Kälte Klima

# SCACY

**Air cooled water chillers**
Air cooled reversible heat pumps
from 40 kW to 320 kW
**Centrifugal fans**

## R 410A

**Scroll Compressors**

| | | | |
|---|---|---|---|
| Series: | **SCACY** | Leaflet: | **DE 78** |
| Issue: | **05/13** | Supersedes: | **09/12** |

## Index



## Indentification code

**SCACY – 151 H – PAC**
**1 2 3 4 5 6 7 8 9 10 11**

| | | |
|---|---|---|
| **1** | **S** | Series small > 40 kW |
| **2** | **C** | Chiller unit |
| **3** | **A** | Air cooled |
| **4** | **C** | Centrifugal fans |
| **5** | **Y** | Refrigerant R410A |
| **6** | **–** | Scroll Compressors |
| | **A** | Recip. Compressors |
| **7** | **15** | Capacity factors |
| **8** | **1** | Number of circuits |
| **9** | **–** | Cooling only version |
| | **H** | Heat pump unit version |
| **10** | **–** | Plate-to-plate evaporator |
| | **F** | Shell and tube evaporator |
| **11** | **PAC** | Storage tank + pump |
| | **P1** | 1 pump |
| | **P2** | 2 pumps |
| | **DS** | Desuperheater |
| | **RCS** | Heat recovery fitted in series (70-90%) |
| | **RCP** | Heat recovery fitted in parallel (100%) |
| | **LN** | Low Noise |

# SCACY

## General features

**FRAME**
Self-supporting galvanized steel frame protected with polyester powder painting. Panels are easily removable for maintenance and service activities.

**COMPRESSORS**
Hermetic **«scroll»** type with overload protection by a klixon and complete with oil sight glass. They are installed on vibrations absorbing rubber.

**EVAPORATOR**
Braze welded plate type with one or two independent refrigerant circuits and one water circuit.
The circuit is made to guarantee an homogeneous cooling of all the water flow even during partial load. The insulation is made of flexible closed-cells lining.
As protection, a flow switch is recommended to mount to stop the unit in case of no water circulation.

**CONDENSER**
Copper tube and aluminium finned coil. As option a protection grid is available.

**FANS**
Centrifugal fans directly coupled to a three-phase belt driven motor.

**REFRIGERANT CIRCUIT**
Each unit is equipped with one or two refrigerant circuits. Each circuit includes: filter dryer, sight glass, Electronic thermostatic valve, Schrader service valve.
To protect the refrigerant circuit the following devices are installed: man. reset high pressure switch, aut. reset low pressure switch, antifreeze thermostat.
The **Heat Pump Units** version contain, in addition: safety thermostat on the discharge line, 4-way valve, non-return valve, two electronic thermostatic valves, liquid receiver and, if necessary, liquid separator on the compressor suction line.

**ELECTRICAL BOARD**
With protection grade IP54 the el. board is mounted in the compressor chamber. Service activities can be done while the unit is in operation. It includes: main circuit automatic breaker with locking door device, compressors and fans contactors and relé, auxiliary circuit transformer.
Microprocessor to control automatically the unit with a visual system to display the function as well as failures.

## Versions

**DS**
Partial condensing heat recovery. Each refrigerant circuit includes: a desuperheater insulated and installed in series between the compressor and the condenser.

**RCS**
Condensing heat recovery from 70% to 90%. Each refrigerant circuit includes: a heat exchanger insulated and mounted in series between compressor and condenser and condensing control pressure transducer type.

**RCP**
100% condensing heat recovery. Each refrigerant circuit includes: a heat exchanger insulated and mounted in parallel to the condenser and solenoid valves.

**P**
This version is equipped with hydraulic kit. It includes: one or two pumps (one as stand-by), expansion vessel, gauge, flow switch, safety valve, air purger, shut off valve and hydraulic circuit insulated. In case of stand-by pump a non-return valve is mounted. Relevant electrical circuit. As option, pumps with higher ESP are available.

**PAC**
This version is equipped with hydraulic kit and inertial storage tank insulated and installed on the return line.

**LN**
Low noise version. It includes: fan speed control (steps) through pressure transducer and a special soundproofing on the compressors.

## Options

- Power factor correction.
- Condensing control (steps).
- Condensing control (with inverter motor).
- Fans with higher ESP.
- Remote control panel.
- Clock card.
- RS 485 card. (protocol: Lonwork, Bacnet, Trend).
- Shell and tube evaporator.
- Evaporator el. heater.
- El Heater PAC version.
- Discharge and Liquid-Line shut-off valves.
- HP/LP gauges.
- Cu/Cu condenser.
- Flow switch loose (STD in P and PAC versions).
- Pump shut off valve.
- Pumps with higher ESP.
- Protection grid/filter condenser (protection grid only in H-units).
- Rubber AV mounts.
- Spring antivibrator mountings.
- Wooden crate.

# SCACY technical data

| SIZE | | | 61 | 71 | 81 | 91 | 101 | 121 |
|---|---|---|---|---|---|---|---|---|
| **COOLING MODE SCACY STD/LN** | | | | | | | | |
| Cooling capacity | (1) | kW | 47 | 53 | 62 | 67 | 82 | 94 |
| Abs. power | (2) | kW | 18.9 | 22.3 | 23,8 | 26,7 | 30.8 | 35.7 |
| EER | (2) | - | 2.48 | 2.37 | 2,60 | 2.50 | 2.66 | 2.63 |
| **HEATING MODE SCACY…H** | | | | | | | | |
| Heating capacity | (1) | kW | 49 | 55 | 65 | 70 | 86 | 98 |
| Abs. power | (2) | kW | 17.9 | 21.1 | 22.3 | 25 | 28.9 | 33.6 |
| COP | (2) | kW | 2.70 | 2.60 | 2.91 | 2.80 | 2.66 | 2.91 |
| **COMPRESSOR (scroll)** | | | | | | | | |
| Ermetico scroll | | | | | | | | |
| Quantity | | n° | 2 | | | | | |
| Refrigerant circuit | | n° | 1 | | | | | |
| Capacity step | | n° | 2 | | | | | |
| Refrigerant | | | R410A | | | | | |
| Refrigerant charge | | kg | 15 | 16 | 17 | 19 | 21 | 25 |
| **EVAPORATOR Plate-to-plate** | (3) | | | | | | | |
| Water flow rate | | m3/h | 8 | 9,1 | 10,6 | 11,5 | 14,1 | 16,1 |
| Pressure drop | | kPa | 31 | 39 | 33 | 39 | 22 | 29 |
| Water volume | | l | 2 | 2 | 2,4 | 2,4 | 4,8 | 4,8 |
| **PAC Version** | | | | | | | | |
| Storage tank water volume | | l | 200 | 200 | 200 | 200 | 300 | 300 |
| Water pump nominal power | | kW | 0,75 | 0,75 | 0,75 | 0,75 | 1,1 | 1,1 |
| Water pump nominal current | | A | 2,2 | 2,2 | 2,2 | 2,2 | 3,5 | 3,5 |
| External static pressure | | kPa | 120 | 110 | 120 | 110 | 130 | 120 |
| **CONDENSER (STD/LN version)** | (4) | | | | | | | |
| Centrifugal fans | | n° | 2 | 2 | 2 | 2 | 2 | 2 |
| Nominal air flow | (5) | m3/h | 24,000 | 24,000 | 24,000 | 24,000 | 24,000 | 31,000 |
| External pressure | | Pa | 120 | | | | | |
| Max abs. power | | n°/ kW | 2 x 2.2 | 2 x 2.2 | 2 x 2.2 | 2 x 2.2 | 2 x 2.2 | 2 x 3 |
| Max abs. current | | A | 2 x 4.5 | 2 x 4.5 | 2 x 4.5 | 2 x 4.5 | 2 x 4.5 | 2 x 6.5 |
| **UNIT ELECTRICAL DATA** | (6) | | | | | | | |
| Max abs. current | | A | 47 | 53 | 58 | 63 | 74 | 82 |
| Max LRC | | A | 141 | 151 | 154 | 178 | 217 | 273 |
| Voltage supply | | V/f/Hz | 400/3N/50 | | | | | |
| **DS Version** | (7) | | | | | | | |
| Heating capacity | | kW | 11 | 12 | 14 | 16 | 19 | 22 |
| Water flow rate | | m3/h | 0,9 | 1 | 1,2 | 1,4 | 1,6 | 1,8 |
| Pressure drop | | kPa | 10 | 10 | 15 | 15 | 16 | 16 |
| **Sound pressure level at 1 m** | (6) (8) | | | | | | | |
| STD Version | | dB(A) | 73 | 73 | 73 | 73 | 73 | 75 |
| LN Version | | dB(A) | 69 | 69 | 69 | 69 | 69 | 71 |
| VLN Version | | - | Contact factory | | | | | |

