

HEAT PUMPS R407C – R134A – R22

WATER COOLED HEAT PUMPS

WITH SCROLL COMPRESSORS (SINGLE AND TANDEM)



PWE 352.Ka+CF

PWE... Series

1 or 2 refrigerant circuits – cooling capacities from 32 to 350 kW

Packaged heat pumps suitable for cooling and heating plants in air conditioning systems and industrial premises.

WARNING: units with inversion on water side (and not on refrigerant side) to be realized, on customer charge, during installation.

Designed for internal installation.

Realized with a compact support frame, made of bent and painted steel profiles, supporting all the main components, installed at sight.

1 or 2 refrigerant circuits

Available versions are the following:

PWE...K with ecological gas R407C

PWE...Ka with ecological gas R134a

PWE...standard version with R22

Made up of:

High efficiency Scroll compressors (COP 3,37 under ARI conditions) with low sound level (on average 6 dB (A) less than the corresponding hermetic compressors), with internal heat protection, mounted on dampers.

Units with 1 or 2 cooling circuits with bigger capacity are provided with scroll tandem compressors.

Weld-brazed plate evaporators with one or two circuits with thermal insulation.

Weld-brazed plate condensers with one or two circuits.

Electric panel in compliance with CE norms, supplied with protection fuses and safety transformer.

Every cooling circuit is composed of: thermostatic expansion valve, sight glass, dehydrating filter, safety device, antifreeze safety device, high and low pressure switches, high and low pressure gauges.

Electronic microprocessor for the control on all units.

Compressors hour counter.

Accessories

| | |
|-----|---|
| A | Amperometer |
| AE | Electrical power supply different from standard |
| CC | Insulated condensers |
| CF | Soundproofed compressors cabinet with standard material |
| CFU | Soundproofed compressors cabinet with lead material |
| CI | Soundproofing jackets on compressors |
| CS | Compressors inrush counter |
| HG | Hot gas by-pass (only for one circuit units) |
| IE | Wooden crate packing |
| IH | Serial interface RS 485 |
| IM | Seawood packing |
| IR | Packing with wooden pallet and transparent film |
| MF | Phase monitor |
| MP | Oversized microprocessor |
| PA | Rubber-type vibration dampers |
| PF | Safety water flow switch on evaporator |
| PM | Spring-type vibration dampers |
| PQ | Remote microprocessor |
| RA | Anti-freeze heater on evaporator |
| RL | Compressors overload relays |
| RP | Partial heat recovery |
| RT | Total heat recovery |
| V | Voltmeter |
| VB | Brine version (water temperature < 0 °C) |
| VS | Solenoid valve |

HEAT PUMPS R407C – R134A – R22

WATER COOLED HEAT PUMPS

WITH SCROLL COMPRESSORS (SINGLE AND TANDEM)

PWE...K Technical data with refrigerant R407C

| MODEL | PWE...K | 541 K | 631 K | 761.K | 931.K | 1201 | 1501 | 1901 |
|-------------------------------------|-------------------------------------|---------------|-------|-------|-------|-------|-------|-------|
| Cooling capacity 1) | kW | 48,4 | 56,0 | 68,6 | 84,4 | 111 | 140 | 175 |
| Absorbed power | kW | 14,6 | 16,6 | 21,2 | 24,6 | 33,5 | 41,8 | 50 |
| Heating capacity | kW | 63,0 | 72,6 | 89,8 | 109,0 | 144,5 | 181,8 | 225 |
| Brazed plate evaporator | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Circuits | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Water flow rate | l/s | 2,3 | 2,7 | 3,3 | 4,0 | 5,3 | 6,7 | 8,4 |
| Water flow rate | m ³ /h | 8,3 | 9,6 | 11,8 | 14,5 | 19,1 | 24,1 | 30,1 |
| Pressure drop | kPa | 32 | 34 | 26 | 31 | 30 | 32 | 34 |
| Brazed plate condenser | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Water flow rate | l/s | 3,0 | 3,5 | 4,3 | 5,2 | 6,9 | 8,7 | 10,8 |
| Water flow rate | m ³ /h | 10,8 | 12,5 | 15,4 | 18,7 | 24,9 | 31,3 | 38,7 |
| Pressure drop | kPa | 52 | 55 | 43 | 36 | 49 | 53 | 62 |
| Scroll compressors (tandem) | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Standard steps capacity | % | 0 / 50 / 100% | | | | | | |
| Nominal absorbed current | A | 30,5 | 31,4 | 36,3 | 43,8 | 55,9 | 71,8 | 84,3 |
| Maximum absorbed current | A | 40 | 44 | 54 | 64 | 82 | 104 | 125 |
| Inrush current | A | 143 | 149 | 194 | 230 | 266 | 324 | 373 |
| Sound pressure level 2) | dB(A) | 70 | 70 | 72 | 72 | 75 | 77 | 79 |
| Dimensions | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 |
| Height | mm | 1.600 | 1.600 | 1.600 | 1.600 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 505 | 521 | 555 | 603 | 715 | 795 | 881 |
| Weight in operation | kg | 511 | 528 | 565 | 614 | 731 | 815 | 908 |
| Refrigerant charge for each circuit | kg | 4,4 | 5 | 6,4 | 7,3 | 10 | 13 | 18 |
| Power supply | 400 V / 50 Hz / 3 Ph + T + N | | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included

