low water temperature Kit                        |
| DS  | Desuperheater                                    |
| RT  | Total heat recovery                              |
| FE  | Antifreeze heater for evaporator                 |
| SS  | Soft start                                       |
| IS  | Modbus RTU protocol, RS485 serial interface      |

### LOOSE ACCESSORIES

|     |   |
|-----|---|
| MN  | High and low pressure gauges              |
| CR  | Remote control panel                      |
| SPU | Inertial tank and single circulating pump |
| SPD | Inertial tank and double circulating pump |
| AG  | Rubber shock absorbers                    |
| AM  | Spring shock absorbers                    |

# MEA/K 182-P÷604-P



| MODEL                      |                                |         | 182-P    | 202-P  | 242-P  | 262-P  | 302-P  | 363-P  | 393-P  | 453-P  | 524-P  | 604-P  |  |
|----------------------------|--------------------------------|---------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| Cooling                    | Cooling capacity (1)           | kW      | 50.8     | 57.1   | 64.3   | 73.6   | 87.1   | 98.8   | 114    | 134    | 149    | 176    |  |
|                            | Absorbed power (1)             | kW      | 15.4     | 17.3   | 19.0   | 21.6   | 25.8   | 29.4   | 32.9   | 38.7   | 43.5   | 51.5   |  |
| Heating                    | Heating capacity (2)           | kW      | 59.5     | 65.8   | 74.3   | 84.7   | 96.5   | 107    | 122    | 148    | 157    | 194    |  |
|                            | Absorbed power (2)             | kW      | 18.0     | 20.0   | 22.3   | 24.7   | 27.8   | 32.8   | 37.2   | 41.1   | 50.8   | 56.5   |  |
| Compressor                 | Quantity                       | n°      | 2        | 2      | 2      | 2      | 2      | 3      | 3      | 3      | 4      | 4      |  |
|                            | Refrigerant circuits           | n°      | 1        | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 2      | 2      |  |
|                            | Capacity steps                 | n°      | 2        |        |        |        | 3      |        |        |        | 4      |        |  |
| Evaporator                 | Water flow                     | l/s     | 2.43     | 2.73   | 3.07   | 3.52   | 4.16   | 4.72   | 5.42   | 6.41   | 7.10   | 8.41   |  |
|                            | Pressure drops                 | kPa     | 47       | 42     | 41     | 42     | 40     | 48     | 44     | 51     | 41     | 40     |  |
|                            | Water connections              | "G      | 1 1/4"   | 1 1/4" | 1 1/4" | 1 1/4" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" |  |
| Connections                | Delivery line                  | Ø mm    | 28       | 28     | 28     | 28     | 28     | 28     | 28     | 28     | 2 x 28 | 2 x 28 |  |
|                            | Liquid line                    | Ø mm    | 22       | 22     | 22     | 22     | 22     | 22     | 22     | 22     | 2 x 22 | 2 x 22 |  |
| Electrical characteristics | Power supply                   | V/Ph/Hz | 400/3/50 |        |        |        |        |        |        |        |        |        |  |
|                            | Max. running current           | A       | 33       | 39     | 43     | 49     | 60     | 64     | 73     | 90     | 98     | 120    |  |
|                            | Max. starting current          | A       | 128      | 137    | 139    | 164    | 204    | 161    | 189    | 234    | 213    | 264    |  |
| Version with tank and pump | Pump available static pressure | kPa     | 105      | 110    | 100    | 135    | 120    | 130    | 120    | 110    | 120    | 100    |  |
|                            | Tank water volume              | l       | 300      | 300    | 300    | 300    | 300    | 300    | 300    | 300    | 300    | 300    |  |
|                            | Water connections              | "G      | 2 1/2"   | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" | 2 1/2" |  |
| Sound pressure             | STD version (3)                | dB(A)   | 55       | 56     | 56     | 57     | 58     | 57     | 57     | 59     | 59     | 60     |  |
|                            | With SL accessory (3)          | dB(A)   | 50       | 51     | 51     | 52     | 53     | 52     | 52     | 54     | 54     | 55     |  |
| Weights                    | Transport weight (4)           | Kg      | 347      | 357    | 376    | 386    | 397    | 562    | 581    | 595    | 669    | 708    |  |
|                            | Operating weight (4)           | Kg      | 350      | 360    | 380    | 390    | 405    | 570    | 590    | 605    | 680    | 720    |  |

| DIMENSIONS     |   |    | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|----------------|---|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| UNIT           | L | mm | 1200  | 1200  | 1200  | 1200  | 1200  | 2285  | 2285  | 2285  | 2285  | 2285  |
|                | W | mm | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   |
|                | H | mm | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  |
| UNIT + SPU/SPD | L | mm | 2310  | 2310  | 2310  | 2310  | 2310  | 3395  | 3395  | 3395  | 3395  | 3395  |
|                | W | mm | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   | 680   |
|                | H | mm | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  | 1520  |

## CLEARANCE AREA

MEA/K 182-P÷604-P

0 | 300 | 800 | 300



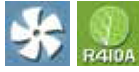
## NOTES

1. Chilled water from 12 to 7 °C, condensing temperature 50 °C.
  2. Heated water from 40 to 45 °C, evaporating temperature 0 °C.
  3. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
  4. Unit without tank and pump.
- N.B.** Weights of WP version are specified on technical brochure.

Electrical board side

# RCA/K 411÷8222

REMOTE AIRCOOLED CONDENSERS WITH AXIAL FANS.



The Remote aircooled Condensers with axial fans of the RCA/K series are designed to be combined with evaporating units with R410A refrigerant (MEA/K).

These units, available in three configurations depending on the degree of noiselessness required: Standard, Silenced (SL) and Super Silenced (SSL), are equipped with latest generation axial fans, with motor fan shrouds having a large radius of curvature to eliminate all the air flow turbulence and with larger plenum to uniform the air distribution on the cooling coil.

The units can be installed with either horizontal or vertical air delivery, as needed.

## VERSION

**RCA/K**

Base unit

## FEATURES

- Frame in oven painted with a polyurethane resin and galvanised steel casework.
- The cowlings of the motorfans are made with a wide bending radius to eliminate any turbulence in the airflow.
- Heat exchanger is made with corrugated tubes with a greater heat exchange surface, fins cut with a special louver configuration to give the best external coefficient of heat exchange.

## COMBINATIONS

|       |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |
|-------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MEA/K | 15   | 18   | 21   | 25   | 31   | 41   | 51   | 61   | 71   | 81   | MEA/K | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
| RCA/K | 4111 | 4111 | 4111 | 4111 | 4111 | 4112 | 5111 | 5111 | 5112 | 5113 | RCA/K | 6114  | 6121  | 6122  | 6123  | 6124  | 6125  | 6131  | 6132  | 8221  | 8222  |
| MEA/K | 91   | 101  | 131  | 151  |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |
| RCA/K | 6111 | 6112 | 6113 | 5121 |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

- SD Wiring integrated in branch circuit box
- FR Fan speed controller

### LOOSE ACCESSORIES

- SVV Supports for vertical air flow versions

## RCA/K 4111÷8222

| MODEL                      |                  |         | 4111     | 4112 | 5111 | 5112 | 5113 | 5121 | 6111 | 6112 | 6113 | 6114 |
|----------------------------|------------------|---------|----------|------|------|------|------|------|------|------|------|------|
| Fan                        | Quantity         | n°      | 1        | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| Connections                | In               | ∅ mm    | 22       | 28   | 22   | 28   | 28   | 35   | 28   | 35   | 35   | 35   |
|                            | Out              | ∅ mm    | 18       | 18   | 18   | 18   | 18   | 28   | 22   | 28   | 28   | 28   |
| Electrical characteristics | Power supply     | V/Ph/Hz | 230/1/50 |      |      |      |      |      |      |      |      |      |
|                            | Absorbed power   | kW      | 0.24     | 0.24 | 0.30 | 0.75 | 0.75 | 1.50 | 0.67 | 0.67 | 0.67 | 3.20 |
|                            | Absorbed current | A       | 1.10     | 1.10 | 1.30 | 3.30 | 3.30 | 6.60 | 3.10 | 3.10 | 3.10 | 4.90 |
| Sound pressure             | STD version (1)  | dB(A)   | 46       | 46   | 38   | 47   | 47   | 50   | 47   | 47   | 47   | 58   |
| Weights                    | Transport weight | Kg      | 30       | 30   | 48   | 52   | 55   | 104  | 79   | 87   | 95   | 95   |
|                            | Operating weight | Kg      | 31       | 32   | 49   | 54   | 57   | 109  | 82   | 92   | 101  | 101  |

| MODEL                      |                  |         | 6121     | 6122 | 6123 | 6124 | 6125 | 6131 | 6132 | 8221 | 8222 |  |
|----------------------------|------------------|---------|----------|------|------|------|------|------|------|------|------|--|
| Fan                        | Quantity         | n°      | 2        | 2    | 2    | 2    | 2    | 3    | 3    | 4    | 4    |  |
| Connections                | In               | ∅ mm    | 35       | 42   | 35   | 42   | 42   | 42   | 54   | 2x35 | 2x35 |  |
|                            | Out              | ∅ mm    | 28       | 35   | 28   | 35   | 35   | 35   | 35   | 2x28 | 2x28 |  |
| Electrical characteristics | Power supply     | V/Ph/Hz | 400/3/50 |      |      |      |      |      |      |      |      |  |
|                            | Absorbed power   | kW      | 0.99     | 0.99 | 3.20 | 3.20 | 3.20 | 3.20 | 3.20 | 1.85 | 1.85 |  |
|                            | Absorbed current | A       | 1.60     | 1.60 | 4.90 | 4.90 | 4.90 | 4.90 | 4.90 | 2.85 | 2.85 |  |
| Sound pressure             | STD version (1)  | dB(A)   | 49       | 49   | 61   | 61   | 61   | 63   | 63   | 52   | 54   |  |
| Weights                    | Transport weight | Kg      | 150      | 166  | 150  | 166  | 183  | 221  | 236  | 462  | 462  |  |
|                            | Operating weight | Kg      | 156      | 175  | 156  | 175  | 195  | 230  | 250  | 480  | 476  |  |

| DIMENSIONS |     |    | 4111 | 4112 | 5111 | 5112 | 5113 | 5121 | 6111 | 6112 | 6113 | 6114 | 6121 | 6122 | 6123 | 6124 | 6125 | 6131 | 6132 | 8221 | 8222 |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD | mm | 1130 | 1130 | 1130 | 1130 | 1130 | 1910 | 1490 | 1490 | 1490 | 1490 | 2630 | 2630 | 2630 | 2630 | 2630 | 3770 | 3770 | 3230 | 3230 |
| W          | STD | mm | 900  | 900  | 900  | 900  | 900  | 900  | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 2400 | 2400 |
| H          | STD | mm | 980  | 980  | 980  | 980  | 980  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 1565 | 1565 |

### CLEARANCE AREA

RCA/K 4111-8222



### NOTES

1. Sound pressure level measured in free field conditions at 10 m from the unit. According to ISO 3744.
- N.B. Combinations are made at condensing temperature 50 °C, ambient air temperature 35 °C.
- N.B. Clearance areas are specified on installation, use and maintenance manual.

# RCA/K/SL 411÷8222

SILENCED REMOTE AIRCOOLED CONDENSERS WITH AXIAL FANS.



The Remote aircooled Condensers with axial fans of the RCA/K/SL series are designed to be combined with evaporating units with R410A refrigerant (MEA/K).

These units, available in three configurations depending on the degree of noiselessness required: Standard, Silenced (SL) and Super Silenced (SSL), are equipped with latest generation axial fans, with motor fan shrouds having a large radius of curvature to eliminate all the air flow turbulence and with larger plenum to uniform the air distribution on the cooling coil.

The units can be installed with either horizontal or vertical air delivery, as needed.

## VERSION

**RCA/K/SL**

Silenced unit

## FEATURES

- Frame in oven painted with a polyurethane resin and galvanised steel casework.
- The cowlings of the motorfans are made with a wide bending radius to eliminate any turbulence in the airflow.
- Heat exchanger is made with corrugated tubes with a greater heat exchange surface, fins cut with a special louver configuration to give the best external coefficient of heat exchange.

## COMBINATIONS

| MEA/K    | 15   | 18   | 21   | 25   | 31   | 41   | 51   | 61   | 71   | 81   | MEA/K    | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |  |
|----------|------|------|------|------|------|------|------|------|------|------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| RCA/K/SL | 4111 | 4111 | 4111 | 4112 | 4113 | 5111 | 5112 | 5113 | 5121 | 5121 | RCA/K/SL | 6121  | 6122  | 6123  | 6124  | 6131  | 6132  | 6133  | 6134  | 8221  | 8222  |  |
| MEA/K    | 91   | 101  | 131  | 151  |      |      |      |      |      |      |          |       |       |       |       |       |       |       |       |       |       |  |
| RCA/K/SL | 5121 | 6111 | 6112 | 6120 |      |      |      |      |      |      |          |       |       |       |       |       |       |       |       |       |       |  |

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

- SD Wiring integrated in branch circuit box
- FR Fan speed controller

### LOOSE ACCESSORIES

- SVV Supports for vertical air flow versions

# RCA/K/SL 4111÷8222

| MODEL                      |                  |         | 4111     | 4112 | 4113 | 5111 | 5112 | 5113 | 5121 | 6111 | 6112 | 6120 |
|----------------------------|------------------|---------|----------|------|------|------|------|------|------|------|------|------|
| Fan                        | Quantity         | n°      | 1        | 1    | 1    | 1    | 1    | 1    | 2    | 1    | 1    | 2    |
| Connections                | In               | ∅ mm    | 22       | 22   | 22   | 22   | 22   | 28   | 28   | 35   | 35   | 35   |
|                            | Out              | ∅ mm    | 18       | 18   | 18   | 18   | 18   | 18   | 22   | 28   | 28   | 28   |
| Electrical characteristics | Power supply     | V/Ph/Hz | 230/1/50 |      |      |      |      |      |      |      |      |      |
|                            | Absorbed power   | kW      | 0.13     | 0.13 | 0.13 | 0.24 | 0.30 | 0.30 | 0.60 | 0.67 | 0.67 | 1.34 |
|                            | Absorbed current | A       | 0.58     | 0.58 | 0.58 | 1.10 | 1.30 | 1.30 | 2.60 | 3.10 | 3.10 | 6.20 |
| Sound pressure             | SL version (1)   | dB(A)   | 34       | 34   | 34   | 41   | 41   | 41   | 44   | 47   | 47   | 49   |
| Weights                    | Transport weight | Kg      | 30       | 30   | 30   | 48   | 48   | 52   | 89   | 87   | 95   | 150  |
|                            | Operating weight | Kg      | 31       | 32   | 33   | 49   | 49   | 54   | 95   | 90   | 100  | 156  |

| MODEL                      |                  |         | 6121     | 6122 | 6123 | 6124 | 6131 | 6132 | 6133 | 6134 | 8221 | 8222 |      |
|----------------------------|------------------|---------|----------|------|------|------|------|------|------|------|------|------|------|
| Fan                        | Quantity         | n°      | 2        | 2    | 2    | 2    | 3    | 3    | 3    | 3    | 2    | 2    |      |
| Connections                | In               | ∅ mm    | 35       | 42   | 35   | 42   | 42   | 42   | 54   | 54   | 2x35 | 2x42 |      |
|                            | Out              | ∅ mm    | 28       | 35   | 28   | 35   | 35   | 35   | 35   | 35   | 2x28 | 2x35 |      |
| Electrical characteristics | Power supply     | V/Ph/Hz | 400/3/50 |      |      |      |      |      |      |      |      |      |      |
|                            | Absorbed power   | kW      | 0.99     | 0.99 | 3.20 | 3.20 | 0.99 | 3.20 | 3.20 | 3.20 | 3.20 | 1.85 | 1.85 |
|                            | Absorbed current | A       | 1.60     | 1.60 | 4.90 | 4.90 | 1.60 | 4.90 | 4.90 | 4.90 | 4.90 | 2.85 | 2.85 |
| Sound pressure             | SL version (1)   | dB(A)   | 43       | 43   | 55   | 55   | 45   | 57   | 57   | 57   | 47   | 54   |      |
| Weights                    | Transport weight | Kg      | 150      | 166  | 150  | 166  | 221  | 221  | 236  | 270  | 462  | 502  |      |
|                            | Operating weight | Kg      | 156      | 175  | 156  | 175  | 230  | 230  | 250  | 288  | 476  | 524  |      |

| DIMENSIONS |    |    | 4111 | 4112 | 4113 | 5111 | 5112 | 5113 | 5121 | 6111 | 6112 | 6120 | 6121 | 6122 | 6123 | 6124 | 6131 | 6132 | 6133 | 6134 | 8221 | 8222 |
|------------|----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | SL | mm | 1130 | 1130 | 1130 | 1130 | 1130 | 1130 | 1910 | 1490 | 1490 | 2630 | 2630 | 2630 | 2630 | 2630 | 3770 | 3770 | 3770 | 3770 | 3230 | 3230 |
| W          | SL | mm | 900  | 900  | 900  | 900  | 900  | 900  | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 2400 | 2400 |
| H          | SL | mm | 980  | 980  | 980  | 980  | 980  | 980  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 1565 | 1565 |

## CLEARANCE AREA

RCA/K/SL 4111÷8222

## NOTES

1. Sound pressure level measured in free field conditions at 10 m from the unit. According to ISO 3744.
- N.B. Combinations are made at condensing temperature 50 °C, ambient air temperature 35 °C.
- N.B. Clearance areas are specified on installation, use and maintenance manual.



Electrical board side



# RCA/K/SSL 511÷8222

**SUPER SILENCED REMOTE AIRCOOLED CONDENSERS WITH AXIAL FANS.**



The Remote aircooled Condensers with axial fans of the RCA/K/SSL series are designed to be combined with evaporating units with R410A refrigerant (ME/K).

These units, available in three configurations depending on the degree of noiselessness required: Standard, Silenced (SL) and Super Silenced (SSL), are equipped with latest generation axial fans, with motor fan shrouds having a large radius of curvature to eliminate all the air flow turbulence and with larger plenum to uniform the air distribution on the cooling coil.

The units can be installed with either horizontal or vertical air delivery, as needed.

## VERSION

**RCA/K/SSL**

Super silenced unit

## FEATURES

- Frame in oven painted with a polyurethane resin and galvanised steel casework.
- The cowlings of the motorfans are made with a wide bending radius to eliminate any turbulence in the airflow.
- Heat exchanger is made with corrugated tubes with a greater heat exchange surface, fins cut with a special louver configuration to give the best external coefficient of heat exchange.