**Note:**

1) Cooling mode: water temp. 12 °C / 7 °C; air temperature 35 °C;
Heating mode: water temp. 40 °C / 45 °C; air temperature 7 °C db, 6 °C wb;
2) Compressors + fans only. No water pump(s);
3) It becomes condenser in SCACY…H (heat pump) version;
4) It becomes evaporator in SCACY…H (heat pump) version;
5) Max air flow in case of LN version;
6) Without water pump(s), STD version;
7) Water temperature from 40 °C to 50 °C;
8) Compressors site and ducted air discharged.

# SCACY technical data

| SIZE | | | 131 | 141 | 151 | 161 | 191 | 222 |
|---|---|---|---|---|---|---|---|---|
| **COOLING MODE SCACY STD/LN** | | | | | | | | |
| Cooling capacity | (1) | kW | 102 | 114 | 123 | 141 | 162 | 186 |
| Abs. power | (2) | kW | 40.8 | 45.6 | 51.4 | 57.5 | 66.2 | 71.2 |
| EER | (2) | - | 2.50 | 2.50 | 2,39 | 2.45 | 2.44 | 2.61 |
| **HEATING MODE SCACY…H** | | | | | | | | |
| Heating capacity | (1) | kW | 108 | 121 | 130 | 150 | 172 | 195 |
| Abs. power | (2) | kW | 37.5 | 41.9 | 47.2 | 52.9 | 60.9 | 66.9 |
| COP | (2) | kW | 2.88 | 2.88 | 2.75 | 2.83 | 2.82 | 2.91 |
| **COMPRESSOR (scroll)** | | | | | | | | |
| Ermetico scroll | | | | | | | | |
| Quantity | | n° | 2 | | | | | 4 |
| Refrigerant circuit | | n° | 1 | | | | | 2 |
| Capacity step | | n° | 2 | | | | | 4 |
| Refrigerant | | | R410A | | | | | |
| Refrigerant charge | | kg | 25 | 30 | 31 | 35 | 36 | 23+23 |
| **EVAPORATOR Plate-to-plate** | (3) | | | | | | | |
| Water flow rate | | m3/h | 17,5 | 19.6 | 21.1 | 24.2 | 27.8 | 31.9 |
| Pressure drop | | kPa | 30 | 38 | 44 | 48 | 34 | 38 |
| Water volume | | l | 6.8 | 6.8 | 6.8 | 8.2 | 8.4 | 9,8 |
| **PAC Version** | | | | | | | | |
| Storage tank water volume | | l | 300 | 300 | 300 | 300 | 300 | 500 |
| Water pump nominal power | | kW | 1.1 | 1.5 | 1.5 | 1.85 | 1.85 | 2.2 |
| Water pump nominal current | | A | 3.5 | 5 | 5 | 5 | 5 | 5.2 |
| External static pressure | | kPa | 110 | 120 | 110 | 140 | 120 | 140 |
| **CONDENSER (STD/LN version)** | (4) | | | | | | | |
| Centrifugal fans | | n° | 2 | 3 | 3 | 3 | 3 | 4 |
| Nominal air flow (5) | | m3/h | 31,000 | 38,000 | 38,000 | 38,000 | 46,000 | 56,000 |
| External pressure | | Pa | 120 | | | | | |
| Max abs. power | | n° / kW | 2 x 3 | 3 x 2.2 | 3 x 2.2 | 3 x 2.2 | 3 x 3 | 4 x 3 |
| Max abs. current | | A | 2 x 6.5 | 3 x 4.5 | 3 x 4.5 | 3 x 4.5 | 3 x 6.5 | 4 x 6.5 |
| **UNIT ELECTRICAL DATA** | (6) | | | | | | | |
| Max abs. current | | A | 86 | 98 | 108 | 121 | 140 | 161 |
| Max LRC | | A | 277 | 326 | 336 | 372 | 392 | 350 |
| Voltage supply | | V/f/Hz | 400/3N/50 | | | | | |
| **DS Version** | (7) | | | | | | | |
| Heating capacity | | kW | 24 | 28 | 33 | 38 | 42 | 46 |
| Water flow rate | | m3/h | 2 | 2.4 | 2.8 | 3.2 | 3.6 | 3.9 |
| Pressure drop | | kPa | 15 | 18 | 18 | 20 | 20 | 20 |
| **Sound pressure level at 1 m** | (6) (8) | | | | | | | |
| STD Version | | dB(A) | 75 | 78 | 78 | 78 | 80 | 82 |
| LN Version | | dB(A) | 71 | 74 | 74 | 74 | 76 | 78 |
| VLN Version | | - | Contact factory | | | | | |

**Note:**

1) Cooling mode: water temp. 12 °C / 7 °C; air temperature 35 °C;
   Heating mode: water temp. 40 °C / 45 °C; air temperature 7 °C db, 6 °C wb;
2) Compressors + fans only. No water pump(s);
3) It becomes condenser in SCACY…H (heat pump) version;
4) It becomes evaporator in SCACY…H (heat pump) version;
5) Max air flow in case of LN version;
6) Without water pump(s), STD version;
7) Water temperature from 40 °C to 50 °C;
8) Compressors site and ducted air discharged.