PWE...K Technical data with refrigerant R407C

| MODEL | PWE...K | 442 K | 532 K | 612 K | 762 K | 922 K | 1232 K | 1552 K | 1912 K |
|-------------------------------------|-------------------------------------|---------------|-------|-------|-------|-------|--------|--------|--------|
| Cooling capacity 1) | kW | 40,3 | 49,1 | 55,8 | 68,9 | 84 | 112 | 141 | 174 |
| Absorbed power | kW | 12,0 | 14,4 | 16,7 | 20,9 | 24,9 | 33,5 | 41,7 | 50,3 |
| Heating capacity | kW | 52,3 | 63,5 | 72,5 | 89,8 | 108,9 | 145,5 | 182,7 | 224,3 |
| Brazed plate evaporator | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Circuits | n | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Water flow rate | l/s | 1,93 | 2,35 | 2,67 | 3,29 | 4,01 | 5,35 | 6,74 | 8,31 |
| Water flow rate | m ³ /h | 6,93 | 8,45 | 9,60 | 11,85 | 14,45 | 19,26 | 24,25 | 29,93 |
| Pressure drop | kPa | 21 | 23 | 30 | 30 | 32 | 30 | 34 | 39 |
| Water volume | l | 3,1 | 3,8 | 3,8 | 4,8 | 5,7 | 8,4 | 10 | 12 |
| Brazed plate condenser | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Water flow rate | l/s | 2,50 | 3,03 | 3,46 | 4,29 | 5,20 | 6,95 | 8,73 | 10,72 |
| Water flow rate | m ³ /h | 9,00 | 10,92 | 12,47 | 15,45 | 18,73 | 25,03 | 31,42 | 38,58 |
| Pressure drop | kPa | 34 | 37 | 48 | 48 | 51 | 41 | 42 | 51 |
| Water volume | l | 3,1 | 3,8 | 3,8 | 4,8 | 5,7 | 8,4 | 10 | 12 |
| Scroll compressors | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Standard steps capacity | n | 0 / 50 / 100% | | | | | | | |
| Nominal absorbed current | A | 26 | 30 | 32 | 36 | 44 | 56 | 72 | 85 |
| Maximum absorbed current | A | 34 | 37 | 48 | 48 | 51 | 41 | 42 | 51 |
| Inrush current | A | 116 | 143 | 149 | 194 | 230 | 266 | 324 | 373 |
| Sound pressure level 2) | dB(A) | 70 | 70 | 74 | 76 | 73 | 73 | 77 | 77 |
| Dimensions | | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 |
| Height | mm | 1.600 | 1.600 | 1.600 | 1.600 | 1.600 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 496 | 516 | 525 | 545 | 596 | 721 | 795 | 859 |
| Working weight | kg | 502 | 523 | 533 | 555 | 608 | 738 | 815 | 883 |
| Refrigerant charge for each circuit | kg | 2,0 | 2,4 | 2,4 | 3,1 | 3,7 | 5,5 | 6,7 | 7,9 |
| Power supply | 400 V / 50 Hz / 3 Ph + T + N | | | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included

HEAT PUMPS R407C – R134A – R22

WATER COOLED HEAT PUMPS

WITH SCROLL COMPRESSORS (SINGLE AND TANDEM)