## COMBINATIONS

|           |      |      |      |      |      |      |      |      |      |      |           |       |       |       |       |       |       |       |       |       |       |  |
|-----------|------|------|------|------|------|------|------|------|------|------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| ME/K      | 15   | 18   | 21   | 25   | 31   | 41   | 51   | 61   | 71   | 81   | ME/K      | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |  |
| RCA/K/SSL | 5111 | 5111 | 5111 | 5111 | 5111 | 5112 | 5112 | 6111 | 6111 | 6111 | RCA/K/SSL | 6124  | 6131  | 6132  | 6133  | 6141  | 8121  | 8131  | 8132  | 8221  | 8222  |  |
| ME/K      | 91   | 101  | 131  | 151  |      |      |      |      |      |      |           |       |       |       |       |       |       |       |       |       |       |  |
| RCA/K/SSL | 6112 | 6121 | 6121 | 6121 |      |      |      |      |      |      |           |       |       |       |       |       |       |       |       |       |       |  |

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

- SD Wiring integrated in branch circuit box
- FR Fan speed controller

### LOOSE ACCESSORIES

- SVV Supports for vertical air flow versions

# RCA/K/SSL 5111÷8222

| MODEL                      |                  |         | 5111     | 5112 | 6111 | 6112 | 6121 | 6124     | 6131 | 6132 |  |
|----------------------------|------------------|---------|----------|------|------|------|------|----------|------|------|--|
| Fan                        | Quantity         | n°      | 1        | 1    | 1    | 1    | 2    | 2        | 3    | 3    |  |
| Connections                | In               | Ø mm    | 22       | 28   | 28   | 35   | 35   | 42       | 42   | 42   |  |
|                            | Out              | Ø mm    | 18       | 18   | 22   | 28   | 28   | 35       | 35   | 35   |  |
| Electrical characteristics | Power supply     | V/Ph/Hz | 230/1/50 |      |      |      |      | 400/3/50 |      |      |  |
|                            | Absorbed power   | kW      | 0.13     | 0.14 | 0.33 | 0.33 | 0.66 | 0.99     | 0.99 | 0.99 |  |
|                            | Absorbed current | A       | 0.59     | 0.68 | 1.60 | 1.60 | 3.20 | 1.60     | 1.60 | 1.60 |  |
| Sound pressure             | SSL version (1)  | dB(A)   | 34       | 34   | 39   | 39   | 41   | 42       | 36   | 44   |  |
| Weights                    | Transport weight | Kg      | 48       | 52   | 79   | 95   | 150  | 166      | 221  | 221  |  |
|                            | Operating weight | Kg      | 49       | 54   | 82   | 98   | 156  | 175      | 230  | 230  |  |

| MODEL                      |                  |         | 6133     | 6141 | 8121 | 8131 | 8132 | 8221 | 8222 |  |
|----------------------------|------------------|---------|----------|------|------|------|------|------|------|--|
| Fan                        | Quantity         | n°      | 3        | 4    | 2    | 3    | 3    | 4    | 4    |  |
| Connections                | In               | Ø mm    | 54       | 35   | 42   | 42   | 54   | 2x35 | 2x35 |  |
|                            | Out              | Ø mm    | 35       | 28   | 35   | 35   | 42   | 2x28 | 2x28 |  |
| Electrical characteristics | Power supply     | V/Ph/Hz | 400/3/50 |      |      |      |      |      |      |  |
|                            | Absorbed power   | kW      | 0.99     | 0.99 | 0.84 | 0.84 | 0.84 | 0.84 | 1.85 |  |
|                            | Absorbed current | A       | 1.60     | 1.60 | 1.40 | 1.40 | 1.40 | 1.40 | 2.85 |  |
| Sound pressure             | SSL version (1)  | dB(A)   | 44       | 45   | 43   | 45   | 45   | 45   | 54   |  |
| Weights                    | Transport weight | Kg      | 236      | 292  | 324  | 413  | 447  | 462  | 462  |  |
|                            | Operating weight | Kg      | 250      | 304  | 340  | 425  | 465  | 476  | 484  |  |

| DIMENSIONS |     |    | 5111 | 5112 | 6111 | 6112 | 6121 | 6124 | 6131 | 6132 | 6133 | 6141 | 8121 | 8131 | 8132 | 8221 | 8222 |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | SSL | mm | 1130 | 1130 | 1490 | 1490 | 2630 | 2630 | 3770 | 3770 | 3770 | 4910 | 3230 | 4580 | 4580 | 3230 | 3230 |
| W          | SSL | mm | 900  | 900  | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1260 | 1380 | 1380 | 1380 | 2400 | 2400 |
| H          | SSL | mm | 980  | 980  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 990  | 1565 | 1565 | 1565 | 1565 | 1565 |

## CLEARANCE AREA

RCA/K/SSL 5111-8222



## NOTES

1. Sound pressure level measured in free field conditions at 10 m from the unit. According to ISO 3744.
- N.B. Combinations are made at condensing temperature 50 °C, ambient air temperature 35 °C.
- N.B. Clearance areas are specified on installation, use and maintenance manual.

# CWW/K 726-P÷36012-P

**WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND PLATE EXCHANGERS.**



The CWW/K 726-P÷36012-P series liquid Chillers and Heat Pumps, with R410A refrigerant, are designed for medium and large domestic or industrial systems which require medium-high power, space-saving units and quiet operation. These units are ideal for indoor installation and, equipped with a self contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier. **MULTIPOWER** is an extremely flexible and reliable machine: an intelligent control module optimizes functioning times and supplied power from the Scroll compressors based on heat load demands in the system and providing elevated energy efficiency. The machine can obtain an high energy yield, elimination of generated power surges and elimination of inertial accumulation tanks. The use of components built in large series, making them highly reliable, and management of an high number of compressors allows increased life span and reduction of unit's stopping risks: a faulty compressor will not compromise cooler functioning, which will continue to work with decreased power levels. In addition, maintenance operations are decisively reduced due to the high reliability of the machines and their components.



## VERSION

### CWW/K

Cooling only

### CWW/K/WP

Reversible Heat Pump

### CWW/K/SSL

Super silenced cooling only

### CWW/K/WP/SSL

Super silenced reversible Heat Pump

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valve on liquid line in 1048-P÷36012-P models.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|     |  |
|-----|--|
| IM  | Automatic circuit breakers                       |
| SL  | Unit silencing                                   |
| RFM | Cooling circuit shut-off valve on discharge line |
| RFL | Cooling circuit shut-off valve on liquid line    |
| BT  | Low water temperature Kit                        |
| DS  | Desuperheater                                    |
| RT  | Total heat recovery                              |
| FE  | Antifreeze heater for evaporator                 |
| SS  | Soft start                                       |
| IS  | Modbus RTU protocol, RS485 serial interface      |

|      |   |
|------|---|
| ISB  | BACnet MSTP protocol, RS485 serial interface  |
| ISBT | BACnet TCP/IP protocol, Ethernet port         |
| ISL  | LonWorks protocol, FFT-10 serial interface    |
| IAV  | Remote set-point, 0-10 V signal               |
| IAA  | Remote set-point, 4-20 mA signal              |
| IAS  | Remote signal for second set-point activation |
| IDL  | Demand limit from digital input               |

### LOOSE ACCESSORIES

|     |                                     |
|-----|-------------------------------------|
| MN  | High and low pressure gauges        |
| CR  | Remote control panel                |
| PV2 | 2-Way electronic pressostatic valve |
| PV3 | 3-Way electronic pressostatic valve |
| AG  | Rubber shock absorbers              |
| AM  | Spring shock absorbers              |

# CWW/K 726-P÷36012-P



| MODEL                      |                       |         | 726-P    | 786-P | 826-P | 906-P | 1048-P | 1128-P | 1208-P | 13010-P | 15010-P |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|--------|--------|--------|---------|---------|
| Cooling                    | Cooling capacity (1)  | kW      | 224      | 250   | 274   | 308   | 345    | 383    | 422    | 462     | 509     |
|                            | Absorbed power (1)    | kW      | 52       | 57    | 63    | 70    | 78     | 86     | 95     | 104     | 115     |
|                            | EER (1)               |         | 4.31     | 4.39  | 4.35  | 4.40  | 4.42   | 4.45   | 4.44   | 4.44    | 4.43    |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 223      | 249   | 273   | 307   | 343    | 382    | 420    | 460     | 507     |
|                            | Absorbed power (1)    | kW      | 55       | 60    | 66    | 74    | 82     | 90     | 99     | 109     | 121     |
|                            | EER (1)               |         | 4.08     | 4.16  | 4.11  | 4.17  | 4.20   | 4.26   | 4.23   | 4.21    | 4.20    |
|                            | ESEER                 |         | 5.16     | 5.27  | 5.25  | 5.45  | 5.26   | 5.51   | 5.57   | 5.23    | 5.57    |
| Heating                    | Heating capacity (2)  | kW      | 290      | 320   | 349   | 394   | 437    | 484    | 534    | 584     | 640     |
|                            | Absorbed power (2)    | kW      | 66       | 74    | 80    | 88    | 101    | 111    | 119    | 135     | 144     |
|                            | COP (2)               |         | 4.39     | 4.32  | 4.36  | 4.48  | 4.33   | 4.36   | 4.49   | 4.33    | 4.44    |
| Heating (EN14511)          | Heating capacity (2)  | kW      | 263      | 290   | 316   | 356   | 395    | 437    | 481    | 528     | 578     |
|                            | Absorbed power (2)    | kW      | 68       | 79    | 83    | 91    | 104    | 114    | 123    | 140     | 149     |
|                            | COP (2)               |         | 3.85     | 3.66  | 3.80  | 3.90  | 3.78   | 3.83   | 3.92   | 3.78    | 3.88    |
|                            | SCOP (3)              |         | 4.98     | 5.11  | 5.25  | 5.23  | 5.39   | 5.33   | 5.23   | 5.47    | 5.24    |
|                            | Energy Efficiency (3) | %       | 191      | 196   | 202   | 201   | 208    | 205    | 201    | 211     | 202     |
| Compressor                 | Quantity              | n°      | 3+3      | 3+3   | 3+3   | 3+3   | 4+4    | 4+4    | 4+4    | 5+5     | 5+5     |
|                            | Refrigerant circuits  | n°      | 2        | 2     | 2     | 2     | 2      | 2      | 2      | 2       | 2       |
|                            | Capacity steps        | n°      | 6        |       |       |       |        | 8      |        |         |         |
| Evaporator                 | Water flow            | l/s     | 10.70    | 11.94 | 13.09 | 14.72 | 16.48  | 18.30  | 20.16  | 22.07   | 24.32   |
|                            | Pressure drops        | kPa     | 54       | 51    | 56    | 56    | 60     | 47     | 52     | 60      | 57      |
|                            | Water connections     | DN      | 80       | 80    | 80    | 80    | 80     | 80     | 80     | 80      | 80      |
| Condenser                  | Water flow            | l/s     | 13.19    | 14.67 | 16.10 | 18.06 | 20.21  | 22.41  | 24.70  | 27.04   | 29.81   |
|                            | Pressure drops        | kPa     | 70       | 74    | 81    | 76    | 67     | 59     | 65     | 75      | 76      |
|                            | Water connections     | DN      | 80       | 80    | 80    | 80    | 80     | 80     | 80     | 80      | 80      |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |        |        |        |         |         |
|                            | Max. running current  | A       | 136      | 151   | 163   | 176   | 201    | 218    | 234    | 251     | 293     |
|                            | Max. starting current | A       | 261      | 284   | 331   | 344   | 334    | 385    | 402    | 384     | 461     |
|                            | STD version (4)       | dB(A)   | 62       | 64    | 65    | 65    | 65     | 66     | 66     | 66      | 67      |
| Sound pressure             | With SL accessory (4) | dB(A)   | 58       | 60    | 61    | 61    | 61     | 62     | 62     | 62      | 63      |
|                            | SSL version (4)       | dB(A)   | 55       | 56    | 57    | 57    | 57     | 58     | 58     | 58      | 59      |
| Weights                    | Transport weight      | Kg      | 1047     | 1103  | 1123  | 1159  | 1352   | 1422   | 1442   | 1642    | 1730    |
|                            | Operating weight      | Kg      | 1080     | 1140  | 1160  | 1200  | 1400   | 1480   | 1500   | 1700    | 1800    |

| MODEL                      |                       |         | 16812-P  | 18012-P | 21012-P | 24012-P | 27012-P | 30012-P | 33012-P | 36012-P |  |
|----------------------------|-----------------------|---------|----------|---------|---------|---------|---------|---------|---------|---------|--|
| Cooling                    | Cooling capacity (1)  | kW      | 562      | 622     | 696     | 786     | 895     | 1015    | 1129    | 1242    |  |
|                            | Absorbed power (1)    | kW      | 129      | 144     | 157     | 176     | 204     | 230     | 261     | 287     |  |
|                            | EER (1)               |         | 4.36     | 4.32    | 4.43    | 4.47    | 4.39    | 4.41    | 4.33    | 4.33    |  |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 559      | 619     | 693     | 783     | 891     | 1011    | 1124    | 1236    |  |
|                            | Absorbed power (1)    | kW      | 135      | 151     | 164     | 183     | 213     | 239     | 273     | 301     |  |
|                            | EER (1)               |         | 4.13     | 4.11    | 4.24    | 4.29    | 4.18    | 4.22    | 4.12    | 4.11    |  |
|                            | ESEER                 |         | 5.30     | 5.38    | 4.56    | 4.70    | 4.39    | 4.49    | 4.26    | 4.10    |  |
| Heating                    | Heating capacity (2)  | kW      | 710      | 783     | 874     | 986     | 1113    | 1255    | 1391    | 1531    |  |
|                            | Absorbed power (2)    | kW      | 164      | 181     | 203     | 224     | 259     | 289     | 321     | 357     |  |
|                            | COP (2)               |         | 4.33     | 4.33    | 4.31    | 4.40    | 4.30    | 4.34    | 4.33    | 4.29    |  |
| Heating (EN14511)          | Heating capacity (2)  | kW      | 642      | 707     | 789     | 890     | 1005    | 1133    | 1258    | 1385    |  |
|                            | Absorbed power (2)    | kW      | 170      | 187     | 209     | 230     | 267     | 297     | 331     | 368     |  |
|                            | COP (2)               |         | 3.78     | 3.78    | 3.78    | 3.87    | 3.77    | 3.81    | 3.80    | 3.76    |  |
|                            | SCOP (3)              |         | -        | -       | -       | -       | -       | -       | -       | -       |  |
|                            | Energy Efficiency (3) | %       | -        | -       | -       | -       | -       | -       | -       | -       |  |
| Compressor                 | Quantity              | n°      | 6+6      | 6+6     | 6+6     | 6+6     | 6+6     | 6+6     | 6+6     | 6+6     |  |
|                            | Refrigerant circuits  | n°      | 2        | 2       | 2       | 2       | 2       | 2       | 2       | 2       |  |
|                            | Capacity steps        | n°      | 10       |         |         |         |         |         |         |         |  |
| Evaporator                 | Water flow            | l/s     | 26.85    | 29.72   | 33.25   | 37.55   | 42.76   | 48.49   | 53.94   | 59.34   |  |
|                            | Pressure drops        | kPa     | 70       | 59      | 60      | 53      | 66      | 61      | 70      | 79      |  |
|                            | Water connections     | DN      | 80       | 80      | 150     | 150     | 150     | 150     | 150     | 150     |  |
| Condenser                  | Water flow            | l/s     | 33.01    | 36.60   | 40.75   | 45.98   | 52.51   | 59.48   | 66.41   | 73.05   |  |
|                            | Pressure drops        | kPa     | 70       | 77      | 60      | 53      | 65      | 61      | 70      | 78      |  |
|                            | Water connections     | DN      | 80       | 80      | 150     | 150     | 150     | 150     | 150     | 150     |  |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |         |         |         |         |         |         |         |  |
|                            | Max. running current  | A       | 326      | 352     | 399     | 454     | 506     | 559     | 629     | 699     |  |
|                            | Max. starting current | A       | 494      | 519     | 576     | 631     | 720     | 773     | 891     | 961     |  |
|                            | STD version (4)       | dB(A)   | 67       | 68      | 71      | 72      | 73      | 73      | 74      | 74      |  |
| Sound pressure             | With SL accessory (4) | dB(A)   | 63       | 63      | 67      | 68      | 69      | 69      | 70      | 70      |  |
|                            | SSL version (4)       | dB(A)   | 59       | 59      | 63      | 64      | 65      | 65      | 66      | 66      |  |
| Weights                    | Transport weight      | Kg      | 1930     | 1968    | 2806    | 2884    | 3184    | 3558    | 3658    | 3708    |  |
|                            | Operating weight      | Kg      | 2000     | 2050    | 2900    | 3000    | 3300    | 3700    | 3800    | 3850    |  |

| DIMENSIONS |         |    | 726-P | 786-P | 826-P | 906-P | 1048-P | 1128-P | 1208-P | 13010-P | 15010-P | 16812-P | 18012-P | 21012-P | 24012-P | 27012-P | 30012-P | 33012-P | 36012-P |
|------------|---------|----|-------|-------|-------|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| L          | STD/SSL | mm | 2500  | 2500  | 2500  | 2500  | 3000   | 3000   | 3000   | 3550    | 3550    | 4000    | 4000    | 4650    | 4650    | 4650    | 4650    | 4650    | 4650    |
| W          | STD/SSL | mm | 800   | 800   | 800   | 800   | 800    | 800    | 800    | 800     | 800     | 800     | 800     | 1350    | 1350    | 1350    | 1350    | 1350    | 1350    |
| H          | STD/SSL | mm | 1900  | 1900  | 1900  | 1900  | 1900   | 1900   | 1900   | 1900    | 1900    | 1900    | 1900    | 1900    | 1900    | 1900    | 1900    | 1900    | 1900    |

## CLEARANCE AREA

CWW/K 726-P÷36012-P

|     |     |     |     |
|-----|-----|-----|-----|
| 500 | 500 | 800 | 500 |
|-----|-----|-----|-----|



Electrical board side

## NOTES

- Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
  - Heated water from 40 to 45 °C, water temperature at the evaporator from 15 to 10 °C.
  - Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL and WP versions are specified on technical brochure.

# CWW/K 726÷36012

WATERCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGERS.



The CWW/K 726÷36012 series liquid Chillers and Heat Pumps, with R410A refrigerant, are designed for medium and large domestic or industrial systems which require medium-high power, space-saving units and quiet operation. These units are ideal for indoor installation and, equipped with a self contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier. **MULTIPOWER** is an extremely flexible and reliable machine: an intelligent control module optimizes functioning times and supplied power from the Scroll compressors based on heat load demands in the system and providing elevated energy efficiency. The machine can obtain a high energy yield, elimination of generated power surges and elimination of inertial accumulation tanks. The use of components built in large series, making them highly reliable, and management of an high number of compressors allows increased life span and reduction of unit's stopping risks: a faulty compressor will not compromise cooler functioning, which will continue to work with decreased power levels. In addition, maintenance operations are decisively reduced due to the high reliability of the machines and their components.