# SCACY technical data

| SIZE | | | 242 | 262 | 282 | 312 | 342 | 382 |
|---|---|---|---|---|---|---|---|---|
| **COOLING MODE SCACY STD/LN** | | | | | | | | |
| Cooling capacity | (1) | kW | 201 | 226 | 235 | 253 | 287 | 311 |
| Abs. power | (2) | kW | 81.4 | 95.1 | 99.2 | 111.6 | 121.2 | 138.8 |
| EER | (2) | - | 2.46 | 2.37 | 2,36 | 2.26 | 2.36 | 2.24 |
| **HEATING MODE SCACY…H** | | | | | | | | |
| Heating capacity | (1) | kW | 216 | 242 | 251 | 270 | 307 | 330 |
| Abs. power | (2) | kW | 76.5 | 89.3 | 93.2 | 104.9 | 113.9 | 130.4 |
| COP | (2) | kW | 2.82 | 2.70 | 2.69 | 2.57 | 2.69 | 2.53 |
| **COMPRESSOR (scroll)** | | | | | | | | |
| Ermetico scroll | | | | | | | | |
| Quantity | | n° | 4 | | | | | |
| Refrigerant circuit | | n° | 2 | | | | | |
| Capacity step | | n° | 4 | | | | | |
| Refrigerant | | | R410A | | | | | |
| Refrigerant charge | | kg | 25+25 | 29+29 | 31+31 | 34+34 | 36+36 | 38+38 |
| **EVAPORATOR Plate-to-plate** | (3) | | | | | | | |
| Water flow rate | | m3/h | 34,5 | 38,8 | 40,4 | 43.5 | 49.3 | 53.4 |
| Pressure drop | | kPa | 43 | 41 | 30 | 34 | 46 | 52 |
| Water volume | | l | 9.8 | 13 | 13 | 13 | 18 | 21 |
| **PAC Version** | | | | | | | | |
| Storage tank water volume | | l | 500 | 500 | 500 | 500 | 500 | 500 |
| Water pump nominal power | | kW | 2.2 | 3 | 3 | 3 | 4 | 4 |
| Water pump nominal current | | A | 5.2 | 6.5 | 6.5 | 6.5 | 7.7 | 7.7 |
| External static pressure | | kPa | 110 | 140 | 130 | 110 | 140 | 130 |
| **CONDENSER (STD/LN version)** | (4) | | | | | | | |
| Centrifugal fans | | n° | 4 | 4 | 4 | 4 | 5 | 5 |
| Nominal air flow | (5) | m3/h | 56,000 | 64,000 | 72,000 | 72,000 | 80,000 | 80,000 |
| External pressure | | Pa | 120 | | | | | |
| Max abs. power | | n° / kW | 4 x 3 | 4 x 4 | 4 x 5.5 | 4 x 5.5 | 5 x 4 | 5 x 4 |
| Max abs. current | | A | 4 x 6.5 | 4 x 7.7 | 4 x 11 | 4 x 11 | 5 x 7.7 | 5 x 7.7 |
| **UNIT ELECTRICAL DATA** | (6) | | | | | | | |
| Max abs. current | | A | 178 | 198 | 212 | 229 | 252 | 281 |
| Max LRC | | A | 366 | 426 | 440 | 458 | 504 | 532 |
| Voltage supply | | V/f/Hz | 400/3N/50 | | | | | |
| **DS Version** | (7) | | | | | | | |
| Heating capacity | | kW | 52 | 62 | 65 | 75 | 83 | 88 |
| Water flow rate | | m3/h | 4.4 | 5.3 | 5.5 | 6.4 | 7.1 | 7.5 |
| Pressure drop | | kPa | 20 | 22 | 22 | 24 | 26 | 26 |
| **Sound pressure level at 1 m** | (6) (8) | | | | | | | |
| STD Version | | dB(A) | 82 | 82 | 84 | 84 | 86 | 86 |
| LN Version | | dB(A) | 78 | 78 | 80 | 80 | 82 | 82 |
| VLN Version | | - | Contact factory | | | | | |

**Note:**

1) Cooling mode: water temp. 12 °C / 7 °C; air temperature 35 °C;
Heating mode: water temp. 40 °C / 45 °C; air temperature 7 °C db, 6 °C wb;
2) Compressors + fans only. No water pump(s);
3) It becomes condenser in SCACY…H (heat pump) version;
4) It becomes evaporator in SCACY…H (heat pump) version;
5) Max air flow in case of LN version;
6) Without water pump(s), STD version;
7) Water temperature from 40 °C to 50 °C;
8) Compressors site and ducted air discharged.