PWE...K Technical data with refrigerant R407C

| MODEL | PWE...K | 892 K | 1082 K | 1212 K | 1512 K | 1852 K | 2462 K | 3102 K | 3822 K |
|-------------------------------------|-------------------|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Cooling capacity 1) | kW | 80,4 | 97 | 111 | 138 | 169 | 223 | 281 | 350 |
| Absorbed power | kW | 24 | 29,4 | 33,5 | 41,9 | 50,1 | 67 | 83,6 | 100 |
| Heating capacity | kW | 104,4 | 125,9 | 144,5 | 179,9 | 219,1 | 290 | 364,6 | 450 |
| Brazed plate evaporator | | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Circuits | n | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Water flow rate | l/s | 3,84 | 4,61 | 5,30 | 6,59 | 8,07 | 10,65 | 13,43 | 16,72 |
| Water flow rate | m ³ /h | 13,83 | 16,60 | 19,09 | 23,74 | 29,07 | 38,36 | 48,33 | 60,20 |
| Pressure drop | kPa | 32 | 35 | 37 | 38 | 30 | 30 | 32 | 34 |
| Water volume | l | 5,7 | 6,6 | 7,5 | 9,3 | 14 | 16 | 20 | 27 |
| Brazed plate condenser | | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Water flow rate | l/s | 4,99 | 6,02 | 6,90 | 8,60 | 10,47 | 13,86 | 17,42 | 21,50 |
| Water flow rate | m ³ /h | 17,96 | 21,65 | 24,85 | 30,94 | 37,69 | 49,88 | 62,71 | 77,40 |
| Pressure drop | kPa | 32 | 37 | 41 | 41 | 48 | 49 | 53 | 62 |
| Water volume | l | 5,7 | 6,6 | 7,5 | 9,3 | 14 | 16 | 20 | 27 |
| Scroll compressors (tandem) | | | | | | | | | |
| Quantity | n | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Standard steps capacity | % | 0 / 50 / 100% | | | | | | | |
| Optional steps capacity | % | 0 / 25 / 50 / 100% | | | | | | | |
| Nominal absorbed current | A | 51 | 61 | 63 | 72 | 89 | 112 | 144 | 169 |
| Maximum absorbed current | A | 68 | 80 | 88 | 108 | 128 | 164 | 208 | 250 |
| Inrush current | A | 150 | 183 | 193 | 248 | 294 | 348 | 428 | 498 |
| Sound pressure level 2) | dB(A) | 72 | 73 | 73 | 75 | 75 | 78 | 80 | 82 |
| Dimensions | | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 2.500 | 2.500 | 2.500 | 2.500 | 2.500 | 3.000 | 3.000 | 3.000 |
| Height | mm | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 862 | 884 | 916 | 956 | 1.096 | 1.338 | 1.498 | 1.670 |
| Working weight | kg | 873 | 897 | 931 | 974 | 1.124 | 1.370 | 1.539 | 1.725 |
| Refrigerant charge for each circuit | kg | 3,7 | 4,3 | 4,9 | 6,1 | 9,2 | 10 | 13 | 18 |
| Power supply | | 400 V / 50 Hz / 3 Ph + T + N | | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included