## VERSION

| CWW/K                       | CWW/K/WP                            |
|-----------------------------|-------------------------------------|
| Cooling only                | Reversible Heat Pump                |
| CWW/K/SSL                   | CWW/K/WP/SSL                        |
| Super silenced cooling only | Super silenced reversible Heat Pump |

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Shell and tube type condenser with two independent circuits on the refrigerant side and one on the water side.
- Shell and tube type evaporator, with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valve on liquid line in 1048÷36012 models.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|     |  |
|-----|--|
| IM  | Automatic circuit breakers                       |
| SL  | Unit silencing                                   |
| RFM | Cooling circuit shut-off valve on discharge line |
| RFL | Cooling circuit shut-off valve on liquid line    |
| BT  | Low water temperature Kit                        |
| HR  | Desuperheater                                    |
| HRT | Total heat recovery                              |
| FE  | Antifreeze heater for evaporator                 |
| SS  | Soft start                                       |
| IS  | Modbus RTU protocol, RS485 serial interface      |

|      |   |
|------|---|
| ISB  | BACnet MSTP protocol, RS485 serial interface  |
| ISBT | BACnet TCP/IP protocol, Ethernet port         |
| ISL  | LonWorks protocol, FFT-10 serial interface    |
| IAV  | Remote set-point, 0-10 V signal               |
| IAA  | Remote set-point, 4-20 mA signal              |
| IAS  | Remote signal for second set-point activation |
| IDL  | Demand limit from digital input               |

### LOOSE ACCESSORIES

|     |                                     |
|-----|-------------------------------------|
| MN  | High and low pressure gauges        |
| CR  | Remote control panel                |
| PV2 | 2-Way electronic pressostatic valve |
| PV3 | 3-Way electronic pressostatic valve |
| AG  | Rubber shock absorbers              |
| AM  | Spring shock absorbers              |
| FL  | Flow switch                         |

# CWW/K 726÷36012



| MODEL                      |                       | 726     | 786      | 826   | 906   | 1048  | 1128  | 1208  | 13010 | 15010 |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)  | kW      | 225      | 248   | 271   | 302   | 343   | 375   | 422   | 511   |
|                            | Absorbed power (1)    | kW      | 53       | 57    | 64    | 72    | 79    | 88    | 94    | 107   |
|                            | EER (1)               |         | 4.25     | 4.35  | 4.23  | 4.19  | 4.34  | 4.26  | 4.49  | 4.34  |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 225      | 248   | 271   | 302   | 343   | 375   | 422   | 511   |
|                            | Absorbed power (1)    | kW      | 53       | 57    | 64    | 72    | 79    | 88    | 94    | 107   |
|                            | EER (1)               |         | 4.25     | 4.35  | 4.23  | 4.19  | 4.34  | 4.26  | 4.49  | 4.34  |
| Heating                    | ESEER                 |         | 5.22     | 5.30  | 5.40  | 5.46  | 5.38  | 5.50  | 5.92  | 5.35  |
|                            | Heating capacity (2)  | kW      | 291      | 317   | 345   | 386   | 434   | 474   | 534   | 586   |
|                            | Absorbed power (2)    | kW      | 67       | 74    | 81    | 91    | 102   | 113   | 118   | 139   |
| Heating (EN14511)          | COP (2)               |         | 4.34     | 4.28  | 4.26  | 4.24  | 4.25  | 4.19  | 4.53  | 4.22  |
|                            | Heating capacity (2)  | kW      | 293      | 319   | 346   | 387   | 436   | 476   | 536   | 589   |
|                            | Absorbed power (2)    | kW      | 69       | 77    | 83    | 93    | 105   | 116   | 121   | 143   |
| Compressor                 | COP (2)               |         | 4.25     | 4.14  | 4.17  | 4.16  | 4.15  | 4.10  | 4.43  | 4.12  |
|                            | SCOP (3)              |         | 4.98     | 5.26  | 5.18  | 5.01  | 5.31  | 5.07  | 5.31  | 5.35  |
|                            | Energy Efficiency (3) | %       | 191      | 202   | 199   | 192   | 204   | 195   | 204   | 206   |
| Evaporator                 | Quantity              | n°      | 3+3      | 3+3   | 3+3   | 3+3   | 4+4   | 4+4   | 5+5   | 5+5   |
|                            | Refrigerant circuits  | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2     | 2     |
|                            | Capacity steps        | n°      | 6        |       |       |       | 8     |       |       |       |
| Condenser                  | Water flow            | l/s     | 10.75    | 11.85 | 12.95 | 14.43 | 16.39 | 17.92 | 20.16 | 22.17 |
|                            | Pressure drops        | kPa     | 38       | 38    | 24    | 27    | 31    | 25    | 25    | 36    |
|                            | Water connections     | DN      | 125      | 125   | 150   | 150   | 150   | 150   | 150   | 150   |
| Electrical characteristics | Water flow            | l/s     | 13.28    | 14.57 | 16.01 | 17.87 | 20.16 | 22.12 | 24.65 | 27.28 |
|                            | Pressure drops        | kPa     | 31       | 28    | 31    | 36    | 35    | 36    | 31    | 35    |
|                            | Water connections     | DN      | 65       | 65    | 65    | 65    | 65    | 65    | 65    | 80    |
| Sound pressure             | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |
|                            | Max. running current  | A       | 136      | 151   | 163   | 176   | 201   | 218   | 234   | 251   |
|                            | Max. starting current | A       | 261      | 284   | 331   | 344   | 334   | 385   | 402   | 384   |
| Weights                    | STD version (4)       | dB(A)   | 62       | 64    | 65    | 65    | 65    | 66    | 66    | 66    |
|                            | With SL accessory (4) | dB(A)   | 58       | 60    | 61    | 61    | 61    | 62    | 62    | 63    |
|                            | SSL version (4)       | dB(A)   | 55       | 56    | 57    | 57    | 57    | 58    | 58    | 59    |
| Compressor                 | Transport weight      | Kg      | 1370     | 1399  | 1544  | 1554  | 1819  | 2024  | 2076  | 2449  |
|                            | Operating weight      | Kg      | 1470     | 1500  | 1680  | 1690  | 1950  | 2230  | 2280  | 2700  |

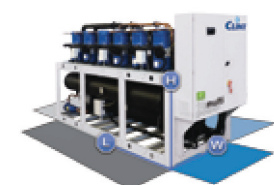
| MODEL                      |                       | 16812   | 18012    | 21012 | 24012 | 27012 | 30012 | 33012 | 36012 |  |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|-------|-------|-------|--|
| Cooling                    | Cooling capacity (1)  | kW      | 579      | 628   | 710   | 801   | 913   | 1035  | 1152  |  |
|                            | Absorbed power (1)    | kW      | 132      | 146   | 159   | 181   | 208   | 233   | 264   |  |
|                            | EER (1)               |         | 4.39     | 4.30  | 4.47  | 4.43  | 4.39  | 4.44  | 4.36  |  |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 579      | 628   | 710   | 801   | 913   | 1035  | 1152  |  |
|                            | Absorbed power (1)    | kW      | 132      | 146   | 160   | 182   | 208   | 233   | 265   |  |
|                            | EER (1)               |         | 4.39     | 4.30  | 4.44  | 4.40  | 4.39  | 4.44  | 4.35  |  |
| Heating                    | ESEER                 |         | 5.59     | 5.61  | 5.81  | 5.28  | 5.19  | 4.96  | 5.08  |  |
|                            | Heating capacity (2)  | kW      | 731      | 791   | 891   | 1005  | 1135  | 1280  | 1419  |  |
|                            | Absorbed power (2)    | kW      | 168      | 183   | 206   | 231   | 264   | 292   | 325   |  |
| Heating (EN14511)          | COP (2)               |         | 4.35     | 4.32  | 4.33  | 4.35  | 4.30  | 4.38  | 4.37  |  |
|                            | Heating capacity (2)  | kW      | 734      | 794   | 894   | 1009  | 1140  | 1287  | 1425  |  |
|                            | Absorbed power (2)    | kW      | 173      | 189   | 212   | 238   | 273   | 303   | 335   |  |
| Compressor                 | COP (2)               |         | 4.24     | 4.20  | 4.22  | 4.24  | 4.18  | 4.25  | 4.25  |  |
|                            | SCOP (3)              |         | -        | -     | -     | -     | -     | -     | -     |  |
|                            | Energy Efficiency (3) | %       | -        | -     | -     | -     | -     | -     | -     |  |
| Evaporator                 | Quantity              | n°      | 6+6      | 6+6   | 6+6   | 6+6   | 6+6   | 6+6   | 6+6   |  |
|                            | Refrigerant circuits  | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2     |  |
|                            | Capacity steps        | n°      | 10       |       |       |       |       |       |       |  |
| Condenser                  | Water flow            | l/s     | 27.66    | 30.00 | 33.92 | 38.27 | 43.62 | 49.45 | 55.04 |  |
|                            | Pressure drops        | kPa     | 34       | 34    | 27    | 38    | 38    | 59    | 45    |  |
|                            | Water connections     | DN      | 150      | 150   | 150   | 150   | 200   | 200   | 200   |  |
| Electrical characteristics | Water flow            | l/s     | 33.97    | 36.98 | 41.52 | 46.92 | 53.56 | 60.58 | 67.65 |  |
|                            | Pressure drops        | kPa     | 42       | 47    | 49    | 43    | 55    | 30    | 35    |  |
|                            | Water connections     | DN      | 80       | 80    | 80    | 80    | 80    | 100   | 100   |  |
| Sound pressure             | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |  |
|                            | Max. running current  | A       | 326      | 352   | 399   | 454   | 506   | 559   | 629   |  |
|                            | Max. starting current | A       | 494      | 519   | 576   | 631   | 720   | 773   | 891   |  |
| Weights                    | STD version (4)       | dB(A)   | 67       | 68    | 71    | 72    | 73    | 73    | 74    |  |
|                            | With SL accessory (4) | dB(A)   | 63       | 63    | 67    | 68    | 69    | 69    | 70    |  |
|                            | SSL version (4)       | dB(A)   | 59       | 59    | 63    | 64    | 65    | 65    | 66    |  |
| Compressor                 | Transport weight      | Kg      | 2728     | 2863  | 3568  | 3446  | 3772  | 4300  | 4370  |  |
|                            | Operating weight      | Kg      | 2960     | 3160  | 3950  | 3800  | 4110  | 4650  | 4720  |  |

| DIMENSIONS |            | 726  | 786  | 826  | 906  | 1048 | 1128 | 1208 | 13010 | 15010 | 16812 | 18012 | 21012 | 24012 | 27012 | 30012 | 33012 | 36012 |
|------------|------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L          | STD/SSL mm | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000  | 3000  | 3300  | 3300  | 3300  | 4000  | 4000  | 4000  | 4000  | 4000  |
| W          | STD/SSL mm | 800  | 800  | 800  | 800  | 1350 | 1350 | 1350 | 1350  | 1350  | 1350  | 1350  | 1350  | 1350  | 1350  | 1350  | 1350  | 1350  |
| H          | STD/SSL mm | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |

## CLEARANCE AREA

CWW/K 726÷36012

|     |     |     |     |
|-----|-----|-----|-----|
| 500 | 500 | 800 | 500 |
|-----|-----|-----|-----|



Electrical board side

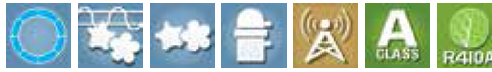
## NOTES

- Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
  - Heated water from 40 to 45 °C, water temperature at the evaporator from 15 to 10 °C.
  - Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL and WP versions are specified on technical brochure.



# CWW/K/A 901÷6202

**A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH (INVERTER) SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



The liquid Chillers of the CWW/K/A 901÷6202 series, with A CLASS energy efficiency and R410A refrigerant, are designed to satisfy the needs of the service sector or industrial systems requiring high power.

Equipped with latest generation mono-Screw compressors with satellite, shell and tube exchangers and connections for condensation with cooling tower water or well water or with a Dry-Cooler, these units have a series of accessories which are factory fitted or supplied separately. Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation. Furthermore, accessories as the Inverter control on Screw compressor is also available for getting the highest efficiency at part load: it is equipped with SYNCHRONIZER that allows to extend the useful life of the compressor, ensuring the rotation at every boot, and significantly reduce the inrush current of the unit.



## INVERTER SCREW

### VERSION

#### CWW/K/A

Cooling only

#### CWW/K/A/SSL

Super silenced cooling only

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors with built-in oil separator, suction filter, crankcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations. Each refrigerant circuit is supplied with an independent condenser. Water connections for cooling tower and Dry-Cooler operation; on request for well water.
- Shell and tube type evaporator, with one or two independent refrigerant circuits, depending on the model, and one water circuit, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|    |   |
|----|---|
| IM | Automatic circuit breakers  |
| BT | Low water temperature Kit   |
| HR | Desuperheater   |
| FE | Antifreeze heater for evaporator                                  |
| II | Inverter on one compressor and Synchronizer                       |
| SS | Soft start  |
| WM | Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP) |
| IS | Modbus RTU protocol, RS485 serial interface                       |

|      |   |
|------|---|
| ISB  | BACnet MSTP protocol, RS485 serial interface  |
| ISBT | BACnet TCP/IP protocol, Ethernet port         |
| ISL  | LonWorks protocol, FFT-10 serial interface    |
| IAV  | Remote set-point, 0-10 V signal               |
| IAA  | Remote set-point, 4-20 mA signal              |
| IAS  | Remote signal for second set-point activation |
| IDL  | Demand limit from digital input               |
| CP   | Potential free contacts                       |

#### LOOSE ACCESSORIES

|     |                                     |
|-----|-------------------------------------|
| MN  | High and low pressure gauges        |
| CR  | Remote control panel                |
| PV3 | 3-Way electronic pressostatic valve |
| AG  | Rubber shock absorbers              |
| AM  | Spring shock absorbers              |
| FL  | Flow switch                         |



# CWW/K/A 901÷6202



| MODEL                      |                       | 901     | 1101     | 1301  | 1501  | 1601  | 2001  | 2201  | 2401  | 2901  | 1902  |       |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)  | kW      | 320      | 387   | 466   | 508   | 566   | 699   | 792   | 880   | 1067  | 644   |
|                            | Absorbed power (1)    | kW      | 62       | 75    | 90    | 98    | 109   | 135   | 152   | 171   | 207   | 125   |
|                            | EER (1)               |         | 5.16     | 5.16  | 5.18  | 5.18  | 5.19  | 5.18  | 5.21  | 5.15  | 5.15  | 5.15  |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 319      | 386   | 465   | 506   | 564   | 697   | 789   | 878   | 1064  | 642   |
|                            | Absorbed power (1)    | kW      | 63       | 76    | 91    | 100   | 111   | 137   | 155   | 173   | 210   | 127   |
|                            | EER (1)               |         | 5.06     | 5.08  | 5.11  | 5.06  | 5.08  | 5.09  | 5.09  | 5.08  | 5.07  | 5.06  |
|                            | ESEER                 |         | 5.34     | 5.41  | 5.38  | 5.35  | 5.52  | 5.75  | 5.72  | 5.63  | 5.61  | 5.36  |
|                            | EUROVENT Class        |         | A        | A     | A     | A     | A     | A     | A     | A     | A     | A     |
| Compressor                 | Quantity              | n°      | 1        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     |
|                            | Refrigerant circuits  | n°      | 1        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 2     |
|                            | Capacity steps        | n°      | Stepless |       |       |       |       |       |       |       |       |       |
| Evaporator                 | Water flow            | l/s     | 15.29    | 18.49 | 22.26 | 24.27 | 27.04 | 33.40 | 37.84 | 42.04 | 50.98 | 30.77 |
|                            | Pressure drops        | kPa     | 33       | 24    | 34    | 38    | 40    | 34    | 43    | 36    | 41    | 47    |
|                            | Water connections     | DN      | 150      | 150   | 150   | 150   | 150   | 200   | 200   | 200   | 200   | 150   |
| Condenser                  | Water flow            | l/s     | 18.25    | 22.07 | 26.56 | 28.95 | 32.25 | 39.85 | 45.10 | 50.21 | 60.87 | 36.74 |
|                            | Pressure drops        | kPa     | 22       | 22    | 25    | 30    | 29    | 32    | 35    | 37    | 31    | 22    |
|                            | Water connections     | DN      | 100      | 125   | 125   | 125   | 125   | 150   | 150   | 150   | 150   | 100   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |       |       |
|                            | Max. running current  | A       | 144      | 171   | 195   | 195   | 144   | 171   | 195   | 367   | 383   | 288   |
|                            | Max. starting current | A       | 288      | 288   | 288   | 288   | 288   | 288   | 288   | 656   | 656   | 432   |
| Sound pressure             | STD version (2)       | dB(A)   | 81       | 81    | 82    | 82    | 82    | 81    | 81    | 83    | 83    | 84    |
|                            | SSL version (2)       | dB(A)   | 77       | 77    | 78    | 78    | 78    | 77    | 77    | 79    | 79    | 80    |
| Weights                    | Transport weight      | Kg      | 2059     | 2431  | 2518  | 2558  | 2877  | 3298  | 3389  | 3984  | 4535  | 3884  |
|                            | Operating weight      | Kg      | 2270     | 2760  | 2880  | 2920  | 3240  | 3890  | 3980  | 4710  | 5310  | 4380  |

| MODEL                      |                       | 2202    | 2602     | 2902  | 3202  | 4002  | 4502  | 4802  | 5802   | 6202   |        |  |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|-------|-------|--------|--------|--------|--|
| Cooling                    | Cooling capacity (1)  | kW      | 781      | 895   | 1023  | 1138  | 1411  | 1584  | 1766   | 2142   | 2486   |  |
|                            | Absorbed power (1)    | kW      | 152      | 173   | 196   | 219   | 271   | 301   | 337    | 404    | 474    |  |
|                            | EER (1)               |         | 5.14     | 5.17  | 5.22  | 5.20  | 5.21  | 5.26  | 5.24   | 5.30   | 5.24   |  |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 779      | 892   | 1019  | 1134  | 1405  | 1577  | 1758   | 2130   | 2472   |  |
|                            | Absorbed power (1)    | kW      | 154      | 176   | 200   | 223   | 277   | 308   | 345    | 416    | 488    |  |
|                            | EER (1)               |         | 5.06     | 5.07  | 5.10  | 5.09  | 5.07  | 5.12  | 5.10   | 5.12   | 5.07   |  |
|                            | ESEER                 |         | 5.44     | 5.40  | 5.41  | 5.58  | 5.80  | 5.81  | 5.68   | 5.50   | 5.41   |  |
|                            | EUROVENT Class        |         | A        | A     | A     | A     | A     | A     | A      | A      | A      |  |
| Compressor                 | Quantity              | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2      | 2      | 2      |  |
|                            | Refrigerant circuits  | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2      | 2      | 2      |  |
|                            | Capacity steps        | n°      | Stepless |       |       |       |       |       |        |        |        |  |
| Evaporator                 | Water flow            | l/s     | 37.31    | 42.76 | 48.88 | 54.37 | 67.41 | 75.68 | 84.38  | 102.34 | 118.78 |  |
|                            | Pressure drops        | kPa     | 32       | 48    | 53    | 49    | 49    | 57    | 62     | 63     | 72     |  |
|                            | Water connections     | DN      | 200      | 200   | 200   | 200   | 250   | 250   | 250    | 250    | 250    |  |
| Condenser                  | Water flow            | l/s     | 44.58    | 51.03 | 58.24 | 64.83 | 80.36 | 90.06 | 100.48 | 121.64 | 141.42 |  |
|                            | Pressure drops        | kPa     | 22       | 31    | 57    | 52    | 51    | 54    | 55     | 62     | 61     |  |
|                            | Water connections     | DN      | 125      | 125   | 100   | 125   | 125   | 125   | 150    | 150    | 150    |  |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |       |       |        |        |        |  |
|                            | Max. running current  | A       | 342      | 390   | 390   | 504   | 612   | 644   | 734    | 766    | 812    |  |
|                            | Max. starting current | A       | 459      | 483   | 483   | 707   | 761   | 777   | 1023   | 1039   | 1062   |  |
| Sound pressure             | STD version (2)       | dB(A)   | 83       | 84    | 84    | 84    | 84    | 84    | 85     | 86     | 87     |  |
|                            | SSL version (2)       | dB(A)   | 79       | 80    | 80    | 80    | 80    | 80    | 81     | 82     | 83     |  |
| Weights                    | Transport weight      | Kg      | 4432     | 4589  | 4618  | 5432  | 5843  | 6001  | 7496   | 8426   | 8712   |  |
|                            | Operating weight      | Kg      | 5050     | 5200  | 5370  | 6200  | 6830  | 6960  | 8650   | 9940   | 10360  |  |

| DIMENSIONS |            | 901  | 1101 | 1301 | 1501 | 1601 | 2001 | 2201 | 2401 | 2901 | 1902 | 2202 | 2602 | 2902 | 3202 | 4002 | 4502 | 4802 | 5802 | 6202 |
|------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD/SSL mm | 3150 | 3350 | 3500 | 3500 | 3500 | 3700 | 3700 | 3750 | 3750 | 3700 | 3700 | 3700 | 4600 | 4600 | 4800 | 4800 | 4800 | 4850 | 4850 |
| W          | STD/SSL mm | 1000 | 1200 | 1200 | 1200 | 1200 | 1350 | 1350 | 1450 | 1450 | 1250 | 1300 | 1300 | 1300 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 |
| H          | STD/SSL mm | 1850 | 1950 | 1950 | 1950 | 1950 | 2050 | 2050 | 2200 | 2200 | 1900 | 2100 | 2100 | 2100 | 2200 | 2200 | 2200 | 2550 | 2550 | 2550 |

## CLEARANCE AREA

CWW/K/A 901÷6202

|     |     |     |     |
|-----|-----|-----|-----|
| 500 | 500 | 800 | 500 |
|-----|-----|-----|-----|



## NOTES

- Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL version are specified on technical brochure.