# SCACY R410A: Performances Plate-to-plate exchanger

## COOLING CAPACITY AND ABSORBED POWER

| MOD. | EVAP. | CONDENSER - Ambient air temperature °C | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tw °C OUT. | 26 | | 29 | | 32 | | 35 | | 38 | | 41 | | 44 | |
| | | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa |
| 61 | 5 | 50 | *11,7* | 48 | *12,6* | 46 | *13,5* | 44 | *14,3* | 42 | *15,4* | 41 | *16,4* | 39 | *17,5* |
| | 6 | 51 | *11,9* | 49 | *12,8* | 47 | *13,6* | 46 | *14,4* | 44 | *15,5* | 42 | *16,5* | 40 | *17,7* |
| | 7 | 52 | *12,0* | 50 | *12,9* | 48 | *13,7* | **47** | ***14,5*** | 45 | *15,6* | 43 | *16,7* | 41 | *17,8* |
| | 8 | 53 | *12,2* | 52 | *13,1* | 50 | *13,8* | 48 | *14,5* | 46 | *15,7* | 44 | *16,8* | *42* | *18,1* |
| | 9 | 55 | *12,3* | 53 | *13,2* | 51 | *14,0* | 49 | *14,8* | 47 | *15,9* | 46 | *17,0* | 43 | *18,3* |
| | 10 | 56 | *12,5* | 55 | *13,3* | 53 | *14,1* | 51 | *14,9* | 48 | *16,0* | 47 | *17,1* | - | - |
| 71 | 5 | 56 | *14,5* | 54 | *15,6* | 52 | *16,6* | 50 | *17,7* | 48 | *19,0* | 46 | *20,2* | 44 | *21,7* |
| | 6 | 58 | *14,7* | 55 | *15,8* | 53 | *16,8* | 51 | *17,8* | 49 | *19,2* | 47 | *20,4* | 45 | *21,8* |
| | 7 | 58 | *14,9* | 57 | *15,9* | 55 | *16,9* | **53** | ***17,9*** | 51 | *19,3* | 49 | *20,6* | 47 | *22,0* |
| | 8 | 60 | *15,0* | 58 | *16,1* | 56 | *17,1* | 54 | *18,0* | 52 | *19,3* | 50 | *20,8* | 48 | *22,4* |
| | 9 | 61 | *15,2* | 60 | *16,3* | 58 | *17,3* | 56 | *18,3* | 54 | *19,6* | 51 | *20,9* | 49 | *22,6* |
| | 10 | 64 | *15,4* | 61 | *16,4* | 59 | *17,4* | 57 | *18,4* | 55 | *19,7* | 52 | *21,1* | - | - |
| 81 | 5 | 66 | *15,7* | 63 | *16,9* | 61 | *18,0* | 58 | *19,1* | 56 | *20,6* | 54 | *21,9* | 51 | *23,5* |
| | 6 | 67 | *15,9* | 64 | *17,1* | 62 | *18,2* | 60 | *19,3* | 58 | *20,8* | 55 | *22,1* | 53 | *23,7* |
| | 7 | 68 | *16,1* | 66 | *17,3* | 64 | *18,3* | **62** | ***19,4*** | 60 | *20,9* | 57 | *22,3* | 55 | *23,9* |
| | 8 | 70 | *16,3* | 68 | *17,5* | 66 | *18,5* | 63 | *19,5* | 61 | *21,0* | 58 | *22,5* | 56 | *24,3* |
| | 9 | 72 | *16,5* | 70 | *17,6* | 68 | *18,7* | 65 | *19,8* | 63 | *21,3* | 60 | *22,7* | 57 | *24,4* |
| | 10 | 74 | *16,7* | 72 | *17,8* | 69 | *18,9* | 67 | *20,0* | 64 | *21,3* | 61 | *22,9* | - | - |
| 91 | 5 | 71 | *18,1* | 68 | *19,4* | 66 | *20,7* | 63 | *22,0* | 60 | *23,6* | 58 | *25,2* | 56 | *27,0* |
| | 6 | 73 | *18,3* | 70 | *19,6* | 67 | *20,9* | 65 | *22,1* | 62 | *23,9* | 60 | *25,4* | 57 | *27,2* |
| | 7 | 74 | *18,5* | 72 | *19,8* | 69 | *21,1* | **67** | ***22,3*** | 64 | *24,0* | 62 | *25,6* | 59 | *27,4* |
| | 8 | 76 | *18,7* | 74 | *20,1* | 71 | *21,3* | 68 | *22,4* | 66 | *24,1* | 63 | *25,9* | 60 | *27,9* |
| | 9 | 78 | *19,0* | 76 | *20,2* | 73 | *21,5* | 70 | *22,7* | 68 | *24,5* | 65 | *26,1* | 62 | *28,1* |
| | 10 | 80 | *19,2* | 78 | *20,4* | 75 | *21,7* | 72 | *23,0* | 69 | *24,5* | 66 | *26,3* | - | - |
| 101 | 5 | 87 | *21,4* | 84 | *23,0* | 80 | *24,6* | 77 | *26,1* | 74 | *28,0* | 71 | *29,8* | 68 | *31,9* |
| | 6 | 89 | *21,6* | 85 | *23,2* | 82 | *24,8* | 80 | *26,2* | 76 | *28,2* | 73 | *30,1* | 70 | *32,2* |
| | 7 | 90 | *21,9* | 88 | *23,5* | 84 | *24,9* | **82** | ***26,4*** | 79 | *28,5* | 75 | *30,4* | 72 | *32,5* |
| | 8 | 93 | *22,2* | 90 | *23,8* | 87 | *25,2* | 84 | *26,5* | 80 | *28,5* | 77 | *30,6* | 74 | *33,0* |
| | 9 | 95 | *22,4* | 93 | *24,0* | 89 | *25,4* | 86 | *26,9* | 83 | *29,0* | 80 | *30,9* | 75 | *33,3* |
| | 10 | 98 | *22,7* | 95 | *24,2* | 92 | *25,7* | 89 | *27,2* | 84 | *29,0* | 81 | *31,2* | - | - |
| 121 | 5 | 100 | *24,1* | 96 | *25,8* | 92 | *27,6* | 88 | 29,3 | 85 | *31,5* | 82 | *33,6* | 78 | *35,9* |
| | 6 | 102 | *24,4* | 98 | *26,1* | 94 | *27,9* | 91 | *29,5* | 87 | *31,8* | 84 | *33,9* | 80 | *36,2* |
| | 7 | 103 | *24,7* | 101 | *26,4* | 97 | *28,1* | **94** | ***29,7*** | 90 | *32,0* | 86 | *34,2* | 83 | *36,5* |
| | 8 | 106 | *24,9* | 103 | *26,7* | 100 | *28,4* | 96 | *29,8* | 92 | *32,1* | 88 | *34,5* | 85 | *37,1* |
| | 9 | 109 | *25,2* | 106 | *27,0* | 102 | *28,6* | 99 | *30,3* | 95 | *32,6* | 91 | *34,7* | 86 | *37,4* |
| | 10 | 113 | *25,5* | 109 | *27,2* | 105 | *28,9* | 102 | *30,6* | 97 | *32,7* | 93 | *35,0* | - | - |

**Note:**

Tw - Evaporator outlet water temperature (delta T 5 °C).
kWf - Cooling capacity.
kWa - Abs. power (compressor only).