PWE...Ka Technical data with refrigerant R134a

| MODEL | PWE...Ka | 341 Ka | 401 Ka | 491 Ka | 591 Ka | 711 Ka | 971 Ka | 1201 Ka |
|-------------------------------------|-------------------|-------------------------------------|--------|--------|--------|--------|--------|---------|
| Cooling capacity 1) | kW | 32 | 37,4 | 45,3 | 54,1 | 72,3 | 89,1 | 112 |
| Absorbed power | kW | 10 | 11,4 | 14,1 | 16,8 | 21,7 | 27,3 | 33,6 |
| Heating capacity | kW | 42 | 48,8 | 59,4 | 70,9 | 94,0 | 116,4 | 145,6 |
| Brazed plate evaporator | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Circuits | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Water flow rate | l/s | 1,5 | 1,8 | 2,2 | 2,6 | 3,5 | 4,3 | 5,4 |
| Water flow rate | m ³ /h | 5,5 | 6,4 | 7,8 | 9,3 | 12,4 | 15,3 | 19,3 |
| Pressure drop | kPa | 18 | 19 | 22 | 22 | 16 | 19 | 20 |
| Brazed plate condenser | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Water flow rate | l/s | 2,0 | 2,3 | 2,8 | 3,4 | 4,5 | 5,6 | 7,0 |
| Water flow rate | m ³ /h | 7,2 | 8,4 | 10,2 | 12,2 | 16,2 | 20,0 | 25,0 |
| Pressure drop | kPa | 65 | 57 | 61 | 66 | 47 | 57 | 65 |
| Scroll compressors (tandem) | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Standard steps capacity | % | 0 / 50 / 100% | | | | | | |
| Nominal absorbed current | A | 22,0 | 25,0 | 30,8 | 34,8 | 41,4 | 52,0 | 65,2 |
| Maximum absorbed current | A | 40 | 44 | 54 | 64 | 82 | 104 | 125 |
| Inrush current | A | 143 | 149 | 194 | 230 | 266 | 324 | 373 |
| Sound pressure level 2) | dB(A) | 70 | 70 | 72 | 72 | 75 | 77 | 79 |
| Dimensions | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 |
| Height | mm | 1.600 | 1.600 | 1.600 | 1.600 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 498 | 514 | 528 | 579 | 699 | 763 | 833 |
| Weight in operation | kg | 504 | 521 | 535 | 588 | 713 | 779 | 854 |
| Refrigerant charge for each circuit | kg | 3,7 | 4,4 | 5 | 6,3 | 9 | 10 | 13 |
| Power supply | | 400 V / 50 Hz / 3 Ph + T + N | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included

HEAT PUMPS R407C – R134A – R22

WATER COOLED HEAT PUMPS

WITH SCROLL COMPRESSORS (SINGLE AND TANDEM)

PWE...Ka Technical data with refrigerant R134a

| MODEL | PWE...Ka | 282 Ka | 352 Ka | 402 Ka | 492 Ka | 592 Ka | 772 Ka | 972 Ka | 1222 Ka |
|--|-------------------|---------------|--------|--------|--------|--------|--------|--------|---------|
| Cooling capacity 1) | kW | 26,2 | 32,5 | 37 | 45,6 | 54,7 | 71,4 | 89,6 | 112 |
| Absorbed power | kW | 8,3 | 9,9 | 11,5 | 14 | 16,7 | 21,8 | 27 | 33,5 |
| Heating capacity | kW | 34,5 | 42,4 | 48,5 | 59,6 | 71,4 | 93,2 | 116,6 | 145,5 |
| Brazed plate evaporator | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Circuits | n | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Water flow rate | l/s | 1,25 | 1,55 | 1,77 | 2,18 | 2,61 | 3,41 | 4,28 | 5,35 |
| Water flow rate | m ³ /h | 4,51 | 5,59 | 6,36 | 7,84 | 9,41 | 12,28 | 15,41 | 19,26 |
| Pressure drop | kPa | 14 | 14 | 18 | 20 | 19 | 26 | 24 | 25 |
| Water volume | l | 2,4 | 3,1 | 3,1 | 3,8 | 4,8 | 5,7 | 7,5 | 9,3 |
| Brazed plate condenser | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Water flow rate | l/s | 1,65 | 2,03 | 2,32 | 2,85 | 3,41 | 4,45 | 5,57 | 6,95 |
| Water flow rate | m ³ /h | 5,93 | 7,29 | 8,34 | 10,25 | 12,28 | 16,03 | 20,06 | 25,03 |
| Pressure drop | kPa | 46 | 36 | 47 | 44 | 47 | 42 | 40 | 50 |
| Water volume | l | 2,4 | 3,1 | 3,1 | 3,8 | 4,8 | 5,7 | 7,5 | 9,3 |
| Scroll compressors | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Standard steps capacity | % | 0 / 50 / 100% | | | | | | | |
| Nominal absorbed current | A | 20 | 22 | 25 | 31 | 35 | 42 | 52 | 65 |
| Maximum absorbed current | A | 34 | 40 | 44 | 54 | 64 | 82 | 102 | 125 |
| Inrush current | A | 116 | 143 | 149 | 194 | 230 | 266 | 324 | 373 |
| Sound pressure level 2) | dB(A) | 69 | 70 | 70 | 72 | 72 | 75 | 77 | 79 |
| Dimensions | | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 |
| Height | mm | 1.600 | 1.600 | 1.600 | 1.600 | 1.600 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 488 | 500 | 510 | 532 | 584 | 683 | 757 | 821 |
| Working weight | kg | 492 | 507 | 516 | 570 | 593 | 694 | 772 | 839 |
| Refrigerant charge for each circuit | kg | 1,5 | 2,0 | 2,0 | 2,4 | 3,1 | 3,7 | 4,9 | 6,1 |
| Power supply 400 V / 50 Hz / 3 Ph + T + N | | | | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included