# CWW/IY/WP 1352÷4402

**WATERCOOLED REVERSIBLE HEAT PUMPS WITH INVERTER SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



The watercooled reversible Heat Pump units of the CWW/IY/WP 1352÷4402 line, with R134a refrigerant, are designed to fulfill with the requirements of big sizes installations, such as commercial and industrial plants. The units are provided with the new technological Inverter mono-Screw compressors with satellite, shell and tube exchangers, and are available also in super low noise version. The optimisation of water and cooling circuits and the Inverter Screw compressors allow the units to reach a very high efficiency and reduced power consumption, if combined with a proper sizing of the end-user plant.



## INVERTER SCREW

### VERSION

#### CWW/IY/WP

Reversible Heat Pump

#### CWW/IY/WP/SSL

Super silenced reversible Heat Pump

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- INVERTER Screw compressors, with built-in oil separator, suction filter, crankcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations. Each refrigerant circuit is supplied with an independent condenser. Water connections for cooling tower and Dry-Cooler operation; on request for well water.
- Shell and tube type evaporator, with one or two independent refrigerant circuits, depending on the model, and one water circuit, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|     |   |
|-----|---|
| IM  | Automatic circuit breakers  |
| BT  | Low water temperature Kit   |
| HR  | Desuperheater   |
| HRT | Total heat recovery   |
| FE  | Antifreeze heater for evaporator                                  |
| SS  | Soft start  |
| WM  | Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP) |
| IS  | Modbus RTU protocol, RS485 serial interface                       |
| ISB | BACnet MSTP protocol, RS485 serial interface                      |

|      |   |
|------|---|
| ISBT | BACnet TCP/IP protocol, Ethernet port         |
| ISL  | LonWorks protocol, FFT-10 serial interface    |
| IAV  | Remote set-point, 0-10 V signal               |
| IAA  | Remote set-point, 4-20 mA signal              |
| IAS  | Remote signal for second set-point activation |
| IDL  | Demand limit from digital input               |
| CP   | Potential free contacts                       |

#### LOOSE ACCESSORIES

|     |                                     |
|-----|-------------------------------------|
| MN  | High and low pressure gauges        |
| CR  | Remote control panel                |
| PV3 | 3-Way electronic pressostatic valve |
| AG  | Rubber shock absorbers              |
| AM  | Spring shock absorbers              |
| FL  | Flow switch                         |

# CWW/IY/WP 1352÷4402



| MODEL                      |                       | 1352    | 1402     | 1602  | 1802  | 1952  | 2302  | 2702  | 3302  | 4402  |       |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| Heating                    | Heating capacity (1)  | kW      | 386      | 454   | 525   | 588   | 697   | 824   | 1033  | 1240  | 1439  |
|                            | Absorbed power (1)    | kW      | 82       | 96    | 112   | 126   | 147   | 173   | 218   | 260   | 298   |
|                            | COP (1)               |         | 4.71     | 4.73  | 4.69  | 4.67  | 4.74  | 4.76  | 4.74  | 4.77  | 4.83  |
| Heating (EN14511)          | Heating capacity (1)  | kW      | 351      | 408   | 478   | 535   | 635   | 750   | 935   | 1121  | 1293  |
|                            | Absorbed power (1)    | kW      | 81       | 97    | 112   | 124   | 146   | 172   | 220   | 268   | 305   |
|                            | COP (1)               |         | 4.34     | 4.22  | 4.29  | 4.31  | 4.34  | 4.36  | 4.25  | 4.19  | 4.24  |
|                            | SCOP (2)              |         | 3.36     | 3.17  | 3.20  | 3.18  | -     | -     | -     | -     | -     |
| Cooling                    | Energy Efficiency (2) | %       | 126      | 119   | 120   | 119   | -     | -     | -     | -     | -     |
|                            | Cooling capacity (3)  | kW      | 319      | 375   | 433   | 490   | 576   | 686   | 848   | 1007  | 1171  |
|                            | Absorbed power (3)    | kW      | 65       | 76    | 88    | 100   | 117   | 137   | 173   | 205   | 237   |
|                            | EER (3)               |         | 4.91     | 4.93  | 4.92  | 4.90  | 4.92  | 5.01  | 4.90  | 4.91  | 4.94  |
| Cooling (EN14511)          | Cooling capacity (3)  | kW      | 318      | 374   | 431   | 489   | 574   | 684   | 845   | 1003  | 1167  |
|                            | Absorbed power (3)    | kW      | 68       | 79    | 92    | 104   | 122   | 143   | 180   | 215   | 248   |
|                            | EER (3)               |         | 4.71     | 4.71  | 4.67  | 4.71  | 4.71  | 4.78  | 4.69  | 4.66  | 4.71  |
|                            | ESEER                 |         | 5.91     | 5.90  | 5.81  | 5.79  | 6.05  | 6.58  | 6.38  | 6.20  | 5.67  |
| Compressor                 | Quantity              | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     |
|                            | Refrigerant circuits  | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     |
|                            | Capacity steps        | n°      | Stepless |       |       |       |       |       |       |       |       |
| Evaporator                 | Water flow            | l/s     | 15.24    | 17.92 | 20.69 | 23.41 | 27.52 | 32.78 | 40.52 | 48.11 | 55.95 |
|                            | Pressure drops        | kPa     | 33       | 40    | 47    | 35    | 43    | 44    | 45    | 56    | 51    |
|                            | Water connections     | DN      | 125      | 150   | 150   | 150   | 200   | 200   | 200   | 200   | 200   |
| Condenser                  | Water flow            | l/s     | 18.35    | 21.55 | 24.89 | 28.19 | 33.11 | 39.32 | 48.78 | 57.91 | 67.27 |
|                            | Pressure drops        | kPa     | 49       | 58    | 68    | 51    | 61    | 63    | 66    | 81    | 73    |
|                            | Water connections     | DN      | 125      | 150   | 150   | 150   | 200   | 200   | 200   | 200   | 200   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |       |
|                            | Max. running current  | A       | 214      | 214   | 238   | 270   | 270   | 354   | 398   | 518   | 658   |
|                            | Max. starting current | A       | 258      | 258   | 314   | 330   | 330   | 465   | 487   | 723   | 793   |
| Sound pressure             | STD version (4)       | dB(A)   | 75       | 76    | 76    | 76    | 76    | 76    | 77    | 79    | 80    |
|                            | SSL version (4)       | dB(A)   | 71       | 72    | 72    | 72    | 72    | 72    | 73    | 75    | 76    |
| Weights                    | Transport weight      | Kg      | 2550     | 2940  | 3010  | 3400  | 4090  | 4500  | 5060  | 5650  | 6300  |
|                            | Operating weight      | Kg      | 2810     | 3470  | 3510  | 3860  | 4800  | 5250  | 5810  | 6620  | 7450  |

| DIMENSIONS |            | 1352 | 1402 | 1602 | 1802 | 1952 | 2302 | 2702 | 3302 | 4402 |
|------------|------------|------|------|------|------|------|------|------|------|------|
| L          | STD/SSL mm | 4000 | 4300 | 4300 | 4300 | 4300 | 4300 | 4300 | 4600 | 4600 |
| W          | STD/SSL mm | 1200 | 1400 | 1400 | 1400 | 1500 | 1600 | 2200 | 2200 | 2200 |
| H          | STD/SSL mm | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |

## CLEARANCE AREA

CWW/IY/WP 1352÷4402

500 | 500 | 800 | 500



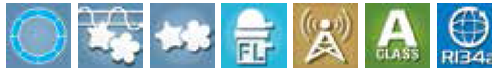
## NOTES

1. Heated water from 40 to 45 °C, water temperature at the evaporator from 15 to 10 °C.
  2. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.
  3. Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
  4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL version are specified on technical brochure.

Electrical board side

# CWW/Y/A 1302÷4802

**A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH (INVERTER) SCREW COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGERS.**



The liquid chillers of the CWW/Y/A 1302÷4802 series, with R134a refrigerant, are designed to satisfy the needs of the service sector or industrial systems requiring high power. These units are characterized by an high efficiency, in A CLASS, with EER higher than 5,05 thanks to the dedicated technical solutions as flooded shell and tube exchangers and mono-Screw compressors with satellite.

Units are equipped with latest generation Screw compressors, flooded shell and tube exchangers and connections for condensation with tower water or well water or with a Dry-Cooler. Furthermore, they have a series of accessories which are factory fitted or supplied separately such as desuperheater, total heat recovery and, if necessary, a device for operating a heat pump. Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation. The units can be equipped with Inverter control on one or on both the Screw compressors. The single Inverter accessory comes with SYNCHRONIZER that allows to extend the useful life of the compressor, ensuring the rotation at every start up and significantly reduce the inrush current of the unit. The solution with double Inverter allows, in addition to the above described, to increase the power efficiency of the unit in the same size, adapting to the different needs and solutions.



**INVERTER SCREW**

## VERSION

**CWW/Y/A**

Cooling only

**CWW/Y/A/SSL**

Super silenced cooling only

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors with suction filter, oil sight glass, thermal protection and stepless capacity steps.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations.
- High efficiency flooded shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|     |   |
|-----|---|
| IM  | Automatic circuit breakers  |
| BT  | Low water temperature Kit   |
| HR  | Desuperheater   |
| HRT | Total heat recovery   |
| FE  | Antifreeze heater for evaporator                                  |
| II  | Inverter on one compressor and Synchronizer                       |
| ID  | Inverter on both compressors                                      |
| SS  | Soft start  |
| DP  | Device for heat pump operation                                    |
| WM  | Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP) |
| IS  | Modbus RTU protocol, RS485 serial interface                       |

|      |   |
|------|---|
| ISB  | BACnet MSTP protocol, RS485 serial interface  |
| ISBT | BACnet TCP/IP protocol, Ethernet port         |
| ISL  | LonWorks protocol, FFT-10 serial interface    |
| IAV  | Remote set-point, 0-10 V signal               |
| IAA  | Remote set-point, 4-20 mA signal              |
| IAS  | Remote signal for second set-point activation |
| IDL  | Demand limit from digital input               |
| CP   | Potential free contacts                       |

### LOOSE ACCESSORIES

|     |                                     |
|-----|-------------------------------------|
| MN  | High and low pressure gauges        |
| CR  | Remote control panel                |
| PV3 | 3-Way electronic pressostatic valve |
| AG  | Rubber shock absorbers              |
| AM  | Spring shock absorbers              |
| FL  | Flow switch                         |

# CWW/Y/A 1302÷4802



| MODEL                      |                       | 1302    | 1502     | 1702  | 1902  | 2002  | 2602  | 2802  | 3002  | 3602  | 4202  | 4802  |       |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)  | kW      | 280      | 341   | 392   | 448   | 507   | 626   | 711   | 792   | 961   | 1126  | 1289  |
|                            | Absorbed power (1)    | kW      | 50       | 60    | 69    | 79    | 88    | 108   | 121   | 132   | 160   | 188   | 217   |
|                            | EER (1)               |         | 5.60     | 5.68  | 5.68  | 5.67  | 5.76  | 5.80  | 5.88  | 6.00  | 6.01  | 5.99  | 5.94  |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 279      | 340   | 391   | 446   | 505   | 623   | 708   | 789   | 957   | 1122  | 1284  |
|                            | Absorbed power (1)    | kW      | 51       | 61    | 70    | 81    | 90    | 111   | 124   | 135   | 164   | 192   | 222   |
|                            | EER (1)               |         | 5.47     | 5.57  | 5.59  | 5.51  | 5.61  | 5.61  | 5.71  | 5.84  | 5.84  | 5.84  | 5.78  |
|                            | ESEER                 |         | 6.80     | 6.84  | 6.87  | 6.53  | 6.56  | 6.65  | 6.60  | 6.80  | 6.83  | 6.82  | 6.69  |
|                            | EUROVENT Class        |         | A        | A     | A     | A     | A     | A     | A     | A     | A     | A     | A     |
| Cooling *                  | Cooling capacity (1)  | kW      | 329      | 401   | 459   | 527   | 595   | 734   | 833   | 928   | 1125  | 1319  | 1510  |
|                            | Absorbed power (1)    | kW      | 60       | 73    | 84    | 96    | 107   | 131   | 148   | 161   | 194   | 228   | 263   |
|                            | EER (1)               |         | 5.48     | 5.49  | 5.46  | 5.49  | 5.56  | 5.60  | 5.63  | 5.76  | 5.80  | 5.79  | 5.74  |
| Cooling * (EN14511)        | Cooling capacity (1)  | kW      | 328      | 399   | 458   | 524   | 592   | 730   | 828   | 923   | 1119  | 1312  | 1502  |
|                            | Absorbed power (1)    | kW      | 61       | 75    | 85    | 99    | 110   | 135   | 153   | 166   | 200   | 235   | 271   |
|                            | EER (1)               |         | 5.38     | 5.32  | 5.39  | 5.29  | 5.38  | 5.41  | 5.41  | 5.56  | 5.60  | 5.58  | 5.54  |
|                            | ESEER                 |         | 7.86     | 7.87  | 7.92  | 7.44  | 7.63  | 7.62  | 7.68  | 7.81  | 7.75  | 7.85  | 7.68  |
|                            | EUROVENT Class        |         | A        | A     | A     | A     | A     | A     | A     | A     | A     | A     | A     |
| Compressor                 | Quantity              | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     |
|                            | Refrigerant circuits  | n°      | 1        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
|                            | Capacity steps        | n°      | Stepless |       |       |       |       |       |       |       |       |       |       |
| Evaporator                 | Water flow            | l/s     | 13.38    | 16.29 | 18.73 | 21.40 | 24.22 | 29.91 | 33.97 | 37.84 | 45.91 | 53.80 | 61.59 |
|                            | Pressure drops        | kPa     | 28       | 32    | 26    | 60    | 54    | 57    | 57    | 54    | 56    | 57    | 61    |
|                            | Water connections     | DN      | 100      | 100   | 100   | 125   | 125   | 125   | 125   | 150   | 150   | 150   | 150   |
| Condenser                  | Water flow            | l/s     | 15.77    | 19.16 | 22.03 | 25.18 | 28.43 | 35.07 | 39.75 | 44.15 | 53.56 | 62.78 | 71.95 |
|                            | Pressure drops        | kPa     | 46       | 39    | 42    | 62    | 52    | 60    | 62    | 65    | 58    | 58    | 59    |
|                            | Water connections     | DN      | 80       | 100   | 100   | 100   | 125   | 125   | 125   | 125   | 150   | 150   | 150   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |       |       |       |
|                            | Max. running current  | A       | 178      | 214   | 238   | 270   | 292   | 354   | 398   | 438   | 456   | 536   | 622   |
|                            | Max. starting current | A       | 240      | 258   | 314   | 330   | 434   | 465   | 487   | 549   | 558   | 598   | 775   |
| Sound pressure             | STD version (2)       | dB(A)   | 76       | 76    | 77    | 77    | 77    | 77    | 77    | 79    | 79    | 80    | 80    |
|                            | SSL version (2)       | dB(A)   | 72       | 72    | 73    | 73    | 73    | 73    | 73    | 75    | 75    | 76    | 76    |
| Weights                    | Transport weight      | Kg      | 3185     | 3207  | 4012  | 4270  | 5141  | 5262  | 5568  | 6880  | 7466  | 7951  | 8376  |
|                            | Operating weight      | Kg      | 3300     | 3350  | 4180  | 4450  | 5360  | 5520  | 5860  | 7200  | 7900  | 8460  | 8950  |

| DIMENSIONS |            | 1302 | 1502 | 1702 | 1902 | 2002 | 2602 | 2802 | 3002 | 3602 | 4202 | 4802 |
|------------|------------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD/SSL mm | 3500 | 3500 | 3500 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 |
| W          | STD/SSL mm | 1300 | 1300 | 1300 | 1400 | 1400 | 1400 | 1400 | 1400 | 1800 | 1800 | 1800 |
| H          | STD/SSL mm | 2100 | 2100 | 2100 | 2200 | 2200 | 2200 | 2200 | 2200 | 2300 | 2300 | 2300 |

## CLEARANCE AREA

CWW/Y/A 1302÷4802

|     |     |     |     |
|-----|-----|-----|-----|
| 500 | 500 | 800 | 500 |
|-----|-----|-----|-----|



## NOTES

- Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL version are specified on technical brochure.
- \* Unit provided with Inverter on both compressors.

Electrical board side

FROM 281 KW TO 1893 KW.

# CWW/K 901÷5802

**WATERCOOLED LIQUID CHILLERS WITH SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



The liquid Chillers of the CWW/K 901 ÷5802 series, with R410A refrigerant, are designed to satisfy the needs of the service sector or industrial systems requiring high power. Equipped with latest generation mono-Screw compressors with satellite, shell and tube exchangers and connections for condensation with tower water or well water or with a Dry-Cooler, these units have a series of accessories which are factory fitted or supplied separately. Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation.