# **SCACY R410A: Performances** Plate-to-plate exchanger

## COOLING CAPACITY AND ABSORBED POWER

| MOD. | EVAP. | CONDENSER - Ambient air temperature °C | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tw °C OUT. | 26 | | 29 | | 32 | | 35 | | 38 | | 41 | | 44 | |
| | | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa |
| 131 | 5 | 108 | *28,2* | 104 | *30,3* | 100 | *32,4* | *96* | *34,3* | *92* | *36,9* | *89* | *39,3* | *85* | *42,1* |
| | 6 | 111 | *28,5* | 106 | *30,6* | 102 | *32,6* | 99 | *34,6* | 95 | *37,2* | 91 | *39,7* | 87 | *42,5* |
| | 7 | 112 | *28,9* | 109 | *31,0* | 105 | *32,9* | **102** | ***34,8*** | 98 | *37,5* | 94 | *40,0* | 90 | *42,8* |
| | 8 | 115 | *29,2* | 112 | *31,3* | 108 | *33,2* | 104 | *34,9* | 100 | *37,6* | 96 | *40,4* | 92 | *43,5* |
| | 9 | 118 | *29,6* | 115 | *31,6* | 111 | *33,5* | 107 | *35,5* | 103 | *38,2* | 99 | *40,7* | 94 | *43,8* |
| | 10 | 122 | *29,9* | 118 | *31,9* | 114 | *33,9* | 110 | *35,8* | 105 | *38,3* | 101 | *41,1* | - | - |
| 141 | 5 | 121 | *31,5* | 116 | *33,8* | 112 | 36,2 | 107 | *38,4* | 103 | *41,2* | 99 | *44,0* | 95 | *47,1* |
| | 6 | 124 | *31,9* | 119 | *34,2* | 114 | *36,5* | 111 | *38,6* | 106 | *41,6* | 101 | *44,3* | 97 | *47,5* |
| | 7 | 125 | *32,3* | 122 | *34,6* | 117 | *36,8* | **114** | ***38,9*** | 109 | *41,9* | 105 | *44,7* | 100 | *47,8* |
| | 8 | 129 | *32,7* | 125 | *35,0* | 121 | *37,1* | 116 | *39,0* | 112 | *42,0* | 107 | *45,1* | 103 | *48,6* |
| | 9 | 132 | *33,1* | 129 | *35,3* | 124 | *37,5* | 120 | *39,7* | 115 | *42,7* | 111 | *45,5* | 105 | *49,0* |
| | 10 | 137 | *33,5* | 132 | *35,7* | 128 | *37,8* | 123 | *40,1* | 117 | *42,8* | 113 | *45,9* | - | - |
| 151 | 5 | 131 | *36,3* | 125 | *39,0* | 121 | *41,7* | 116 | *44,2* | 111 | *47,5* | 107 | 50,6 | 102 | *54,2* |
| | 6 | 134 | *36,7* | 128 | *39,4* | 123 | *42,0* | 119 | *44,5* | 114 | *47,9* | 109 | *51,1* | 105 | *54,7* |
| | 7 | 135 | *37,2* | 132 | *39,9* | 127 | *42,3* | **123** | ***44,8*** | 118 | *48,3* | 113 | *51,5* | 108 | *55,1* |
| | 8 | 139 | *37,6* | 135 | *40,3* | 130 | *42,8* | 125 | *44,9* | 121 | *48,4* | 116 | *52,0* | 111 | *56,0* |
| | 9 | 143 | *38,1* | 139 | *40,7* | 134 | *43,2* | 129 | *45,7* | 124 | *49,1* | 119 | *52,4* | 113 | *56,4* |
| | 10 | 148 | *38,5* | 143 | *41,1* | 138 | *43,6* | 133 | *46,1* | 127 | *49,3* | 122 | *52,9* | - | - |
| 161 | 5 | 150 | *41,2* | 144 | *44,3* | 138 | *47,3* | 133 | *50,2* | 127 | *54,0* | 123 | *57,5* | 117 | *61,6* |
| | 6 | 153 | *41,7* | 147 | *44,8* | 141 | *47,7* | 137 | *50,5* | 131 | *54,5* | 125 | *58,0* | 120 | *62,1* |
| | 7 | 155 | *42,2* | 151 | *45,3* | 145 | *48,1* | **141** | ***50,9*** | 135 | *54,9* | 130 | *58,5* | 124 | *62,6* |
| | 8 | 159 | *42,8* | 155 | *45,8* | 149 | *48,6* | 144 | *51,1* | 138 | *55,0* | 133 | *59,0* | 127 | *63,6* |
| | 9 | 164 | *43,3* | 159 | *46,2* | 154 | *49,1* | 148 | *51,9* | 142 | *55,8* | 137 | *59,6* | 130 | *64,1* |
| | 10 | 169 | *43,8* | 164 | *46,7* | 158 | *49,5* | 152 | *52,4* | 145 | *56,0* | 140 | *60,1* | - | - |
| 191 | 5 | 172 | *46,3* | 165 | *49,8* | 159 | *53,2* | 152 | *56,5* | 146 | *60,6* | 141 | *64,6* | 134 | *69,2* |
| | 6 | 176 | *46,9* | 168 | *50,3* | 162 | *53,7* | 157 | *56,8* | 151 | *61,2* | 144 | *65,2* | 138 | *69,8* |
| | 7 | 178 | *47,5* | 173 | *50,9* | 167 | *54,1* | **162** | ***57,2*** | 156 | *61,7* | 149 | *65,8* | 143 | *70,4* |
| | 8 | 183 | *48,0* | 178 | *51,5* | 172 | *54,6* | 165 | *57,4* | 159 | *61,8* | 152 | *66,4* | 146 | *71,5* |
| | 9 | 188 | *48,6* | 183 | *51,9* | 177 | *55,1* | 170 | *58,3* | 164 | *62,7* | 157 | *66,9* | 149 | *72,1* |
| | 10 | 194 | *49,2* | 188 | *52,5* | 181 | *55,7* | 175 | *58,9* | 167 | *62,9* | 160 | *67,5* | - | - |
| 222 | 5 | 198 | *48,0* | 190 | *51,5* | 182 | *55,1* | 175 | *58,4* | 167 | *62,8* | 162 | *66,9* | 154 | *71,6* |
| | 6 | 202 | *48,5* | 193 | *52,1* | 186 | *55,5* | 180 | *58,8* | 173 | *63,3* | 166 | *67,5* | 158 | *72,2* |
| | 7 | 205 | *49,1* | 199 | *52,7* | 192 | *55,9* | **186** | ***59,2*** | 179 | *63,8* | 171 | *68,1* | 164 | *72,8* |
| | 8 | 210 | *49,7* | 205 | *53,3* | 197 | *56,5* | 190 | *59,4* | 182 | *63,9* | 175 | *68,7* | 167 | *74,0* |
| | 9 | 216 | *50,3* | 210 | *53,8* | 203 | *57,1* | 195 | *60,4* | 188 | *64,9* | 180 | *69,3* | 171 | *74,6* |
| | 10 | 223 | *50,9* | 216 | *54,3* | 208 | *57,6* | *201* | 61,0 | *192* | *65,1* | *184* | 69,9 | - | - |

**Note:**

Tw - Evaporator outlet water temperature (delta T 5 °C).
kWf - Cooling capacity.
kWa - Abs. power (compressor only).