PWE...Ka Technical data with refrigerant R134a

| MODEL | PWE...Ka | 572 Ka | 702 Ka | 802 Ka | 992 Ka | 1192 Ka | 1522 Ka | 1952 Ka | 2442 Ka |
|--|-------------------|--------------------|--------|--------|--------|---------|---------|---------|---------|
| Cooling capacity 1) | kW | 52,2 | 64 | 75 | 91 | 109 | 145 | 178 | 225 |
| Absorbed power | kW | 16,3 | 20,1 | 23 | 28,1 | 33,6 | 43,4 | 54,6 | 66,4 |
| Heating capacity | kW | 68,5 | 84,1 | 97,8 | 119,3 | 142,6 | 188,4 | 232,6 | 291,4 |
| Brazed plate evaporator | | | | | | | | | |
| Quantity | n | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 |
| Circuits | n | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 |
| Water flow rate | l/s | 2,49 | 3,06 | 3,57 | 4,36 | 5,21 | 6,93 | 8,50 | 10,75 |
| Water flow rate | m ³ /h | 8,98 | 11,01 | 12,87 | 15,69 | 18,75 | 24,94 | 30,62 | 38,70 |
| Pressure drop | kPa | 22 | 18 | 21 | 25 | 24 | 16 | 19 | 21 |
| Water volume | l | 4,2 | 5,7 | 6,6 | 7,5 | 9 | 14 | 16 | 20 |
| Brazed plate condenser | | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Water flow rate | l/s | 3,27 | 4,02 | 4,67 | 5,70 | 6,81 | 9,00 | 11,11 | 13,92 |
| Water flow rate | m ³ /h | 11,78 | 14,47 | 16,82 | 20,52 | 24,53 | 32,40 | 40,01 | 50,12 |
| Pressure drop | kPa | 43 | 65 | 47 | 41 | 48 | 47 | 57 | 50 |
| Water volume | l | 4,2 | 5,7 | 6,6 | 7,5 | 9 | 14 | 16 | 20 |
| Scroll compressors (tandem) | | | | | | | | | |
| Quantity | n | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Standard steps capacity | % | 0 / 50 / 100% | | | | | | | |
| Optional steps capacity | % | 0 / 25 / 50 / 100% | | | | | | | |
| Nominal absorbed current | A | 39 | 44 | 50 | 62 | 70 | 83 | 104 | 129 |
| Maximum absorbed current | A | 68 | 80 | 88 | 108 | 128 | 164 | 208 | 250 |
| Inrush current | A | 150 | 183 | 193 | 248 | 294 | 348 | 428 | 498 |
| Sound pressure level 2) | dB(A) | 72 | 73 | 73 | 75 | 75 | 78 | 80 | 82 |
| Dimensions | | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 2.500 | 2.500 | 2.500 | 2.500 | 2.500 | 3.000 | 3.000 | 3.000 |
| Height | mm | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 835 | 865 | 903 | 930 | 1.033 | 1.306 | 1.434 | 1.575 |
| Working weight | kg | 843 | 876 | 916 | 945 | 1.051 | 1.334 | 1.466 | 1.616 |
| Refrigerant charge for each circuit | kg | 2,7 | 3,7 | 4,3 | 4,9 | 6,1 | 9 | 10 | 13 |
| Power supply 400 V / 50 Hz / 3 Ph + T + N | | | | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included

HEAT PUMPS R407C – R134A – R22

WATER COOLED HEAT PUMPS

WITH SCROLL COMPRESSORS (SINGLE AND TANDEM)