## VERSION

**CWW/K**

Cooling only

**CWW/K/SSL**

Super silenced cooling only

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors with built-in oil separator, suction filter, crankcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations. Each refrigerant circuit is supplied with an independent condenser. Water connections for cooling tower and Dry-Cooler operation; on request for well water.
- Shell and tube type evaporator, with one or two independent refrigerant circuits, depending on the model, and one water circuit, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|      |   |
|------|---|
| IM   | Automatic circuit breakers  |
| BT   | Low water temperature Kit   |
| HR   | Desuperheater   |
| FE   | Antifreeze heater for evaporator                                  |
| SS   | Soft start  |
| WM   | Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP) |
| IS   | Modbus RTU protocol, RS485 serial interface                       |
| ISB  | BACnet MSTP protocol, RS485 serial interface                      |
| ISBT | BACnet TCP/IP protocol, Ethernet port                             |
| ISL  | LonWorks protocol, FFT-10 serial interface                        |

|     |   |
|-----|---|
| IAV | Remote set-point, 0-10 V signal               |
| IAA | Remote set-point, 4-20 mA signal              |
| IAS | Remote signal for second set-point activation |
| IDL | Demand limit from digital input               |
| CP  | Potential free contacts                       |

### LOOSE ACCESSORIES

|     |                                     |
|-----|-------------------------------------|
| MN  | High and low pressure gauges        |
| CR  | Remote control panel                |
| PV3 | 3-Way electronic pressostatic valve |
| AG  | Rubber shock absorbers              |
| AM  | Spring shock absorbers              |
| FL  | Flow switch                         |



# CWW/K 901÷5802



| MODEL                      |                       | 901     | 1101     | 1301  | 1501  | 1601  | 2001  | 2201  | 2401  | 2901  |       |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| Cooling                    | Cooling capacity (1)  | kW      | 281      | 346   | 399   | 457   | 500   | 619   | 702   | 781   | 946   |
|                            | Absorbed power (1)    | kW      | 68       | 82    | 95    | 108   | 120   | 146   | 166   | 178   | 215   |
|                            | EER (1)               |         | 4.13     | 4.22  | 4.20  | 4.23  | 4.17  | 4.24  | 4.23  | 4.39  | 4.40  |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 280      | 345   | 398   | 456   | 498   | 616   | 700   | 778   | 943   |
|                            | Absorbed power (1)    | kW      | 69       | 83    | 96    | 109   | 122   | 149   | 168   | 181   | 218   |
|                            | EER (1)               |         | 4.06     | 4.16  | 4.15  | 4.18  | 4.08  | 4.13  | 4.17  | 4.30  | 4.33  |
|                            | ESEER                 |         | 4.31     | 4.46  | 4.48  | 4.53  | 4.52  | 4.73  | 4.77  | 4.87  | 4.87  |
| Compressor                 | Quantity              | n°      | 1        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
|                            | Refrigerant circuits  | n°      | 1        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
|                            | Capacity steps        | n°      | Stepless |       |       |       |       |       |       |       |       |
| Evaporator                 | Water flow            | l/s     | 13.43    | 16.53 | 19.06 | 21.83 | 23.89 | 29.57 | 33.54 | 37.31 | 45.20 |
|                            | Pressure drops        | kPa     | 51       | 37    | 31    | 26    | 44    | 54    | 43    | 43    | 47    |
|                            | Water connections     | DN      | 100      | 125   | 125   | 150   | 150   | 150   | 150   | 150   | 200   |
|                            | Water flow            | l/s     | 16.67    | 20.45 | 23.60 | 26.99 | 29.62 | 36.55 | 41.47 | 45.82 | 55.47 |
| Condenser                  | Pressure drops        | kPa     | 49       | 52    | 52    | 38    | 45    | 48    | 49    | 47    | 55    |
|                            | Water connections     | DN      | 80       | 80    | 80    | 100   | 100   | 125   | 125   | 125   | 125   |
|                            | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |       |
| Electrical characteristics | Max. running current  | A       | 144      | 171   | 195   | 195   | 144   | 171   | 195   | 367   | 383   |
|                            | Max. starting current | A       | 288      | 288   | 288   | 288   | 288   | 288   | 288   | 656   | 656   |
| Sound pressure             | STD version (2)       | dB(A)   | 81       | 81    | 82    | 82    | 82    | 82    | 82    | 84    | 84    |
|                            | SSL version (2)       | dB(A)   | 77       | 77    | 78    | 78    | 78    | 78    | 78    | 80    | 80    |
| Weights                    | Transport weight      | Kg      | 1517     | 1601  | 1639  | 1860  | 2130  | 2191  | 2353  | 2906  | 2960  |
|                            | Operating weight      | Kg      | 1590     | 1710  | 1760  | 2040  | 2310  | 2370  | 2560  | 3220  | 3270  |

| MODEL                      |                       | 1902    | 2202     | 2602  | 2902  | 3202  | 4002  | 4502  | 4802  | 5802  |        |
|----------------------------|-----------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|--------|
| Cooling                    | Cooling capacity (1)  | kW      | 561      | 692   | 798   | 913   | 1001  | 1236  | 1403  | 1562  | 1893   |
|                            | Absorbed power (1)    | kW      | 137      | 166   | 190   | 216   | 240   | 293   | 332   | 357   | 431    |
|                            | EER (1)               |         | 4.09     | 4.17  | 4.20  | 4.23  | 4.17  | 4.22  | 4.23  | 4.38  | 4.39   |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 559      | 689   | 794   | 910   | 997   | 1231  | 1398  | 1557  | 1886   |
|                            | Absorbed power (1)    | kW      | 139      | 169   | 194   | 219   | 244   | 298   | 337   | 362   | 438    |
|                            | EER (1)               |         | 4.02     | 4.08  | 4.09  | 4.16  | 4.09  | 4.13  | 4.15  | 4.30  | 4.31   |
|                            | ESEER                 |         | 4.37     | 4.45  | 4.43  | 4.50  | 4.59  | 4.70  | 4.73  | 4.83  | 4.62   |
| Compressor                 | Quantity              | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2      |
|                            | Refrigerant circuits  | n°      | 2        | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2      |
|                            | Capacity steps        | n°      | Stepless |       |       |       |       |       |       |       |        |
| Evaporator                 | Water flow            | l/s     | 26.80    | 33.06 | 38.13 | 43.62 | 47.83 | 59.05 | 67.03 | 74.63 | 90.44  |
|                            | Pressure drops        | kPa     | 48       | 49    | 65    | 53    | 50    | 59    | 54    | 52    | 59     |
|                            | Water connections     | DN      | 125      | 150   | 150   | 150   | 150   | 150   | 200   | 200   | 200    |
|                            | Water flow            | l/s     | 33.35    | 40.99 | 47.20 | 53.94 | 59.29 | 73.05 | 82.89 | 91.69 | 111.04 |
| Condenser                  | Pressure drops        | kPa     | 19       | 16    | 20    | 19    | 18    | 28    | 20    | 25    | 31     |
|                            | Water connections     | DN      | 80       | 80    | 80    | 80    | 80    | 80    | 100   | 100   | 100    |
|                            | Power supply          | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |        |
| Electrical characteristics | Max. running current  | A       | 288      | 342   | 390   | 390   | 504   | 612   | 644   | 734   | 766    |
|                            | Max. starting current | A       | 432      | 459   | 483   | 483   | 707   | 761   | 777   | 1023  | 1039   |
| Sound pressure             | STD version (2)       | dB(A)   | 84       | 84    | 85    | 85    | 84    | 84    | 84    | 86    | 87     |
|                            | SSL version (2)       | dB(A)   | 80       | 80    | 81    | 81    | 80    | 80    | 80    | 82    | 83     |
| Weights                    | Transport weight      | Kg      | 2954     | 3223  | 3247  | 3278  | 4157  | 4205  | 4582  | 5877  | 6090   |
|                            | Operating weight      | Kg      | 3190     | 3470  | 3510  | 3530  | 4580  | 4610  | 5020  | 6600  | 6820   |

| DIMENSIONS |            | 901  | 1101 | 1301 | 1501 | 1601 | 2001 | 2201 | 2401 | 2901 | 1902 | 2202 | 2602 | 2902 | 3202 | 4002 | 4502 | 4802 | 5802 |
|------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L          | STD/SSL mm | 2600 | 2600 | 2850 | 2850 | 2850 | 2850 | 3150 | 3150 | 3150 | 3550 | 3550 | 3550 | 3550 | 4300 | 4300 | 4300 | 4450 | 4450 |
| W          | STD/SSL mm | 1000 | 1000 | 1000 | 1000 | 1150 | 1150 | 1150 | 1150 | 1150 | 1100 | 1100 | 1100 | 1100 | 1250 | 1250 | 1250 | 1350 | 1350 |
| H          | STD/SSL mm | 1850 | 1850 | 1850 | 1850 | 1850 | 1850 | 1950 | 2000 | 2000 | 1850 | 1850 | 1850 | 1850 | 1950 | 1950 | 1950 | 2250 | 2250 |

## CLEARANCE AREA

CWW/K 901÷5802

500 | 500 | 800 | 500



## NOTES

1. Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
  2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL version are specified on technical brochure.

Electrical board side



FROM 267 KW TO 2473 KW.

# CWW/Y 1302-B÷9003-B

**WATERCOOLED LIQUID CHILLERS WITH SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGERS.**



The liquid Chillers of the CWW/Y 1302-B÷9003-B series, with R134a refrigerant, are designed to satisfy the needs of the service sector or industrial systems requiring high power.

Equipped with latest generation Screw compressors, shell and tube exchangers and connections for condensation with cooling tower water or well water or with a Dry-Cooler, these units can also be produced in super silent versions. Furthermore, they have a series of accessories which are factory fitted or supplied separately such as heat recuperator in series or in parallel, soft start and, if necessary, a device for operating a Heat Pump. Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation.



## VERSION

### CWW/Y

Cooling only

### CWW/Y/SSL

Super silenced cooling only

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors with built-in oil separator, suction filter, crankcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations. Each refrigerant circuit is supplied with an independent condenser. Water connections for cooling tower and Dry-Cooler operation; on request for well water.
- Shell and tube type evaporator, with two or three independent refrigerant circuits, depending on the model, and one water circuit, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|      |   |
|------|---|
| IM   | Automatic circuit breakers  |
| BT   | Low water temperature Kit   |
| HR   | Desuperheater   |
| HRT  | Total heat recovery   |
| FE   | Antifreeze heater for evaporator                                  |
| SS   | Soft start  |
| DP   | Device for heat pump operation                                    |
| WM   | Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP) |
| IS   | Modbus RTU protocol, RS485 serial interface                       |
| ISB  | BACnet MSTP protocol, RS485 serial interface                      |
| ISBT | BACnet TCP/IP protocol, Ethernet port                             |

|     |   |
|-----|---|
| ISL | LonWorks protocol, FFT-10 serial interface    |
| IAV | Remote set-point, 0-10 V signal               |
| IAA | Remote set-point, 4-20 mA signal              |
| IAS | Remote signal for second set-point activation |
| IDL | Demand limit from digital input               |
| CP  | Potential free contacts                       |

### LOOSE ACCESSORIES

|     |                                     |
|-----|-------------------------------------|
| MN  | High and low pressure gauges        |
| CR  | Remote control panel                |
| PV3 | 3-Way electronic pressostatic valve |
| AG  | Rubber shock absorbers              |
| AM  | Spring shock absorbers              |
| FL  | Flow switch                         |

# CWW/Y 1302-B÷9003-B



| MODEL                      |                       |            | 1302-B   | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 2802-B | 3002-B | 3602-B |
|----------------------------|-----------------------|------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | kW         | 267      | 323    | 374    | 426    | 488    | 577    | 660    | 750    | 892    |
|                            | Absorbed power (1)    | kW         | 57       | 69     | 80     | 90     | 99     | 123    | 136    | 150    | 182    |
|                            | EER (1)               |            | 4.68     | 4.68   | 4.68   | 4.73   | 4.93   | 4.69   | 4.85   | 5.00   | 4.90   |
| Cooling (EN14511)          | Cooling capacity (1)  | kW         | 266      | 322    | 372    | 424    | 486    | 574    | 657    | 747    | 889    |
|                            | Absorbed power (1)    | kW         | 59       | 72     | 83     | 94     | 103    | 128    | 142    | 157    | 189    |
|                            | EER (1)               |            | 4.47     | 4.48   | 4.46   | 4.51   | 4.74   | 4.48   | 4.62   | 4.77   | 4.70   |
|                            | ESEER                 |            | 5.40     | 5.43   | 5.27   | 5.27   | 5.51   | 5.26   | 5.17   | 5.29   | 5.45   |
| Compressor                 | Quantity              | n°         | 2        | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
|                            | Refrigerant circuits  | n°         | 2        | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
|                            | Capacity steps        | n°         | Stepless |        |        |        |        |        |        |        |        |
| Evaporator                 | Water flow            | l/s        | 12.76    | 15.43  | 17.87  | 20.35  | 23.32  | 27.57  | 31.53  | 35.83  | 42.62  |
|                            | Pressure drops        | kPa        | 51       | 43     | 55     | 60     | 48     | 61     | 67     | 66     | 47     |
|                            | Water connections     | DN         | 100      | 125    | 125    | 125    | 125    | 150    | 150    | 150    | 200    |
|                            | Condenser             | Water flow | l/s      | 15.48  | 18.71  | 21.67  | 24.67  | 28.00  | 33.43  | 38.00  | 42.99  |
| Pressure drops             |                       | kPa        | 43       | 49     | 51     | 47     | 36     | 52     | 48     | 45     | 57     |
| Water connections          |                       | DN         | 65       | 65     | 65     | 65     | 80     | 80     | 80     | 80     | 80     |
| Electrical characteristics | Power supply          | V/Ph/Hz    | 400/3/50 |        |        |        |        |        |        |        |        |
|                            | Max. running current  | A          | 178      | 214    | 238    | 270    | 306    | 354    | 398    | 438    | 518    |
|                            | Max. starting current | A          | 240      | 258    | 314    | 330    | 374    | 465    | 487    | 549    | 723    |
| Sound pressure             | STD version (2)       | dB(A)      | 76       | 76     | 76     | 76     | 76     | 76     | 76     | 77     | 78     |
|                            | SSL version (2)       | dB(A)      | 72       | 72     | 72     | 72     | 72     | 72     | 72     | 73     | 74     |
| Weights                    | Transport weight      | Kg         | 2124     | 2183   | 2309   | 2340   | 2973   | 3121   | 3174   | 4274   | 4613   |
|                            | Operating weight      | Kg         | 2240     | 2350   | 2480   | 2510   | 3160   | 3440   | 3490   | 4580   | 5050   |

| MODEL                      |                       |            | 4202-B   | 4402-B | 4802-B | 5402-B | 6002-B | 6603-B | 7203-B | 8103-B | 9003-B |
|----------------------------|-----------------------|------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | kW         | 1049     | 1159   | 1286   | 1438   | 1612   | 1789   | 1981   | 2204   | 2473   |
|                            | Absorbed power (1)    | kW         | 210      | 234    | 256    | 287    | 323    | 357    | 395    | 443    | 500    |
|                            | EER (1)               |            | 5.00     | 4.95   | 5.02   | 5.01   | 4.99   | 5.01   | 5.02   | 4.98   | 4.95   |
| Cooling (EN14511)          | Cooling capacity (1)  | kW         | 1045     | 1155   | 1281   | 1432   | 1604   | 1780   | 1972   | 2195   | 2456   |
|                            | Absorbed power (1)    | kW         | 219      | 244    | 269    | 299    | 339    | 374    | 415    | 463    | 528    |
|                            | EER (1)               |            | 4.78     | 4.73   | 4.77   | 4.79   | 4.73   | 4.76   | 4.75   | 4.74   | 4.65   |
|                            | ESEER                 |            | 5.18     | 5.03   | 4.94   | 5.12   | 5.20   | 5.16   | 5.12   | 5.07   | 5.23   |
| Compressor                 | Quantity              | n°         | 2        | 2      | 2      | 2      | 2      | 3      | 3      | 3      | 3      |
|                            | Refrigerant circuits  | n°         | 2        | 2      | 2      | 2      | 2      | 3      | 3      | 3      | 3      |
|                            | Capacity steps        | n°         | Stepless |        |        |        |        |        |        |        |        |
| Evaporator                 | Water flow            | l/s        | 50.12    | 55.37  | 61.44  | 68.70  | 77.02  | 85.47  | 94.65  | 105    | 118    |
|                            | Pressure drops        | kPa        | 62       | 51     | 59     | 65     | 81     | 77     | 74     | 65     | 119    |
|                            | Water connections     | DN         | 200      | 200    | 200    | 200    | 200    | 250    | 250    | 250    | 250    |
|                            | Condenser             | Water flow | l/s      | 60.17  | 66.55  | 73.67  | 82.42  | 92.45  | 102.53 | 113.52 | 126.47 |
| Pressure drops             |                       | kPa        | 49       | 66     | 77     | 66     | 63     | 66     | 78     | 73     | 63     |
| Water connections          |                       | DN         | 100      | 100    | 100    | 100    | 125    | 100    | 100    | 100    | 125    |
| Electrical characteristics | Power supply          | V/Ph/Hz    | 400/3/50 |        |        |        |        |        |        |        |        |
|                            | Max. running current  | A          | 602      | 602    | 658    | 818    | 834    | 903    | 987    | 1228   | 1251   |
|                            | Max. starting current | A          | 765      | 765    | 793    | 1610   | 1479   | 1066   | 1122   | 2019   | 1896   |
| Sound pressure             | STD version (2)       | dB(A)      | 79       | 80     | 80     | 81     | 82     | 81     | 82     | 83     | 85     |
|                            | SSL version (2)       | dB(A)      | 75       | 76     | 76     | 77     | 78     | ---    | ---    | ---    | ---    |
| Weights                    | Transport weight      | Kg         | 4645     | 4650   | 5360   | 5440   | 6000   | 7050   | 8450   | 8600   | 9250   |
|                            | Operating weight      | Kg         | 5100     | 5220   | 5940   | 6100   | 6690   | 7800   | 9350   | 9550   | 10270  |

| DIMENSIONS |            | 1302-B | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 2802-B | 3002-B | 3602-B | 4202-B | 4402-B | 4802-B | 5402-B | 6002-B | 6603-B | 7203-B | 8103-B | 9003-B |
|------------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L          | STD/SSL mm | 3550   | 3550   | 3300   | 3300   | 3300   | 3500   | 3500   | 3600   | 3600   | 3600   | 4800   | 4800   | 5200   | 5200   | 5200   | 5200   | 5500   | 5500   |
| W          | STD/SSL mm | 800    | 800    | 1400   | 1400   | 1400   | 1450   | 1450   | 1650   | 1650   | 1650   | 1800   | 1800   | 1800   | 1800   | 2200   | 2200   | 2200   | 2200   |
| H          | STD/SSL mm | 2000   | 2000   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   | 2150   |

## CLEARANCE AREA

CWW/Y 1302-B÷9003-B

|     |     |     |     |
|-----|-----|-----|-----|
| 500 | 500 | 800 | 500 |
|-----|-----|-----|-----|



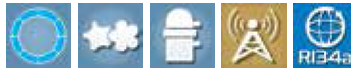
## NOTES

- Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
  - Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL version are specified on technical brochure.

FROM 235 KW TO 2168 KW.

# MEA/Y 1302-B÷9003-B

**CONDENSERLESS LIQUID CHILLERS WITH SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGER.**



The liquid Chillers for remote condensation of MEA/Y 1302-B÷9003-B series, with R134a refrigerant, are designed to satisfy the needs of the service sector or industrial systems which require high power with continual refrigerant delivery, space-saving units and quiet operation.

Combined with the remote condenser, these units are ideal for indoor installation and, equipped with a self-supporting structure that sustains the main components, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.

Equipped with latest generation screw compressors and shell and tube exchanger, these units can also be produced in a super silent version. They have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency. A series of accessories, factory fitted or supplied separately, rounds off the variety of equipment in this product range.