# SCACY R410A: Performances Plate-to-plate exchanger

## COOLING CAPACITY AND ABSORBED POWER

| MOD. | EVAP. | CONDENSER - Ambient air temperature °C | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tw °C OUT. | 26 | | 29 | | 32 | | 35 | | 38 | | 41 | | 44 | |
| | | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa | kWf | kWa |
| 242 | 5 | 214 | 56,2 | 205 | 60,4 | 197 | 64,5 | 189 | 68,5 | 181 | 73,6 | 175 | 78,4 | 167 | 84,0 |
| | 6 | 218 | 56,9 | 209 | 61,1 | 201 | 65,1 | 195 | 68,9 | 187 | 74,3 | 179 | 79,1 | 171 | 84,7 |
| | 7 | 221 | 57,6 | 215 | 61,8 | 207 | 65,6 | **201** | ***69,4*** | 193 | 74,8 | 185 | 79,8 | 177 | 85,4 |
| | 8 | 227 | 58,3 | 221 | 62,5 | 213 | 66,3 | 205 | 69,6 | 197 | 75,0 | 189 | 80,5 | 181 | 86,8 |
| | 9 | 233 | 59,0 | 227 | 63,0 | 219 | 66,9 | 211 | 70,8 | 203 | 76,1 | 195 | 81,2 | 185 | 87,4 |
| | 10 | 241 | 59,7 | 233 | 63,6 | 225 | 67,5 | 217 | 71,5 | 207 | 76,3 | 199 | 81,9 | - | - |
| 262 | 5 | 240 | 64,1 | 231 | 68,8 | 221 | 73,6 | 212 | 78,1 | 203 | 83,8 | 197 | 89,4 | 188 | 95,7 |
| | 6 | 245 | 64,9 | 235 | 69,6 | 226 | 74,2 | 219 | 78,5 | 210 | 84,6 | 201 | 90,2 | 192 | 96,5 |
| | 7 | 249 | 65,7 | 242 | 70,4 | 233 | 74,7 | **226** | ***79,1*** | 217 | 85,3 | 208 | 91,0 | 199 | 97,3 |
| | 8 | 255 | 66,4 | 249 | 71,2 | 240 | 75,5 | 231 | 79,3 | 221 | 85,4 | 212 | 91,8 | 203 | 98,9 |
| | 9 | 262 | 67,2 | 255 | 71,8 | 246 | 76,3 | 237 | 80,7 | 228 | 86,8 | 219 | 92,5 | 208 | 99,7 |
| | 10 | 271 | 68,0 | 262 | 72,5 | 253 | 77,0 | 244 | 81,5 | 233 | 87,0 | 224 | 93,3 | - | - |
| 282 | 5 | 250 | 62,5 | 240 | 67,2 | 230 | 71,8 | 221 | 76,2 | 212 | 81,8 | 204 | 87,2 | 195 | 93,4 |
| | 6 | 255 | 63,3 | 244 | 67,9 | 235 | 72,4 | 228 | 76,7 | 219 | 82,6 | 209 | 88,0 | 200 | 94,2 |
| | 7 | 259 | 64,1 | 251 | 68,7 | 242 | 73,0 | **235** | ***77,2*** | 226 | 83,2 | 216 | 88,8 | 207 | 95,0 |
| | 8 | 266 | 64,8 | 259 | 69,5 | 249 | 73,7 | 240 | 77,4 | 230 | 83,4 | 221 | 89,6 | 212 | 96,5 |
| | 9 | 273 | 65,6 | 266 | 70,1 | 256 | 74,4 | 247 | 78,7 | 237 | 84,7 | 228 | 90,3 | 216 | 97,3 |
| | 10 | 282 | 66,4 | 273 | 70,8 | 263 | 75,1 | 254 | 79,5 | 242 | 84,9 | 233 | 91,1 | - | - |
| 312 | 5 | 269 | 72,6 | 258 | 78,0 | 248 | 83,3 | 238 | 88,4 | 228 | 95,0 | 220 | 101,2 | 210 | 108,4 |
| | 6 | 275 | 73,5 | 263 | 78,8 | 253 | 84,0 | 245 | 89,0 | 235 | 95,9 | 225 | 102,1 | 215 | 109,3 |
| | 7 | 278 | 74,4 | 271 | 79,7 | 261 | 84,7 | **253** | ***89,6*** | 243 | 96,6 | 233 | 103,0 | 223 | 110,2 |
| | 8 | 286 | 75,3 | 278 | 80,6 | 268 | 85,6 | 258 | 89,9 | 248 | 96,8 | 238 | 103,9 | 228 | 112,0 |
| | 9 | 293 | 76,2 | 286 | 81,4 | 276 | 86,4 | 266 | 91,4 | 256 | 98,3 | 245 | 104,8 | 233 | 112,9 |
| | 10 | 304 | 77,1 | 293 | 82,2 | 283 | 87,2 | 273 | 92,3 | 261 | 98,6 | 250 | 105,7 | - | - |
| 342 | 5 | 305 | 82,0 | 293 | 88,0 | 281 | 94,1 | 270 | 99,9 | 258 | 107,3 | 250 | 114,4 | 238 | 122,5 |
| | 6 | 312 | 83,0 | 298 | 89,1 | 287 | 94,9 | 278 | 100,5 | 267 | 108,3 | 255 | 115,4 | 244 | 123,5 |
| | 7 | 316 | 84,0 | 307 | 90,1 | 296 | 95,6 | **287** | ***101,2*** | 276 | 109,1 | 264 | 116,4 | 253 | 124,5 |
| | 8 | 324 | 85,0 | 316 | 91,1 | 304 | 96,6 | 293 | 101,5 | 281 | 109,3 | 270 | 117,4 | 258 | 126,5 |
| | 9 | 333 | 86,0 | 324 | 91,9 | 313 | 97,6 | 301 | 103,2 | 290 | 111,0 | 278 | 118,4 | 264 | 127,5 |
| | 10 | 344 | 87,0 | 333 | 92,8 | 321 | 98,5 | 310 | 104,2 | 296 | 111,3 | 284 | 119,4 | - | - |
| 382 | 5 | 331 | 96,2 | 317 | 103,4 | 305 | 110,5 | 292 | 117,3 | 280 | 125,9 | 271 | 134,2 | 258 | 143,7 |
| | 6 | 338 | 97,4 | 323 | 104,5 | 311 | 111,4 | 302 | 118,0 | 289 | 127,1 | 277 | 135,4 | 264 | 144,9 |
| | 7 | 342 | 98,6 | 333 | 105,7 | 320 | 112,3 | **311** | ***118,8*** | 299 | 128,1 | 286 | 136,6 | 274 | 146,1 |
| | 8 | 351 | 99,8 | 342 | 106,9 | 330 | 113,5 | 317 | 119,2 | 305 | 128,3 | 292 | 137,8 | 280 | 148,5 |
| | 9 | 361 | 101,0 | 351 | 107,9 | 339 | 114,5 | 327 | 121,2 | 314 | 130,3 | 302 | 139,0 | 286 | 149,7 |
| | 10 | 373 | 102,2 | 361 | 108,9 | 348 | 115,6 | 336 | 122,4 | 320 | 130,7 | 308 | 140,2 | - | - |

**Note:**

Tw - Evaporator outlet water temperature (delta T 5 °C).
kWf - Cooling capacity.
kWa - Abs. power (compressor only).

# **SCACY R410A: Performances** Plate-to-plate exchanger

## HEAT PUMP CAPACITY AND ABSORBED POWER

| MOD. | COND. | CONDENSER - Ambient air temperature °C | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tw °C | +10 | | +7 | | +4 | | 0 | |
| | IN. | kWt | *kWa* | kWt | *kWa* | kWt | *kWa* | kWt | *kWa* |
| **61** | **30** | 54 | *11,7* | 52 | *11,6* | 48 | *11,6* | 44 | *11,5* |
| | **35** | 54 | *13,0* | 52 | *12,9* | 48 | *12,9* | 44 | *12,8* |
| | **40** | 53 | *14,4* | **51** | ***14,4*** | 48 | *14,3* | 43 | *14,3* |
| | **45** | 52 | *16,1* | 50 | *16,1* | 47 | *16,0* | - | - |
| **71** | **30** | 61 | *13,8* | 60 | *13,7* | 55 | *13,7* | 50 | *13,6* |
| | **35** | 62 | *15,3* | 59 | *15,3* | 55 | *15,2* | 50 | *15,1* |
| | **40** | 61 | *17,0* | **58** | ***17,0*** | 54 | *16,9* | 49 | *16,9* |
| | **45** | 59 | *19,0* | 57 | *19,0* | 54 | *18,9* | - | - |
| **81** | **30** | 72 | *15,4* | 70 | *15,3* | 65 | *15,3* | 59 | *15,2* |
| | **35** | 72 | *17,1* | 69 | *17,1* | 64 | *17,0* | 58 | *16,9* |
| | **40** | 71 | *19,0* | **68** | ***19,0*** | 64 | *18,9* | 58 | *18,9* |
| | **45** | 69 | *21,2* | 67 | *21,2* | 63 | *21,1* | - | - |
| **91** | **30** | 78 | *17,0* | 76 | *16,9* | 70 | *16,9* | 64 | *16,8* |
| | **35** | 79 | *18,9* | 75 | *18,9* | 70 | *18,8* | 63 | *18,7* |
| | **40** | 77 | *21,0* | **74** | ***21,0*** | 69 | *20,9* | 63 | *20,9* |
| | **45** | 75 | *23,5* | 73 | *23,5* | 69 | *23,4* | - | - |
| **101** | **30** | 96 | *19,8* | 93 | *19,7* | 86 | *19,6* | 79 | *19,5* |
| | **35** | 97 | *22,0* | 92 | *21,9* | 86 | *21,8* | 78 | *21,7* |
| | **40** | 95 | *24,4* | **91** | ***24,4*** | 85 | *24,3* | 78 | *24,3* |
| | **45** | 93 | *27,3* | 90 | *27,3* | 85 | *27,2* | - | - |
| **121** | **30** | 110 | *22,9* | 107 | *22,8* | 99 | *22,6* | 90 | *22,6* |
| | **35** | 110 | *25,4* | 105 | *25,3* | 98 | *25,2* | 89 | *25,1* |
| | **40** | 109 | *28,2* | **104** | ***28,2*** | 97 | *28,1* | 89 | *28,1* |
| | **45** | 106 | *31,5* | 103 | *31,5* | 97 | *31,4* | - | - |
| **131** | **30** | 121 | *25,6* | 117 | *25,5* | 108 | *25,4* | 98 | *25,3* |
| | **35** | 121 | *28,5* | 115 | *28,4* | 107 | *28,3* | 98 | *28,1* |
| | **40** | 119 | *31,6* | **114** | ***31,6*** | 107 | *31,5* | 97 | *31,5* |
| | **45** | 116 | *35,3* | 113 | *35,3* | 106 | *35,2* | - | - |
| **141** | **30** | 136 | *29,0* | 131 | *28,9* | 122 | *28,7* | 110 | *28,6* |
| | **35** | 136 | *32,3* | 130 | *32,1* | 120 | *32,0* | 110 | *31,9* |
| | **40** | 134 | *35,8* | **128** | ***35,8*** | 120 | *35,7* | 109 | *35,7* |
| | **45** | 131 | *40,0* | 127 | *40,0* | 119 | *39,8* | - | - |
| **151** | **30** | 148 | *32,4* | 144 | *32,3* | 133 | *32,1* | 121 | *32,0* |
| | **35** | 149 | *36,1* | 142 | *35,9* | 132 | *35,8* | 120 | *35,6* |
| | **40** | 147 | *40,0* | **140** | ***40,0*** | 131 | *39,8* | 119 | *39,8* |
| | **45** | 143 | *44,7* | 139 | *44,7* | 130 | *44,5* | - | - |