PWE... Technical data with refrigerant R22

| MODEL | PWE | 531 | 611 | 741 | 891 | 1171 | 1451 | 1811 |
|-------------------------------------|-------------------|-------------------------------------|-------|-------|-------|-------|-------|-------|
| Cooling capacity 1) | kW | 48,6 | 57 | 68,7 | 85 | 110 | 136 | 169 |
| Absorbed power | kW | 14,5 | 16,8 | 21 | 24,7 | 33 | 40 | 49,2 |
| Heating capacity | kW | 63,1 | 73,3 | 89,7 | 109,3 | 143 | 176 | 218,2 |
| Brazed plate evaporator | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Circuits | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Water flow rate | l/s | 2,3 | 2,7 | 3,3 | 4,0 | 5,3 | 6,5 | 8,1 |
| Water flow rate | m ³ /h | 8,4 | 9,7 | 11,8 | 14,6 | 18,9 | 23,4 | 29,1 |
| Pressure drop | kPa | 26 | 24 | 21 | 23 | 24 | 26 | 29 |
| Brazed plate condenser | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Water flow rate | l/s | 3,0 | 3,5 | 4,3 | 5,2 | 6,8 | 8,4 | 10,4 |
| Water flow rate | m ³ /h | 10,9 | 12,6 | 15,4 | 18,8 | 24,6 | 30,3 | 37,5 |
| Pressure drop | kPa | 52 | 56 | 43 | 36 | 48 | 50 | 58 |
| Scroll compressors (tandem) | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Standard steps capacity | % | 0 / 50 / 100% | | | | | | |
| Nominal absorbed current | A | 27,5 | 31,7 | 36,2 | 43,9 | 54,5 | 70,5 | 83,4 |
| Maximum absorbed current | A | 40 | 44 | 54 | 64 | 82 | 104 | 125 |
| Inrush current | A | 143 | 149 | 194 | 230 | 266 | 324 | 373 |
| Sound pressure level 2) | dB(A) | 70 | 70 | 72 | 72 | 75 | 77 | 79 |
| Dimensions | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 |
| Height | mm | 1.600 | 1.600 | 1.600 | 1.600 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 511 | 533 | 564 | 619 | 731 | 811 | 897 |
| Weight in operation | kg | 519 | 543 | 576 | 632 | 749 | 833 | 926 |
| Refrigerant charge for each circuit | kg | 5 | 6,3 | 7,3 | 8,8 | 12 | 15 | 20 |
| Power supply | | 400 V / 50 Hz / 3 Ph + T + N | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included

PWE... Technical data with refrigerant R22

| MODEL | PWE | 422 | 522 | 602 | 742 | 892 | 1172 | 1452 | 1812 |
|-------------------------------------|-------------------|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Cooling capacity 1) | kW | 39,2 | 48,8 | 56 | 68,9 | 83,1 | 109 | 135 | 169 |
| Absorbed power | kW | 12,2 | 14,4 | 16,8 | 20,9 | 24,9 | 32,9 | 40,2 | 49,4 |
| Heating capacity | kW | 51,4 | 63,2 | 72,8 | 89,8 | 108 | 141,9 | 175,2 | 218,4 |
| Brazed plate evaporator | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Circuits | n | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Water flow rate | l/s | 1,87 | 2,33 | 2,68 | 3,29 | 3,97 | 5,21 | 6,45 | 8,07 |
| Water flow rate | m ³ /h | 6,74 | 8,39 | 9,63 | 11,85 | 14,29 | 18,75 | 23,22 | 29,07 |
| Pressure drop | kPa | 20 | 23 | 25 | 21 | 31 | 29 | 31 | 30 |
| Water volume | l | 3,1 | 3,8 | 4,2 | 5,7 | 5,7 | 8,4 | 10 | 14 |
| Brazed plate condenser | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Water flow rate | l/s | 2,46 | 3,02 | 3,48 | 4,29 | 5,16 | 6,78 | 8,37 | 10,43 |
| Water flow rate | m ³ /h | 8,84 | 10,87 | 12,52 | 15,45 | 18,58 | 24,41 | 30,13 | 37,56 |
| Pressure drop | kPa | 33 | 36 | 48 | 48 | 50 | 39 | 44 | 48 |
| Water volume | l | 3,1 | 3,8 | 4,2 | 5,7 | 5,7 | 8,4 | 10 | 14 |
| Scroll compressors | | | | | | | | | |
| Quantity | n | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Standard steps capacity | % | 0 / 50 / 100% | | | | | | | |
| Nominal absorbed current | A | 25 | 27 | 32 | 36 | 44 | 54 | 71 | 84 |
| Maximum absorbed current | A | 34 | 40 | 44 | 54 | 64 | 82 | 104 | 125 |
| Inrush current | A | 116 | 143 | 149 | 194 | 230 | 266 | 324 | 373 |
| Sound pressure level 2) | dB(A) | 69 | 70 | 70 | 72 | 72 | 75 | 77 | 79 |
| Dimensions | | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 |
| Height | mm | 1.600 | 1.600 | 1.600 | 1.600 | 1.600 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 496 | 516 | 530 | 558 | 596 | 721 | 795 | 884 |
| Working weight | kg | 502 | 523 | 539 | 569 | 608 | 738 | 815 | 912 |
| Refrigerant charge for each circuit | kg | 2,0 | 2,4 | 2,7 | 3,7 | 3,7 | 5,5 | 6,7 | 9,2 |
| Power supply | | 400 V / 50 Hz / 3 Ph + T + N | | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included