## VERSION

### MEA/Y

Cooling only

### MEA/Y/SSL

Super silenced cooling only

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors with built-in oil separator, suction filter, crankcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Shell and tube type evaporator, with two or three independent refrigerant circuits, depending on the model, and one water circuit, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|      |   |
|------|---|
| IM   | Automatic circuit breakers  |
| BT   | Low water temperature Kit   |
| HR   | Desuperheater   |
| HRT  | Total heat recovery   |
| FE   | Antifreeze heater for evaporator                                  |
| SS   | Soft start  |
| WM   | Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP) |
| IS   | Modbus RTU protocol, RS485 serial interface                       |
| ISB  | BACnet MSTP protocol, RS485 serial interface                      |
| ISBT | BACnet TCP/IP protocol, Ethernet port                             |
| ISL  | LonWorks protocol, FFT-10 serial interface                        |
| IAV  | Remote set-point, 0-10 V signal                                   |

|     |   |
|-----|---|
| IAA | Remote set-point, 4-20 mA signal              |
| IAS | Remote signal for second set-point activation |
| IDL | Demand limit from digital input               |
| CP  | Potential free contacts                       |

### LOOSE ACCESSORIES

|    |                              |
|----|------------------------------|
| MN | High and low pressure gauges |
| CR | Remote control panel         |
| AG | Rubber shock absorbers       |
| AM | Spring shock absorbers       |
| FL | Flow switch                  |

# MEA/Y 1302-B÷9003-B



| MODEL                      |                       |         | 1302-B   | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 2802-B | 3002-B | 3602-B |
|----------------------------|-----------------------|---------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | kW      | 235      | 279    | 325    | 375    | 424    | 526    | 599    | 672    | 778    |
|                            | Absorbed power (1)    | kW      | 73       | 85     | 103    | 118    | 133    | 158    | 176    | 193    | 228    |
| Compressor                 | Quantity              | n°      | 2        | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
|                            | Refrigerant circuits  | n°      | 2        | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
|                            | Capacity steps        | n°      | Stepless |        |        |        |        |        |        |        |        |
| Evaporator                 | Water flow            | l/s     | 11.23    | 13.33  | 15.53  | 17.92  | 20.26  | 25.13  | 28.62  | 32.11  | 37.17  |
|                            | Pressure drops        | kPa     | 49       | 34     | 39     | 41     | 34     | 50     | 48     | 55     | 51     |
|                            | Water connections     | DN      | 100      | 125    | 125    | 125    | 125    | 150    | 150    | 150    | 150    |
| Connections                | Delivery line         | Ø mm    | 2 x 42   | 2 x 42 | 2 x 54 | 2 x 54 | 2 x 54 | 2 x 64 | 2 x 64 | 2 x 76 | 2 x 76 |
|                            | Liquid line           | Ø mm    | 2 x 35   | 2 x 35 | 2 x 35 | 2 x 35 | 2 x 35 | 2 x 42 | 2 x 42 | 2 x 42 | 2 x 54 |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |        |        |        |        |        |        |        |        |
|                            | Max. running current  | A       | 178      | 214    | 238    | 270    | 306    | 354    | 398    | 438    | 518    |
|                            | Max. starting current | A       | 240      | 258    | 314    | 330    | 374    | 465    | 487    | 549    | 723    |
| Sound pressure             | STD version (2)       | dB(A)   | 76       | 76     | 76     | 76     | 76     | 76     | 76     | 77     | 78     |
|                            | SSL version (2)       | dB(A)   | 72       | 72     | 72     | 72     | 72     | 72     | 72     | 73     | 74     |
| Weights                    | Transport weight      | Kg      | 1480     | 1820   | 1840   | 1860   | 1900   | 2420   | 2540   | 2590   | 3190   |
|                            | Operating weight      | Kg      | 1570     | 1960   | 1990   | 2010   | 2040   | 2680   | 2820   | 2850   | 3460   |

| MODEL                      |                       |         | 4202-B   | 4402-B | 4802-B | 5402-B | 6002-B | 6603-B | 7203-B | 8103-B | 9003-B |
|----------------------------|-----------------------|---------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | kW      | 905      | 1015   | 1140   | 1282   | 1433   | 1566   | 1733   | 1909   | 2168   |
|                            | Absorbed power (1)    | kW      | 262      | 296    | 327    | 364    | 417    | 456    | 498    | 550    | 631    |
| Compressor                 | Quantity              | n°      | 2        | 2      | 2      | 2      | 2      | 3      | 3      | 3      | 3      |
|                            | Refrigerant circuits  | n°      | 2        | 2      | 2      | 2      | 2      | 3      | 3      | 3      | 3      |
|                            | Capacity steps        | n°      | Stepless |        |        |        |        |        |        |        |        |
| Evaporator                 | Water flow            | l/s     | 43.24    | 48.49  | 54.47  | 61.25  | 68.47  | 74.82  | 82.80  | 91.21  | 103.58 |
|                            | Pressure drops        | kPa     | 57       | 55     | 56     | 52     | 69     | 78     | 57     | 67     | 95     |
|                            | Water connections     | DN      | 150      | 200    | 200    | 200    | 200    | 250    | 250    | 250    | 250    |
| Connections                | Delivery line         | Ø mm    | 2 x 76   | 2 x 76 | 2 x 89 | 2 x 89 | 2 x 89 | 3 x 76 | 3 x 89 | 3 x 89 | 3 x 89 |
|                            | Liquid line           | Ø mm    | 2 x 54   | 2 x 54 | 2 x 54 | 2 x 54 | 2 x 54 | 3 x 54 | 3 x 54 | 3 x 54 | 3 x 54 |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |        |        |        |        |        |        |        |        |
|                            | Max. running current  | A       | 602      | 602    | 658    | 818    | 834    | 903    | 987    | 1228   | 1251   |
|                            | Max. starting current | A       | 765      | 765    | 793    | 1610   | 1479   | 1066   | 1122   | 2019   | 1896   |
| Sound pressure             | STD version (2)       | dB(A)   | 79       | 80     | 80     | 81     | 82     | 81     | 82     | 83     | 85     |
|                            | SSL version (2)       | dB(A)   | 75       | 76     | 76     | 77     | 78     | ---    | ---    | ---    | ---    |
| Weights                    | Transport weight      | Kg      | 3225     | 3525   | 4445   | 4530   | 4600   | 4980   | 6430   | 6555   | 6740   |
|                            | Operating weight      | Kg      | 3480     | 3980   | 4980   | 5040   | 5100   | 5570   | 7130   | 7290   | 7440   |

| DIMENSIONS |            | 1302-B | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 2802-B | 3002-B | 3602-B | 4202-B | 4402-B | 4802-B | 5402-B | 6002-B | 6603-B | 7203-B | 8103-B | 9003-B |
|------------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L          | STD/SSL mm | 3300   | 3300   | 3700   | 3700   | 3700   | 3800   | 4000   | 4000   | 4300   | 4300   | 4300   | 5100   | 5100   | 5100   | 4800   | 5300   | 5300   | 5300   |
| W          | STD/SSL mm | 800    | 800    | 800    | 800    | 800    | 1080   | 1080   | 1080   | 1080   | 1080   | 1080   | 1080   | 1080   | 1080   | 1600   | 1600   | 1600   | 1600   |
| H          | STD/SSL mm | 1700   | 1700   | 1700   | 1700   | 1700   | 1700   | 2100   | 2100   | 2100   | 2100   | 2100   | 2100   | 2100   | 2100   | 2100   | 2100   | 2100   | 2100   |

## CLEARANCE AREA

MEA/Y 1302-B÷9003-B



Electrical board side

## NOTES

1. Chilled water from 12 to 7 °C, condensing temperature 50 °C.
  2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL version are specified on technical brochure.

# RCA/Y 8141÷9282

REMOTE AIRCOOLED CONDENSERS WITH AXIAL FANS.



The Remote aircooled Condensers with axial fans of the RCA/Y series are designed to be combined with evaporating units with R134a refrigerant (MEA/Y). These units, available in three configurations depending on the degree of noiselessness required: Standard, Silenced (SL) and Super Silenced (SSL), are equipped with latest generation axial fans, with motor fan shrouds having a large radius of curvature to eliminate all the air flow turbulence and with larger plenum to uniform the air distribution on the cooling coil. The units, except the V shaped ones, can be installed with either horizontal or vertical air delivery, as needed.

## VERSION

RCA/Y

Base unit

## FEATURES

- Frame in oven painted with a polyurethane resin and galvanised steel casework.
- The cowlings of the motorfans are made with a wide bending radius to eliminate any turbulence in the airflow.
- Heat exchanger is made with corrugated tubes with a greater heat exchange surface, fins cut with a special louver configuration to give the best external coefficient of heat exchange.

## COMBINATIONS

| MEA/Y | 1302-B | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 2802-B | 3002-B | 3602-B | 4202-B |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| RCA/Y | 8141   | 8151   | 8161   | 8171   | 8172   | 8251   | 8261   | 8271   | 8281   | 8282   |
| MEA/Y | 4402-B | 4802-B | 5402-B | 6002-B | 6603-B | 7203-B | 8103-B | 9003-B |        |        |
| RCA/Y | 9261   | 9271   | 9281   | 9282   | 3x8251 | 3x8252 | 3x8262 | 3x8272 |        |        |

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

- SD Wiring integrated in branch circuit box
- FR Fan speed controller

### LOOSE ACCESSORIES

- SVV Supports for vertical air flow versions

# RCA/Y 8141÷9282

| MODEL                      |                  |         | 8141     | 8151  | 8161  | 8171  | 8172  | 8251  | 8252  | 8261  | 8262  |
|----------------------------|------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| Fan                        | Quantity         | n°      | 4        | 5     | 6     | 7     | 7     | 10    | 10    | 12    | 12    |
| Connections                | In               | Ø mm    | 2X64     | 2X64  | 2X76  | 2X76  | 2X76  | 2X64  | 2X64  | 2X76  | 2X76  |
|                            | Out              | Ø mm    | 2x42     | 2x42  | 2x42  | 2x54  | 2x54  | 2x42  | 2x42  | 2x42  | 2x42  |
| Electrical characteristics | Power supply     | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |       |
|                            | Absorbed power   | kW      | 7.40     | 9.25  | 11.10 | 12.95 | 12.95 | 9.25  | 9.25  | 11.10 | 11.10 |
|                            | Absorbed current | A       | 11.40    | 14.25 | 17.10 | 19.95 | 19.95 | 14.25 | 14.25 | 17.10 | 17.10 |
| Sound pressure             | STD version (1)  | dB(A)   | 55       | 56    | 57    | 57    | 57    | 58    | 58    | 59    | 59    |
| Weights                    | Transport weight | Kg      | 637      | 794   | 950   | 1027  | 1107  | 1325  | 1222  | 1461  | 1585  |
|                            | Operating weight | Kg      | 669      | 833   | 1022  | 1091  | 1192  | 1395  | 1276  | 1561  | 1716  |

| MODEL                      |                  |         | 8271     | 8272  | 8281  | 8282  | 9261  | 9271  | 9281  | 9282  |  |
|----------------------------|------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|--|
| Fan                        | Quantity         | n°      | 14       | 14    | 16    | 16    | 12    | 14    | 16    | 16    |  |
| Connections                | In               | Ø mm    | 2X76     | 2X76  | 2X76  | 2X76  | 2X76  | 2X76  | 2X76  | 2X76  |  |
|                            | Out              | Ø mm    | 2x54     | 2x54  | 2x54  | 2x54  | 2X64  | 2X64  | 2X64  | 2X64  |  |
| Electrical characteristics | Power supply     | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |  |
|                            | Absorbed power   | kW      | 12.95    | 12.95 | 14.80 | 14.80 | 12.60 | 14.70 | 16.80 | 16.80 |  |
|                            | Absorbed current | A       | 19.95    | 19.95 | 22.80 | 22.80 | 19.20 | 22.40 | 25.60 | 25.60 |  |
| Sound pressure             | STD version (1)  | dB(A)   | 59       | 59    | 60    | 60    | 57    | 57    | 58    | 58    |  |
| Weights                    | Transport weight | Kg      | 1702     | 1845  | 1942  | 2106  | 3056  | 3515  | 3974  | 3974  |  |
|                            | Operating weight | Kg      | 1855     | 1998  | 2074  | 2280  | 3187  | 3666  | 4145  | 4145  |  |

| DIMENSIONS |     |    | 8141 | 8151 | 8161 | 8171 | 8172 | 8251 | 8252 | 8261 | 8262 | 8271 | 8272 | 8281  | 8282  | 9261 | 9271 | 9281  | 9282  |
|------------|-----|----|------|------|------|------|------|------|------|------|------|------|------|-------|-------|------|------|-------|-------|
| L          | STD | mm | 5930 | 7280 | 8630 | 9980 | 9980 | 7280 | 7280 | 8630 | 8630 | 9980 | 9980 | 11330 | 11330 | 7990 | 9240 | 10490 | 10490 |
| W          | STD | mm | 1380 | 1380 | 1380 | 1380 | 1380 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400  | 2400  | 2400 | 2400 | 2400  | 2400  |
| H          | STD | mm | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565  | 1565  | 2260 | 2260 | 2260  | 2260  |

## CLEARANCE AREA

RCA/Y 8141-8282

RCA/Y 9261-9282



## NOTES

1. Sound pressure level measured in free field conditions at 10 m from the unit. According to ISO 3744.
- N.B. Combinations are made at condensing temperature 50 °C, ambient air temperature 35 °C.
- N.B. Clearance areas are specified on installation, use and maintenance manual.

# RCA/Y/SL 8231÷9282

SILENCED REMOTE AIRCOOLED CONDENSERS WITH AXIAL FANS.



The Remote aircooled Condensers with axial fans of the RCA/Y/SL series are designed to be combined with evaporating units with R134a refrigerant (MEA/Y). These units, available in three configurations depending on the degree of noiselessness required: Standard, Silenced (SL) and Super Silenced (SSL), are equipped with latest generation axial fans, with motor fan shrouds having a large radius of curvature to eliminate all the air flow turbulence and with larger plenum to uniform the air distribution on the cooling coil. The units, except the V shaped ones, can be installed with either horizontal or vertical air delivery, as needed.

## VERSION

RCA/Y/SL

Silenced unit

## FEATURES

- Frame in oven painted with a polyurethane resin and galvanised steel casework.
- The cowlings of the motorfans are made with a wide bending radius to eliminate any turbulence in the airflow.
- Heat exchanger is made with corrugated tubes with a greater heat exchange surface, fins cut with a special louver configuration to give the best external coefficient of heat exchange.

## COMBINATIONS

| MEA/Y    | 1302-B | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 2802-B | 3002-B | 3602-B | 4202-B |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| RCA/Y/SL | 8231   | 8232   | 8241   | 8242   | 8251   | 8261   | 8271   | 8281   | 9261   | 9271   |
| MEA/Y    | 4402-B | 4802-B | 5402-B | 6002-B | 6603-B | 7203-B | 8103-B | 9003-B |        |        |
| RCA/Y/SL | 9281   | 9282   | 2x8272 | 2x8282 | 3x9171 | 3x9172 | 3x9251 | 3x9252 |        |        |

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

- SD Wiring integrated in branch circuit box
- FR Fan speed controller

### LOOSE ACCESSORIES

- SVV Supports for vertical air flow versions



## RCA/Y/SL 8231÷9282

| MODEL                      |                  |         | 8231     | 8232 | 8241  | 8242  | 8251  | 8261  | 8271  | 8272  | 8281  |
|----------------------------|------------------|---------|----------|------|-------|-------|-------|-------|-------|-------|-------|
| Fan                        | Quantity         | n°      | 6        | 6    | 8     | 8     | 10    | 12    | 14    | 14    | 16    |
| Connections                | In               | Ø mm    | 2x54     | 2x54 | 2x54  | 2x54  | 2X64  | 2X76  | 2X76  | 2X76  | 2X76  |
|                            | Out              | Ø mm    | 2x42     | 2x42 | 2x35  | 2x42  | 2x42  | 2x42  | 2x54  | 2x54  | 2x54  |
| Electrical characteristics | Power supply     | V/Ph/Hz | 400/3/50 |      |       |       |       |       |       |       |       |
|                            | Absorbed power   | kW      | 5.55     | 5.55 | 7.40  | 7.40  | 9.25  | 11.10 | 12.95 | 12.95 | 14.80 |
|                            | Absorbed current | A       | 8.55     | 8.55 | 11.40 | 11.40 | 14.25 | 17.10 | 19.95 | 19.95 | 22.80 |
| Sound pressure             | SL version (1)   | dB(A)   | 49       | 49   | 50    | 50    | 51    | 52    | 52    | 52    | 53    |
| Weights                    | Transport weight | Kg      | 742      | 804  | 982   | 1065  | 1222  | 1461  | 1702  | 1845  | 1942  |
|                            | Operating weight | Kg      | 775      | 847  | 1025  | 1121  | 1276  | 1561  | 1819  | 1998  | 2074  |

| MODEL                      |                  |         | 8282     | 9171  | 9172  | 9251  | 9252  | 9261  | 9271  | 9281  | 9282  |
|----------------------------|------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| Fan                        | Quantity         | n°      | 16       | 7     | 7     | 10    | 10    | 12    | 14    | 16    | 16    |
| Connections                | In               | Ø mm    | 2X76     | 2X76  | 2X76  | 2X76  | 2X76  | 2X76  | 2X76  | 2X76  | 2X76  |
|                            | Out              | Ø mm    | 2x54     | 2x54  | 2x54  | 2x54  | 2x54  | 2x54  | 2X64  | 2X64  | 2X64  |
| Electrical characteristics | Power supply     | V/Ph/Hz | 400/3/50 |       |       |       |       |       |       |       |       |
|                            | Absorbed power   | kW      | 14.80    | 14.70 | 14.70 | 10.50 | 10.50 | 12.60 | 14.70 | 16.80 | 16.80 |
|                            | Absorbed current | A       | 22.80    | 22.40 | 22.40 | 16.00 | 16.00 | 19.20 | 22.40 | 25.60 | 25.60 |
| Sound pressure             | SL version (1)   | dB(A)   | 53       | 48    | 48    | 50    | 50    | 51    | 51    | 52    | 63    |
| Weights                    | Transport weight | Kg      | 2106     | 1747  | 1902  | 2451  | 2597  | 3056  | 3515  | 3974  | 3974  |
|                            | Operating weight | Kg      | 2280     | 1833  | 2015  | 2536  | 2707  | 3187  | 3666  | 4145  | 4145  |

| DIMENSIONS |    |    | 8231 | 8232 | 8241 | 8242 | 8251 | 8261 | 8271 | 8272 | 8281  | 8282  | 9171  | 9172  | 9251 | 9252 | 9261 | 9271 | 9281  | 9282  |      |
|------------|----|----|------|------|------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|-------|-------|------|
| L          | SL | mm | 4580 | 4580 | 5930 | 5930 | 7280 | 8630 | 9980 | 9980 | 11330 | 11330 | 10275 | 10275 | 6740 | 6740 | 7990 | 9240 | 10490 | 10490 |      |
| W          | SL | mm | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400 | 2400  | 2400  | 1170  | 1170  | 2400 | 2400 | 2400 | 2400 | 2400  | 2400  | 2400 |
| H          | SL | mm | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565  | 1565  | 1805  | 1805  | 2260 | 2260 | 2260 | 2260 | 2260  | 2260  |      |

### CLEARANCE AREA

RCA/Y/SL 8231÷8282

RCA/Y/SL 9171÷9282



### NOTES

1. Sound pressure level measured in free field conditions at 10 m from the unit. According to ISO 3744.
- N.B. Combinations are made at condensing temperature 50 °C, ambient air temperature 35 °C.
- N.B. Clearance areas are specified on installation, use and maintenance manual.

# RCA/Y/SSL 8151÷9281

**SUPER SILENCED REMOTE AIRCOOLED CONDENSERS WITH AXIAL FANS.**



The Remote aircooled Condensers with axial fans of the RCA/Y/SSL series are designed to be combined with evaporating units with R134a refrigerant (MEA/Y).

These units, available in three configurations depending on the degree of noiselessness required: Standard, Silenced (SL) and Super Silenced (SSL), are equipped with latest generation axial fans, with motor fan shrouds having a large radius of curvature to eliminate all the air flow turbulence and with larger plenum to uniform the air distribution on the cooling coil.

The units, except the V shaped ones, can be installed with either horizontal or vertical air delivery, as needed.

## VERSION

**RCA/Y/SSL**

Super silenced unit

## FEATURES

- Frame in oven painted with a polyurethane resin and galvanised steel casework.
- The cowlings of the motorfans are made with a wide bending radius to eliminate any turbulence in the airflow.
- Heat exchanger is made with corrugated tubes with a greater heat exchange surface, fins cut with a special louver configuration to give the best external coefficient of heat exchange.