**Note:**

Tw - Condenser Inlet water temperature (delta T 5°C)
kWt - Heating capacity
kWa - Abs.power (compressor only)

# SCACY R410A: Performances Plate-to-plate exchanger

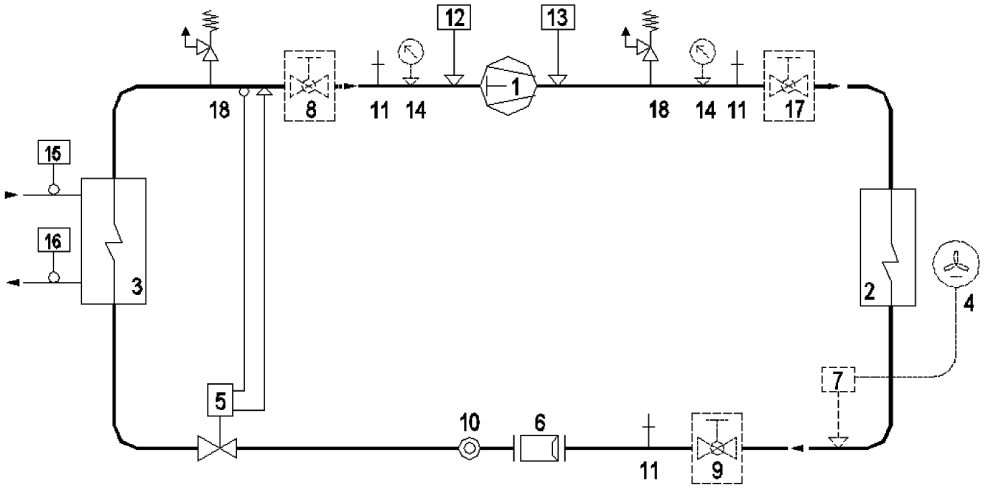
## HEAT PUMP CAPACITY AND ABSORBED POWER

| MOD. | COND. | CONDENSER - Ambient air temperature °C | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tw °C IN. | +10 | | +7 | | +4 | | 0 | |
| | | kWt | *kWa* | kWt | *kWa* | kWt | *kWa* | kWt | *kWa* |
| **161** | **30** | 171 | *37,1* | 165 | *36,9* | 153 | *36,7* | 139 | *36,6* |
| | **35** | 171 | *41,2* | 163 | *41,0* | 151 | *40,9* | 138 | *40,7* |
| | **40** | 169 | *45,7* | **161** | ***45,7*** | 151 | *45,5* | 137 | *45,5* |
| | **45** | 164 | *51,0* | 159 | *51,0* | 150 | *50,9* | - | - |
| **191** | **30** | 194 | *41,5* | 188 | *41,3* | 174 | *41,1* | 158 | *41,0* |
| | **35** | 194 | *46,2* | 185 | *46,0* | 172 | *45,8* | 157 | *45,6* |
| | **40** | 192 | *51,2* | **183** | ***51,2*** | 171 | *51,0* | 156 | *51,0* |
| | **45** | 187 | *57,2* | 181 | *57,2* | 170 | *57,0* | - | - |
| **222** | **30** | 219 | *45,7* | 212 | *45,5* | 197 | *45,3* | 179 | *45,1* |
| | **35** | 220 | *50,9* | 209 | *50,6* | 195 | *50,4* | 177 | *50,2* |
| | **40** | 217 | *56,4* | **207** | ***56,4*** | 194 | *56,2* | 176 | *56,2* |
| | **45** | 211 | *63,0* | 205 | *63,0* | 193 | *62,8* | - | - |
| **242** | **30** | 243 | *51,9* | 235 | *51,6* | 218 | *51,4* | 198 | *51,2* |
| | **35** | 243 | *57,7* | 232 | *57,5* | 215 | *57,2* | 196 | *57,0* |
| | **40** | 240 | *64,0* | **229** | ***64,0*** | 214 | *63,7* | 195 | *63,7* |
| | **45** | 234 | *71,5* | 227 | *71,5* | 213 | *71,2* | - | - |
| **262** | **30** | 272 | *58,1* | 264 | *57,8* | 244 | *57,5* | 222 | *57,3* |
| | **35** | 273 | *64,6* | 260 | *64,3* | 242 | *64,0* | 220 | *63,7* |
| | **40** | 269 | *71,6* | **257** | ***71,6*** | 240 | *71,3* | 219 | *71,3* |
| | **45** | 262 | *80,0* | 254 | *80,0* | 239 | *79,7* | - | - |
| **282** | **30** | 281 | *58,2* | 272 | *57,9* | 252 | *57,7* | 229 | *57,4* |
| | **35** | 281 | *64,8* | 268 | *64,5* | 249 | *64,2* | 227 | *63,9* |
| | **40** | 277 | *71,8* | **265** | ***71,8*** | 248 | *71,5* | 226 | *71,5* |
| | **45** | 270 | *80,2* | 262 | *80,2* | 246 | *79,9* | - | - |
| **312** | **30** | 315 | *65,5* | 305 | *65,2* | 282 | *64,9* | 256 | *64,6* |
| | **35** | 315 | *72,9* | 301 | *72,6* | 279 | *72,2* | 255 | *71,9* |
| | **40** | 311 | *80,8* | **297** | ***80,8*** | 278 | *80,5* | 253 | *80,5* |
| | **45** | 303 | *90,3* | 294 | *90,3* | 276 | *89,9* | - | - |
| **342** | **30** | 351 | *74,0* | 340 | *73,6* | 314 | *73,2* | 286 | *73,0* |
| | **35** | 351 | *82,3* | 335 | *81,9* | 311 | *81,5* | 284 | *81,2* |
| | **40** | 347 | *91,2* | **331** | ***91,2*** | 309 | *90,8* | 282 | *90,8* |
| | **45** | 338 | *101,9* | 328 | *101,9* | 308 | *101,5* | - | - |
| **382** | **30** | 387 | *82,7* | 374 | *82,3* | 347 | *81,9* | 315 | *81,6* |
| | **35** | 387 | *92,0* | 369 | *91,6* | 343 | *91,2* | 313 | *90,8* |
| | **40** | 382 | *102,0* | **365** | ***102,0*** | 341 | *101,6* | 311 | *101,6* |
| | **45** | 372 | *113,9* | 361 | *113,9* | 339 | *113,5* | - | - |