HEAT PUMPS R407C – R134A – R22

WATER COOLED HEAT PUMPS WITH SCROLL COMPRESSORS (SINGLE AND TANDEM)

PWE... Technical data with refrigerant R22

| MODEL | PWE | 842 | 1052 | 1232 | 1482 | 1792 | 2352 | 2922 | 3632 |
|-------------------------------------|-------------------|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Cooling capacity 1) | kW | 78,6 | 97 | 112 | 137 | 169 | 220 | 273 | 335 |
| Absorbed power | kW | 24,6 | 29,1 | 33,7 | 41,7 | 49,8 | 65,9 | 80 | 98,3 |
| Heating capacity | kW | 103 | 126 | 146 | 179 | 219 | 286 | 353 | 433 |
| Brazed plate evaporator | | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Circuits | n | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Water flow rate | l/s | 3,76 | 4,63 | 5,35 | 6,55 | 8,07 | 10,51 | 13,04 | 16,01 |
| Water flow rate | m ³ /h | 13,52 | 16,68 | 19,26 | 23,56 | 29,07 | 37,84 | 46,96 | 57,62 |
| Pressure drop | kPa | 23 | 28 | 30 | 32 | 30 | 24 | 26 | 32 |
| Water volume | l | 6,6 | 7,5 | 8,4 | 10,0 | 14 | 18 | 23 | 27 |
| Brazed plate condenser | | | | | | | | | |
| Quantity | n | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Water flow rate | l/s | 4,93 | 6,02 | 6,96 | 8,54 | 10,45 | 13,66 | 16,87 | 20,70 |
| Water flow rate | m ³ /h | 17,75 | 21,69 | 25,06 | 30,74 | 37,63 | 49,17 | 60,72 | 74,53 |
| Pressure drop | kPa | 40 | 37 | 41 | 40 | 48 | 48 | 50 | 57 |
| Water volume | l | 6,6 | 7,5 | 8,4 | 10,0 | 14 | 18 | 23 | 27 |
| Scroll compressors (tandem) | | | | | | | | | |
| Quantity | n | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Standard steps capacity | % | 0 / 50 / 100% | | | | | | | |
| Optional steps capacity | % | 0 / 25 / 50 / 100% | | | | | | | |
| Nominal absorbed current | A | 50 | 55 | 64 | 72 | 89 | 109 | 141 | 167 |
| Maximum absorbed current | A | 68 | 80 | 88 | 108 | 128 | 164 | 208 | 250 |
| Inrush current | A | 150 | 183 | 193 | 248 | 294 | 348 | 428 | 498 |
| Sound pressure level 2) | dB(A) | 72 | 73 | 73 | 75 | 75 | 78 | 80 | 82 |
| Dimensions | | | | | | | | | |
| Width | mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Length | mm | 2.500 | 2.500 | 2.500 | 2.500 | 2.500 | 3.000 | 3.000 | 3.000 |
| Height | mm | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 | 1.800 |
| Transport weight 3) | kg | 874 | 897 | 929 | 969 | 1.096 | 1.370 | 1.530 | 1.670 |
| Working weight | kg | 888 | 912 | 945 | 989 | 1.124 | 1.406 | 1.575 | 1.725 |
| Refrigerant charge for each circuit | kg | 4,3 | 4,9 | 5,5 | 6,7 | 9,2 | 12 | 15 | 18 |
| Power supply | | 400 V / 50 Hz / 3 Ph + T + N | | | | | | | |

1) Nominal conditions referred to: chilled water 7/12 °C - condensing water 40/45 °C

2) Measured at 1 m in open field (ISO 3746)

3) Oil and refrigerant charge included