## COMBINATIONS

| MEA/Y     | 1302-B | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 2802-B | 3002-B | 3602-B | 4202-B |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| RCA/Y/SSL | 8151   | 8161   | 8171   | 8251   | 8251   | 8261   | 8272   | 8282   | 9271   | 9272   |
| MEA/Y     | 4402-B | 4802-B | 5402-B | 6002-B | 6603-B | 7203-B | 8103-B | 9003-B |        |        |
| RCA/Y/SSL | 9281   | 2x8271 | 2x8281 | 2x8282 | 3x8261 | 3x8271 | 3x8272 | 3x8281 |        |        |

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

- SD Wiring integrated in branch circuit box
- FR Fan speed controller

### LOOSE ACCESSORIES

- SVV Supports for vertical air flow versions

# RCA/Y/SSL 8151÷9281

| MODEL                      |                  |         | 8151     | 8161 | 8171 | 8251 | 8261 | 8271 | 8272 | 8281 | 8282 | 9271  | 9272  | 9281  |
|----------------------------|------------------|---------|----------|------|------|------|------|------|------|------|------|-------|-------|-------|
| Fan                        | Quantity         | n°      | 5        | 6    | 7    | 10   | 12   | 14   | 14   | 16   | 16   | 14    | 14    | 16    |
| Connections                | In               | Ø mm    | 2X64     | 2X76 | 2X76 | 2X64 | 2X76 | 2X76 | 2X76 | 2x54 | 2x54 | 2X76  | 2X76  | 2X76  |
|                            | Out              | Ø mm    | 2x42     | 2x42 | 2x54 | 2x42 | 2x42 | 2x54 | 2x54 | 2x54 | 2x54 | 2X64  | 2X64  | 2X64  |
| Electrical characteristics | Power supply     | V/Ph/Hz | 400/3/50 |      |      |      |      |      |      |      |      |       |       |       |
|                            | Absorbed power   | kW      | 4.20     | 5.04 | 5.88 | 4.20 | 5.04 | 5.88 | 5.88 | 6.72 | 6.72 | 11.06 | 11.06 | 12.64 |
|                            | Absorbed current | A       | 7.0      | 8.4  | 9.8  | 7.0  | 8.4  | 9.8  | 9.8  | 11.2 | 11.2 | 17.5  | 17.5  | 20.0  |
| Sound pressure             | SSL version (1)  | dB(A)   | 47       | 48   | 48   | 49   | 50   | 50   | 50   | 51   | 51   | 50    | 50    | 51    |
| Weights                    | Transport weight | Kg      | 794      | 950  | 1107 | 1222 | 1585 | 1702 | 1845 | 1942 | 2106 | 3309  | 3515  | 3974  |
|                            | Operating weight | Kg      | 833      | 1022 | 1192 | 1276 | 1716 | 1855 | 1958 | 2116 | 2238 | 3426  | 3666  | 4145  |

1  
2  
3  
4  
5  
6  
7

| DIMENSIONS |     |    | 8151 | 8161 | 8171 | 8251 | 8261 | 8271 | 8272 | 8281  | 8282  | 9271 | 9272 | 9281  |
|------------|-----|----|------|------|------|------|------|------|------|-------|-------|------|------|-------|
| L          | SSL | mm | 7280 | 8630 | 9980 | 7280 | 8630 | 9980 | 9980 | 11330 | 11330 | 9240 | 9240 | 10490 |
| W          | SSL | mm | 1380 | 1380 | 1380 | 2400 | 2400 | 2400 | 2400 | 2400  | 2400  | 2400 | 2400 | 2400  |
| H          | SSL | mm | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565 | 1565  | 1565  | 2262 | 2262 | 2262  |

## CLEARANCE AREA

RCA/Y/SSL 8151-8282

RCA/Y/SSL 9271-9281



## NOTES

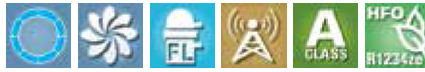
1. Sound pressure level measured in free field conditions at 10 m from the unit. According to ISO 3744.
- N.B. Combinations are made at condensing temperature 50 °C, ambient air temperature 35 °C.
- N.B. Clearance areas are specified on installation, use and maintenance manual.

FROM 321 KW TO 1922 KW.

# CWW/TTH 1701-1÷6606-1

**A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH TURBOCOR (MAGNETIC LEVITATION) COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGERS FOR COOLING TOWER OPERATION.**

**NEW**



The innovative CWW/TTH 1701-1 ÷ 6606-1 **TURBOLINE** units for **cooling tower** operation, featuring **A CLASS** energy efficiency and **HFO-R1234ze** refrigerant, are designed to provide an effective solution to highly selective system needs. The latest generation refrigerant HFO-R1234ze, with GWP<1 (Global warming Potential), is the most environmentally sustainable refrigerant on the market, and meets the strictest international environmental regulations. Furthermore, thanks to Turbocor compressors, the units perform with top efficiency at partial loads, low inrush currents, an excellent silent functioning and reduced weight.

Using **TURBOCOR** dynamic partial-load oil-free magnetic levitation compressors, managed by the **TURBOSOFT** self-adaptive electronic control and flooded shell and tube evaporators, provide high energy performance, with unbeatable **ESEER/IPLV** values, eliminating accumulation tanks and reaching low noise levels during operation. Compared to traditional Screw compressor units, **TURBOLINE** units have low operational costs during their entire use, with a savings that can even reach 50%. Besides, the units are equipped with the **WEB MONITORING** system, for remotely managing and monitoring the units by means of **GPRS/EDGE/3G/TCP-IP** communication protocol. The users enabled to use this service can, through dedicated Web page, access Monitoring, Management and Statistics activities.



**TURBOLINE**

**HFO R1234ze**

## VERSION

**CWW/TTH**

Cooling only for cooling tower

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic centrifugal compressors with dual Turbocor turbine, oil free, magnetic rising rotor, thermal protection, flow and delivery tap, continuous capacity adjustment system thanks to built-in INVERTER, automatic anti-cavitation system. The power circuit of the compressor is fitted with a set of electrolytic condensers to control the rising in the event of a power failure, reactor for the power factor correction, EMI filter for electromagnetic compatibility.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations.
- High efficiency flooded shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- HFO-R1234ze refrigerant.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors, interface relay and terminals for external connections.
- **TURBOSOFT** control and regulation system is fitted with RS485 serial interface and Web Monitoring device for remote monitoring via GPRS/EDGE/3G/TCP-IP network.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|      |  |
|------|--|
| IM   | Automatic circuit breakers                   |
| HR   | Desuperheater                                |
| HRT  | Total heat recovery                          |
| FE   | Antifreeze heater for evaporator             |
| TS   | Touch screen interface                       |
| ISB  | BACnet MSTP protocol, RS485 serial interface |
| ISBT | BACnet TCP/IP protocol, Ethernet port        |

|     |   |
|-----|---|
| ISL | LonWorks protocol, FFT-10 serial interface    |
| IAV | Remote set-point, 0-10 V signal               |
| IAA | Remote set-point, 4-20 mA signal              |
| IAS | Remote signal for second set-point activation |
| IDL | Demand limit from digital input               |
| CP  | Potential free contacts                       |

### LOOSE ACCESSORIES

|    |                              |
|----|------------------------------|
| MN | High and low pressure gauges |
| CR | Remote control panel         |
| AG | Rubber shock absorbers       |
| AM | Spring shock absorbers       |
| FL | Flow switch                  |

# CWW/TTH 1701-1÷6606-1



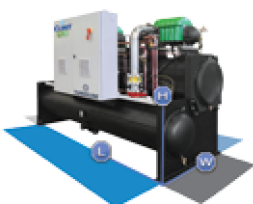
| MODEL                      |                       |         | 1701-1   | 2202-1 | 3303-1 | 4404-1 | 5505-1 | 6606-1 |
|----------------------------|-----------------------|---------|----------|--------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | kW      | 321      | 639    | 958    | 1279   | 1601   | 1922   |
|                            | Absorbed power (1)    | kW      | 54       | 108    | 162    | 216    | 271    | 325    |
|                            | EER (1)               |         | 5.94     | 5.92   | 5.91   | 5.92   | 5.91   | 5.91   |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 320      | 637    | 955    | 1276   | 1595   | 1916   |
|                            | Absorbed power (1)    | kW      | 56       | 110    | 165    | 220    | 277    | 331    |
|                            | EER (1)               |         | 5.71     | 5.79   | 5.79   | 5.80   | 5.76   | 5.79   |
|                            | ESEER                 |         | 8.51     | 8.85   | 8.87   | 8.93   | 8.99   | 9.03   |
| Compressor                 | EUROVENT Class        |         | A        | A      | A      | A      | A      | A      |
|                            | Quantity              | n°      | 1        | 2      | 3      | 4      | 5      | 6      |
|                            | Refrigerant circuits  | n°      | 1        | 1      | 1      | 1      | 1      | 1      |
|                            | Capacity steps        | n°      | Stepless |        |        |        |        |        |
| Evaporator                 | Water flow            | l/s     | 15.34    | 30.53  | 45.77  | 61.11  | 76.49  | 91.83  |
|                            | Pressure drops        | kPa     | 45       | 46     | 45     | 34     | 52     | 50     |
|                            | Water connections     | DN      | 100      | 125    | 150    | 150    | 200    | 200    |
| Condenser                  | Water flow            | l/s     | 17.93    | 35.69  | 53.51  | 71.43  | 89.44  | 107    |
|                            | Pressure drops        | kPa     | 49       | 50     | 49     | 50     | 55     | 52     |
|                            | Water connections     | DN      | 100      | 125    | 150    | 150    | 200    | 200    |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |        |        |        |        |        |
|                            | Max. running current  | A       | 150      | 300    | 450    | 600    | 750    | 900    |
|                            | Max. starting current | A       | 5        | 155    | 305    | 455    | 605    | 755    |
| Sound pressure             | STD version (2)       | dB(A)   | 72       | 74     | 76     | 76     | 77     | 78     |
| Weights                    | Transport weight      | Kg      | 1798     | 2837   | 3924   | 6408   | 7741   | 11474  |
|                            | Operating weight      | Kg      | 1930     | 3100   | 4340   | 7120   | 8780   | 13140  |

| DIMENSIONS |     |    | 1701-1 | 2202-1 | 3303-1 | 4404-1 | 5505-1 | 6606-1 |
|------------|-----|----|--------|--------|--------|--------|--------|--------|
| L          | STD | mm | 3400   | 3400   | 3450   | 4550   | 5500   | 6500   |
| W          | STD | mm | 1100   | 1150   | 1800   | 1800   | 1800   | 1800   |
| H          | STD | mm | 1800   | 1950   | 2050   | 2100   | 2100   | 2150   |

## CLEARANCE AREA

CWW/TTH 1701-1-6606-1

500 | 500 | 800 | 500



## NOTES

1. Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

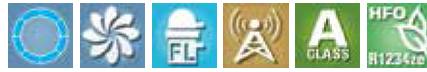
Electrical board side

FROM 301 KW TO 1802 KW.

# CWW/TTH/DR 1701-1÷6606-1

**A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH TURBOCOR (MAGNETIC LEVITATION) COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGERS FOR DRY-COOLER OPERATION.**

**NEW**



The innovative CWW/TTH/DR 1701-1 ÷ 6606-1 **TURBOLINE** units for **Dry-Cooler** operation, featuring **A CLASS** energy efficiency and **HFO-R1234ze** refrigerant, are designed to provide an effective solution to highly selective system needs. The latest generation refrigerant HFO-R1234ze, with GWP<1 (Global warming Potential), is the most environmentally sustainable refrigerant on the market, and meets the strictest international environmental regulations. Furthermore, thanks to Turbocor compressors, the units perform with top efficiency at partial loads, low inrush currents, an excellent silent functioning and reduced weight.

Using **TURBOCOR** dynamic partial-load oil-free magnetic levitation compressors, managed by the **TURBOSOFT** self-adaptive electronic control and flooded shell and tube evaporators, provide high energy performance, with unbeatable **ESEER/IPLV** values, eliminating accumulation tanks and reaching low noise levels during operation. Compared to traditional Screw compressor units, **TURBOLINE** units have low operational costs during their entire use, with a savings that can even reach 50%. Besides, the units are equipped with the **WEB MONITORING** system, for remotely managing and monitoring the units by means of **GPRS/EDGE/3G/TCP-IP** communication protocol. The users enabled to use this service can, through dedicated Web page, access Monitoring, Management and Statistics activities.



**TURBOLINE**

**HFO R1234ze**

## VERSION

**CWW/TTH/DR**

Cooling only for **Dry-Cooler**

## FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic centrifugal compressors with dual Turbocor turbine, oil free, magnetic rising rotor, thermal protection, flow and delivery tap, continuous capacity adjustment system thanks to built-in **INVERTER**, automatic anti-cavitation system. The power circuit of the compressor is fitted with a set of electrolytic condensers to control the rising in the event of a power failure, reactor for the power factor correction, EMI filter for electromagnetic compatibility.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations.
- High efficiency flooded shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- HFO-R1234ze refrigerant.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors, interface relay and terminals for external connections.
- **TURBOSOFT** control and regulation system is fitted with RS485 serial interface and Web Monitoring device for remote monitoring via **GPRS/EDGE/3G/TCP-IP** network.

## ACCESSORIES

### FACTORY FITTED ACCESSORIES

|      |  |
|------|--|
| IM   | Automatic circuit breakers                   |
| HR   | Desuperheater                                |
| HRT  | Total heat recovery                          |
| FE   | Antifreeze heater for evaporator             |
| TS   | Touch screen interface                       |
| ISB  | BACnet MSTP protocol, RS485 serial interface |
| ISBT | BACnet TCP/IP protocol, Ethernet port        |

|     |   |
|-----|---|
| ISL | LonWorks protocol, FFT-10 serial interface    |
| IAV | Remote set-point, 0-10 V signal               |
| IAA | Remote set-point, 4-20 mA signal              |
| IAS | Remote signal for second set-point activation |
| IDL | Demand limit from digital input               |
| CP  | Potential free contacts                       |

### LOOSE ACCESSORIES

|    |                              |
|----|------------------------------|
| MN | High and low pressure gauges |
| CR | Remote control panel         |
| AG | Rubber shock absorbers       |
| AM | Spring shock absorbers       |
| FL | Flow switch                  |

# CWW/TTH/DR 1701-1÷6606-1



| MODEL                      |                       | 1701-1  | 2202-1   | 3303-1 | 4404-1 | 5505-1 | 6606-1 |       |
|----------------------------|-----------------------|---------|----------|--------|--------|--------|--------|-------|
| Cooling                    | Cooling capacity (1)  | kW      | 301      | 603    | 899    | 1203   | 1499   | 1802  |
|                            | Absorbed power (1)    | kW      | 71       | 142    | 212    | 283    | 354    | 424   |
|                            | EER (1)               |         | 4.24     | 4.25   | 4.24   | 4.25   | 4.23   | 4.25  |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 300      | 601    | 896    | 1200   | 1494   | 1797  |
|                            | Absorbed power (1)    | kW      | 72       | 144    | 215    | 286    | 359    | 429   |
|                            | EER (1)               |         | 4.17     | 4.17   | 4.17   | 4.20   | 4.16   | 4.19  |
| Compressor                 | Quantity              | n°      | 1        | 2      | 3      | 4      | 5      | 6     |
|                            | Refrigerant circuits  | n°      | 1        | 1      | 1      | 1      | 1      | 1     |
|                            | Capacity steps        | n°      | Stepless |        |        |        |        |       |
| Evaporator                 | Water flow            | l/s     | 14.38    | 28.81  | 42.95  | 57.48  | 71.62  | 86.10 |
|                            | Pressure drops        | kPa     | 41       | 42     | 41     | 30     | 47     | 44    |
|                            | Water connections     | DN      | 100      | 125    | 150    | 150    | 200    | 200   |
| Condenser                  | Water flow            | l/s     | 19,40    | 38,80  | 58,00  | 77,70  | 96,70  | 116   |
|                            | Pressure drops        | kPa     | 55       | 56     | 55     | 56     | 62     | 58    |
|                            | Water connections     | DN      | 100      | 125    | 150    | 150    | 200    | 200   |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |        |        |        |        |       |
|                            | Max. running current  | A       | 150      | 300    | 450    | 600    | 750    | 900   |
|                            | Max. starting current | A       | 5        | 155    | 305    | 455    | 605    | 755   |
| Sound pressure             | STD version (2)       | dB(A)   | 72       | 74     | 76     | 76     | 77     | 78    |
|                            | Transport weight      | Kg      | 1849     | 2919   | 4065   | 6587   | 7942   | 11716 |
| Weights                    | Operating weight      | Kg      | 1990     | 3200   | 4510   | 7340   | 9040   | 13460 |

| DIMENSIONS |     |    | 1701-1 | 2202-1 | 3303-1 | 4404-1 | 5505-1 | 6606-1 |
|------------|-----|----|--------|--------|--------|--------|--------|--------|
| L          | STD | mm | 3400   | 3400   | 3450   | 4550   | 5500   | 6500   |
| W          | STD | mm | 1100   | 1150   | 1800   | 1800   | 1800   | 1800   |
| H          | STD | mm | 1800   | 1950   | 2050   | 2100   | 2100   | 2150   |

## CLEARANCE AREA

CWW/TTH/DR 1701-1-6606-1

|     |     |     |     |
|-----|-----|-----|-----|
| 500 | 500 | 800 | 500 |
|-----|-----|-----|-----|



## NOTES

- Chilled water from 12 to 7 °C, temperature at the condenser (with ethylene glycol at 35%) from 40 to 45 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

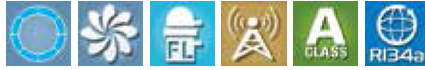
Electrical board side



FROM 319 KW TO 3912 KW.

# CWW/TTY 1601-1 ÷ 14406-1

**A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH TURBOCOR (MAGNETIC LEVITATION) COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGERS FOR COOLING TOWER OPERATION.**



The innovative CWW/TTY 1601-1 ÷ 14406-1 **TURBOLINE** units for **cooling tower** operation, featuring A CLASS energy efficiency, are designed to provide an effective solution to highly selective system needs. Efficiency at partial loads, low breakaway starting current, low levels of operational noise, reduced weight and the specific design and handling every manufacturing aspect, make the TURBOLINE series the top of the range.

Using TURBOCOR dynamic partial-load oil-free magnetic levitation compressors, managed by the TURBOSOFT self-adaptive electronic control and flooded shell and tube evaporators, provide high energy performance, with unbeatable ESEER/IPLV values, eliminating accumulation tanks and reaching low noise levels during operation. Compared to traditional Screw compressor units, TURBOLINE units have low operational costs during their entire use, with a savings that can even reach 50%. Besides, the units are equipped with the WEB MONITORING system, for remotely managing and monitoring the units by means of GPRS/EDGE/3G/TCP-IP communication protocol. The users enabled to use this service can, through dedicated Web page, access Monitoring, Management and Statistics activities.



## TURBOLINE

### VERSION

**CWW/TTY**

Cooling only for cooling tower

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic centrifugal compressors with dual Turbocor turbine, oil free, magnetic rising rotor, thermal protection, flow and delivery tap, continuous capacity adjustment system thanks to built-in INVERTER, automatic anti-cavitation system. The power circuit of the compressor is fitted with a set of electrolytic condensers to control the rising in the event of a power failure, reactor for the power factor correction, EMI filter for electromagnetic compatibility.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations.
- High efficiency flooded shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a refrigerant.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors, interface relay and terminals for external connections.
- TURBOSOFT control and regulation system is fitted with RS485 serial interface and Web Monitoring device for remote monitoring via GPRS/EDGE/3G/TCP-IP network.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|      |  |
|------|--|
| IM   | Automatic circuit breakers                   |
| HR   | Desuperheater                                |
| HRT  | Total heat recovery                          |
| FE   | Antifreeze heater for evaporator             |
| TS   | Touch screen interface                       |
| ISB  | BACnet MSTP protocol, RS485 serial interface |
| ISBT | BACnet TCP/IP protocol, Ethernet port        |

|     |   |
|-----|---|
| ISL | LonWorks protocol, FFT-10 serial interface    |
| IAV | Remote set-point, 0-10 V signal               |
| IAA | Remote set-point, 4-20 mA signal              |
| IAS | Remote signal for second set-point activation |
| IDL | Demand limit from digital input               |
| CP  | Potential free contacts                       |

#### LOOSE ACCESSORIES

|    |                              |
|----|------------------------------|
| MN | High and low pressure gauges |
| CR | Remote control panel         |
| AG | Rubber shock absorbers       |
| AM | Spring shock absorbers       |
| FL | Flow switch                  |

# CWW/TTY 1601-1÷14406-1



| MODEL                      |                       |         | 1601-1   | 2001-1 | 2501-1 | 3002-1 | 3502-1 | 4002-1 | 4203-1 | 4602-1 | 5103-1 | 5202-1 |
|----------------------------|-----------------------|---------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | kW      | 319      | 421    | 519    | 642    | 712    | 838    | 962    | 1040   | 1260   | 1302   |
|                            | Absorbed power (1)    | kW      | 55       | 71     | 85     | 110    | 121    | 141    | 166    | 170    | 213    | 206    |
|                            | EER (1)               |         | 5.80     | 5.93   | 6.11   | 5.84   | 5.88   | 5.94   | 5.80   | 6.12   | 5.92   | 6.32   |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 318      | 420    | 517    | 640    | 710    | 835    | 958    | 1036   | 1255   | 1298   |
|                            | Absorbed power (1)    | kW      | 55       | 72     | 87     | 112    | 123    | 143    | 167    | 174    | 216    | 210    |
|                            | EER (1)               |         | 5.78     | 5.83   | 5.94   | 5.71   | 5.77   | 5.84   | 5.74   | 5.95   | 5.81   | 6.18   |
|                            | ESEER                 |         | 8.12     | 8.29   | 8.51   | 8.57   | 8.66   | 8.70   | 8.55   | 8.97   | 8.70   | 9.21   |
| Compressor                 | EUROVENT Class        |         | A        | A      | A      | A      | A      | A      | A      | A      | A      | A      |
|                            | Quantity              | n°      | 1        | 1      | 1      | 2      | 2      | 2      | 3      | 2      | 3      | 2      |
|                            | Refrigerant circuits  | n°      | 1        | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| Evaporator                 | Capacity steps        | n°      | Stepless |        |        |        |        |        |        |        |        |        |
|                            | Water flow            | l/s     | 15.24    | 20.11  | 24.80  | 30.67  | 34.02  | 40.04  | 45.96  | 49.69  | 60.20  | 62.21  |
|                            | Pressure drops        | kPa     | 46       | 48     | 50     | 49     | 42     | 53     | 57     | 53     | 59     | 45     |
|                            | Water connections     | DN      | 100      | 100    | 100    | 125    | 125    | 125    | 150    | 150    | 150    | 150    |
| Condenser                  | Water flow            | l/s     | 17.87    | 23.51  | 28.86  | 35.93  | 39.80  | 46.77  | 53.89  | 57.81  | 70.38  | 72.05  |
|                            | Pressure drops        | kPa     | 46       | 45     | 37     | 45     | 38     | 46     | 47     | 48     | 44     | 47     |
|                            | Water connections     | DN      | 100      | 100    | 125    | 125    | 125    | 125    | 150    | 150    | 150    | 150    |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |        |        |        |        |        |        |        |        |        |
|                            | Max. running current  | A       | 145      | 231    | 187    | 290    | 462    | 462    | 435    | 374    | 693    | 420    |
|                            | Max. starting current | A       | 2        | 2      | 2      | 147    | 233    | 233    | 292    | 189    | 464    | 212    |
| Sound pressure             | STD version (2)       | dB(A)   | 72       | 74     | 74     | 75     | 76     | 77     | 76     | 76     | 77     | 77     |
| Weights                    | Transport weight      | Kg      | 1795     | 2060   | 2360   | 2870   | 3225   | 3325   | 3715   | 3540   | 4235   | 4155   |
|                            | Operating weight      | Kg      | 1920     | 2230   | 2580   | 3120   | 3560   | 3660   | 4070   | 3940   | 4720   | 4740   |

| MODEL                      |                       |         | 5303-1   | 5703-1 | 6204-1 | 7303-1 | 7603-1 | 8104-1 | 9704-1 | 10104-1 | 12605-1 | 14406-1 |
|----------------------------|-----------------------|---------|----------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| Cooling                    | Cooling capacity (1)  | kW      | 1427     | 1563   | 1676   | 1787   | 1944   | 2080   | 2382   | 2600    | 3245    | 3912    |
|                            | Absorbed power (1)    | kW      | 238      | 257    | 281    | 295    | 306    | 341    | 396    | 411     | 511     | 617     |
|                            | EER (1)               |         | 6.00     | 6.08   | 5.96   | 6.06   | 6.35   | 6.10   | 6.02   | 6.33    | 6.35    | 6.34    |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 1423     | 1559   | 1671   | 1783   | 1939   | 2075   | 2376   | 2592    | 3234    | 3898    |
|                            | Absorbed power (1)    | kW      | 242      | 260    | 286    | 298    | 311    | 346    | 401    | 419     | 522     | 631     |
|                            | EER (1)               |         | 5.88     | 6.00   | 5.84   | 5.98   | 6.23   | 6.00   | 5.93   | 6.19    | 6.20    | 6.18    |
|                            | ESEER                 |         | 8.74     | 8.89   | 8.77   | 9.16   | 9.26   | 8.96   | 8.99   | 9.24    | 9.26    | 9.31    |
| Compressor                 | EUROVENT Class        |         | A        | A      | A      | A      | A      | A      | A      | A       | A       | A       |
|                            | Quantity              | n°      | 3        | 3      | 4      | 3      | 3      | 4      | 4      | 4       | 5       | 6       |
|                            | Refrigerant circuits  | n°      | 1        | 1      | 1      | 1      | 1      | 1      | 1      | 1       | 1       | 1       |
| Evaporator                 | Capacity steps        | n°      | Stepless |        |        |        |        |        |        |         |         |         |
|                            | Water flow            | l/s     | 68.18    | 74.68  | 80.08  | 85.38  | 92.88  | 99.38  | 113.81 | 124.22  | 155.04  | 186.91  |
|                            | Pressure drops        | kPa     | 45       | 54     | 48     | 28     | 36     | 36     | 37     | 48      | 58      | 62      |
|                            | Water connections     | DN      | 200      | 200    | 200    | 200    | 200    | 200    | 250    | 250     | 300     | 300     |
| Condenser                  | Water flow            | l/s     | 79.55    | 86.96  | 93.50  | 99.47  | 107.50 | 115.67 | 132.71 | 143.86  | 179.45  | 216.39  |
|                            | Pressure drops        | kPa     | 42       | 49     | 35     | 36     | 45     | 46     | 36     | 46      | 50      | 52      |
|                            | Water connections     | DN      | 200      | 200    | 200    | 200    | 200    | 250    | 250    | 250     | 300     | 300     |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |        |        |        |        |        |        |         |         |         |
|                            | Max. running current  | A       | 561      | 561    | 924    | 630    | 630    | 748    | 840    | 840     | 1050    | 1260    |
|                            | Max. starting current | A       | 376      | 376    | 695    | 422    | 422    | 563    | 632    | 632     | 842     | 1052    |
| Sound pressure             | STD version (2)       | dB(A)   | 78       | 78     | 79     | 78     | 78     | 78     | 79     | 79      | 80      | 80      |
| Weights                    | Transport weight      | Kg      | 4725     | 4825   | 7355   | 7730   | 7880   | 8350   | 9330   | 9430    | 14440   | 18420   |
|                            | Operating weight      | Kg      | 5310     | 5410   | 8190   | 8760   | 8910   | 9400   | 10520  | 10620   | 16590   | 21260   |

| DIMENSIONS |     |    | 1601-1 | 2001-1 | 2501-1 | 3002-1 | 3502-1 | 4002-1 | 4203-1 | 4602-1 | 5103-1 | 5202-1 |
|------------|-----|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L          | STD | mm | 3400   | 3400   | 3400   | 3400   | 3400   | 3400   | 3400   | 3400   | 3450   | 3450   |
| W          | STD | mm | 1100   | 1150   | 1150   | 1150   | 1250   | 1250   | 1700   | 1300   | 1800   | 1400   |
| H          | STD | mm | 1800   | 1850   | 1950   | 1950   | 2000   | 2000   | 2000   | 2050   | 2050   | 2100   |

| DIMENSIONS |     |    | 5303-1 | 5703-1 | 6204-1 | 7303-1 | 7603-1 | 8104-1 | 9704-1 | 10104-1 | 12605-1 | 14406-1 |
|------------|-----|----|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| L          | STD | mm | 3450   | 3450   | 4500   | 4500   | 4500   | 4500   | 4750   | 4750    | 5750    | 6750    |
| W          | STD | mm | 1800   | 1800   | 1750   | 1800   | 1800   | 1800   | 1800   | 1800    | 1950    | 2100    |
| H          | STD | mm | 2100   | 2100   | 2100   | 2150   | 2150   | 2150   | 2200   | 2200    | 2350    | 2400    |

## CLEARANCE AREA

CWW/TTY 1601-1÷14406-1

500 500 800 500



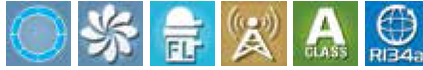
## NOTES

- Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

Electrical board side

# CWW/TTY/DR 1601-1÷6204-1

**A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH TURBOCOR (MAGNETIC LEVITATION) COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGERS FOR DRY-COOLER OPERATION.**



The innovative CWW/TTY/DR 1601-1÷6204-1 **TURBOLINE** units for **Dry-Cooler** operation, featuring A CLASS energy efficiency, are designed to provide an effective solution for highly selective system needs. Efficiency at partial loads, low breakaway starting current, low levels of operational noise, reduced weight and the specific design and handling every manufacturing aspect, make the TURBOLINE series the top of the range.

Using TURBOCOR dynamic partial-load oil-free magnetic levitation compressors, managed by the TURBOSOFT self-adaptive electronic control and flooded shell and tube evaporators, provide high energy performance, with unbeatable ESEER/IPLV values, eliminating accumulation tanks and reaching low noise levels during operation. Compared to traditional Screw compressor units, TURBOLINE units have low operational costs during their entire use, with a savings that can even reach 50%. Besides, the units are equipped with the WEB MONITORING system, for remotely managing and monitoring the units by means of GPRS/EDGE/3G/TCP-IP communication protocol. The users enabled to use this service can, through dedicated Web page, access Monitoring, Management and Statistics activities.



## TURBOLINE

### VERSION

**CWW/TTY/DR**

Cooling only for **Dry-Cooler**

### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic centrifugal compressors with dual Turbocor turbine, oil free, magnetic rising rotor, thermal protection, flow and delivery tap, continuous capacity adjustment system thanks to built-in INVERTER, automatic anti-cavitation system. The power circuit of the compressor is fitted with a set of electrolytic condensers to control the rising in the event of a power failure, reactor for the power factor correction, EMI filter for electromagnetic compatibility.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations.
- High efficiency flooded shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a refrigerant.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors, interface relay and terminals for external connections.
- TURBOSOFT control and regulation system is fitted with RS485 serial interface and Web Monitoring device for remote monitoring via GPRS/EDGE/3G/TCP-IP network.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

|      |  |
|------|--|
| IM   | Automatic circuit breakers                   |
| HR   | Desuperheater                                |
| HRT  | Total heat recovery                          |
| FE   | Antifreeze heater for evaporator             |
| TS   | Touch screen interface                       |
| ISB  | BACnet MSTP protocol, RS485 serial interface |
| ISBT | BACnet TCP/IP protocol, Ethernet port        |
| ISL  | LonWorks protocol, FFT-10 serial interface   |
| IAV  | Remote set-point, 0-10 V signal              |

|     |   |
|-----|---|
| IAA | Remote set-point, 4-20 mA signal              |
| IAS | Remote signal for second set-point activation |
| IDL | Demand limit from digital input               |
| CP  | Potential free contacts                       |

#### LOOSE ACCESSORIES

|    |                              |
|----|------------------------------|
| MN | High and low pressure gauges |
| CR | Remote control panel         |
| AG | Rubber shock absorbers       |
| AM | Spring shock absorbers       |
| FL | Flow switch                  |

# CWW/TTY/DR 1601-1÷6204-1



| MODEL                      |                       | 1601-1  | 2001-1   | 3002-1 | 4002-1 | 4203-1 | 5103-1 | 6204-1 |        |
|----------------------------|-----------------------|---------|----------|--------|--------|--------|--------|--------|--------|
| Cooling                    | Cooling capacity (1)  | kW      | 298      | 395    | 598    | 792    | 894    | 1185   | 1584   |
|                            | Absorbed power (1)    | kW      | 70       | 92     | 141    | 186    | 211    | 277    | 372    |
|                            | EER (1)               |         | 4.26     | 4.29   | 4.24   | 4.26   | 4.24   | 4.28   | 4.26   |
| Cooling (EN14511)          | Cooling capacity (1)  | kW      | 297      | 394    | 596    | 789    | 891    | 1180   | 1579   |
|                            | Absorbed power (1)    | kW      | 71       | 94     | 144    | 189    | 214    | 282    | 376    |
|                            | EER (1)               |         | 4.18     | 4.19   | 4.14   | 4.17   | 4.16   | 4.18   | 4.20   |
| Compressor                 | Quantity              | n°      | 1        | 1      | 2      | 2      | 3      | 3      | 4      |
|                            | Refrigerant circuits  | n°      | 1        | 1      | 1      | 1      | 1      | 1      | 1      |
|                            | Capacity steps        | n°      | Stepless |        |        |        |        |        |        |
| Evaporator                 | Water flow            | l/s     | 14.24    | 18.87  | 28.57  | 37.84  | 42.71  | 56.62  | 75.68  |
|                            | Pressure drops        | kPa     | 44       | 45     | 48     | 50     | 54     | 56     | 42     |
|                            | Water connections     | DN      | 100      | 100    | 125    | 125    | 150    | 150    | 200    |
| Condenser                  | Water flow            | l/s     | 19.20    | 25.40  | 38.55  | 51.02  | 57.64  | 76.26  | 102.03 |
|                            | Pressure drops        | kPa     | 58       | 52     | 57     | 53     | 59     | 52     | 40     |
|                            | Water connections     | DN      | 100      | 100    | 125    | 125    | 150    | 150    | 200    |
| Electrical characteristics | Power supply          | V/Ph/Hz | 400/3/50 |        |        |        |        |        |        |
|                            | Max. running current  | A       | 145      | 231    | 290    | 462    | 435    | 693    | 924    |
|                            | Max. starting current | A       | 2        | 2      | 147    | 233    | 292    | 464    | 695    |
| Sound pressure             | STD version (2)       | dB(A)   | 72       | 74     | 75     | 76     | 76     | 77     | 78     |
|                            | Transport weight      | Kg      | 1840     | 2115   | 2955   | 3430   | 3855   | 4415   | 7555   |
| Weights                    | Operating weight      | Kg      | 1980     | 2300   | 3220   | 3790   | 4240   | 4940   | 8450   |

| DIMENSIONS |     |    | 1601-1 | 2001-1 | 3002-1 | 4002-1 | 4203-1 | 5103-1 | 6204-1 |
|------------|-----|----|--------|--------|--------|--------|--------|--------|--------|
| L          | STD | mm | 3400   | 3400   | 3400   | 3400   | 3400   | 3450   | 4500   |
| W          | STD | mm | 1100   | 1150   | 1150   | 1250   | 1700   | 1800   | 1750   |
| H          | STD | mm | 1800   | 1850   | 1950   | 2000   | 2000   | 2050   | 2100   |

## CLEARANCE AREA

CWW/TTY/DR 1601-1-6204-1

500 | 500 | 800 | 500



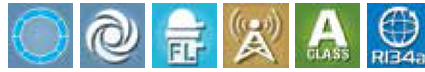
## NOTES

1. Chilled water from 12 to 7 °C, temperature at the condenser (with ethylene glycol at 35%) from 40 to 45 °C.
2. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

Electrical board side

# CWW/CCY 4031÷11682

**A CLASS ENERGY EFFICIENCY WATERCOOLED LIQUID CHILLERS WITH (INVERTER) CENTRIFUGAL COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGERS.**



The CWW / CCY 4031 ÷ 11682 **CENTRITEK** units, with R134a refrigerant and innovative technology, are the technologic and innovative heart of the most selective air conditioning and refrigeration systems. These units, provided with touch screen interface and featuring A CLASS energy efficiency, are designed especially for large size systems, intensively used throughout the year. The units, equipped with Inverter technology, combined with the use of last generation Centrifugal compressors, reach outstanding EER and ESEER/ IPLV energy coefficients: respectively up to 6,2 at full load and up to 10 at partial load. The extremely high reliability of the series is achieved through the careful control of power, even at partial loads, which minimizes the number of stops and starts and extends the useful life of the compressor. The solidity of the mechanical parts and the wide range of solutions in terms of accessories and system arrangements make the unit sturdy, but at the same time flexible, suitable for any type of application. In addition, the units are equipped with a WEB MONITORING system, for the monitoring and remote management of the units through the communication protocol GPRS/EDGE/3G/TCP-IP. Users enabled to the use of this service can, by using a specific webpage, have access to the Monitoring, Managing and Statistics activities.

## CENTRITEK

### INVERTER CENTRIFUGAL

#### VERSION

**CWW/CCY**

Cooling only

#### FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Single stage gear driven semi – hermetic Centrifugal compressor with high strength aluminum alloy impeller. The compressor is complete with gear drive and loading and unloading mechanism consisting of inlet guide vanes. The electric motor is an accessible hermetically sealed liquid refrigerant cooled squirrel cage two pole induction motor.
- Shell and tube type condenser, with easily removable cast iron heads to enable access for maintenance operations.
- High efficiency flooded shell and tube type evaporator, with one circuit on the refrigerant side and one on the water side, complete with water differential pressure switch.
- R134a refrigerant.
- Lubrication system with submersible oil pump, to prevent any sudden changes in tension.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors, interface relay and terminals for external connections.
- CENTRISOFT control and regulation system is fitted with RS485 serial interface and Web monitoring device for remote monitoring via GPRS/EDGE/3G/TCP-IP network.

#### ACCESSORIES

##### FACTORY FITTED ACCESSORIES

|    |   |
|----|---|
| MW | Marine water boxes                      |
| PW | High water pressure heat exchangers     |
| CK | Cupro – Nickel or Stainless Steel tubes |
| FE | Antifreeze heater for evaporator        |
| IV | Inverter on compressor                  |
| SS | Soft start                              |

# CWW/CCY 4031÷11682



| MODEL                |                  |    | 4031      | 4631      | 5241      | 5841      | 8062      | 9262      | 10482     | 11682     |
|----------------------|------------------|----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Cooling capacity (1) |                  | kW | 1050÷2150 | 1950÷3000 | 2650÷3000 | 3000÷4400 | 1400÷2300 | 2100÷4300 | 4000÷6000 | 5600÷9000 |
|                      | Transport weight | Kg | 9350      | 14550     | 15900     | 15900     | 20200     | 20200     | 26850     | 26850     |
| Weights              | Operating weight | Kg | 10100     | 17100     | 19000     | 19000     | 23400     | 23400     | 31300     | 31300     |

1  
2  
3  
4  
5  
6  
7

| DIMENSIONS |     |    | 4031 | 4631 | 5241 | 5841 | 8062 | 9262 | 10482 | 11682 |
|------------|-----|----|------|------|------|------|------|------|-------|-------|
| Max length | STD | mm | 4270 | 4450 | 4450 | 4450 | 5560 | 5560 | 5710  | 5710  |
| Max width  | STD | mm | 2670 | 2700 | 2700 | 2700 | 2540 | 2540 | 2970  | 2970  |
| Max height | STD | mm | 2030 | 2490 | 2650 | 2650 | 2350 | 2350 | 3130  | 2870  |

## CLEARANCE AREA

CWW/CCY 4031÷11682

## NOTES

1. Chilled water from 12 to 7 °C, water temperature at the condenser from 30 to 35 °C.



Electrical board side