**Note:**

Tw - Condenser Inlet water temperature (delta T 5°C)
kWt - Heating capacity
kWa - Abs.power (compressor only)

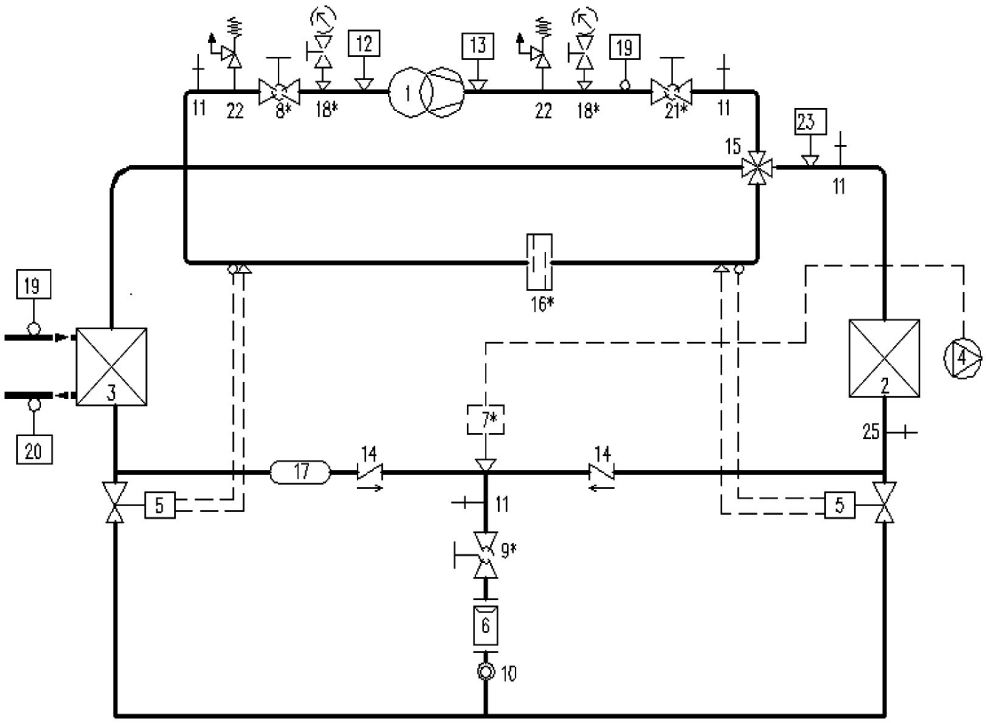
## Refrigerant Circuit **SCACY**




1 = Compressor
2 = Condenser
3 = Evaporator
4 = Centrifugal Fans
5 = ElectronicThermostatic valve
6 = Dryer
7 = Fan speed regulator **
8 = Shut off valve suction line **
9 = Shut off valve liquid line **
10 = Sight glass
11 = Schrader service valve
12 = Low pressure switch
13 = High pressure switch
14 = Gauges **
15 = Temperature probe
16 = Antifreeze probe
17 = Shut off valves discharge line **
18 = Safety valve

** The outlined components are optional

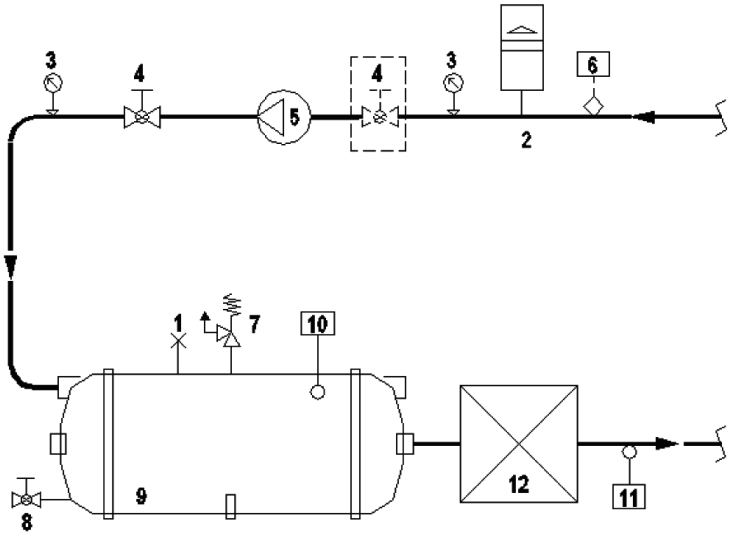
## Refrigerant Circuit **SCACY...H**




1 = Compressor
2 = Condenser
3 = Evaporator
4 = Centrifugal Fans
5 = Electronic Thermostatic valve
6 = Dryer
7 = Fan speed regulator **
8 = Shut off valve suction line **
9 = Shut off valves liquid line **
10 = Sight glass
11 = Schrader service valve
12 = Low pressure switch
13 = High pressure switch
14 = Non-return valve
15 = 4-way valve
16 = Liquid separator suction line **
17 = Liquid receiver
18 = Gauges **
19 = Temperature probe
20 = Antifreeze probe
21 = Shut off valve discharge line **
22 = Safety valve
23= Pressure transducer

** The outlined components are optional

## Hydraulic Circuit **SCACY....PAC 1 (PAC 2)**




1 = Air purger
2 = Expansion vessel
3 = Gauge
4 = Shut off valve**
5 = Pump
6 = Flow switch
7 = Safety valve
8 = Drain/fill up valve
9 = Tank
10 = Temperature probe
11 = Antifreeze probe
12 = Exchanger

** The outlined components are optional

**• PAC 1: 1 off pump - PAC 2: 2 off pumps**

| **Operatine range** | | **Cooling** | **Heating** |
|---|---|---|---|
| INLET WATER TEMPERATURE | Max °C | 17 | 45 |
| | Min °C | 9 | 30 |
| OUTLET WATER TEMPERATURE | Max °C | 10 | 50 |
| | Min °C | 5 | 35 |
| AMBIENT AIR TEMPERATURE | Max °C | 46 | 20 |
| | Min °C | 15 (1) | -5 |

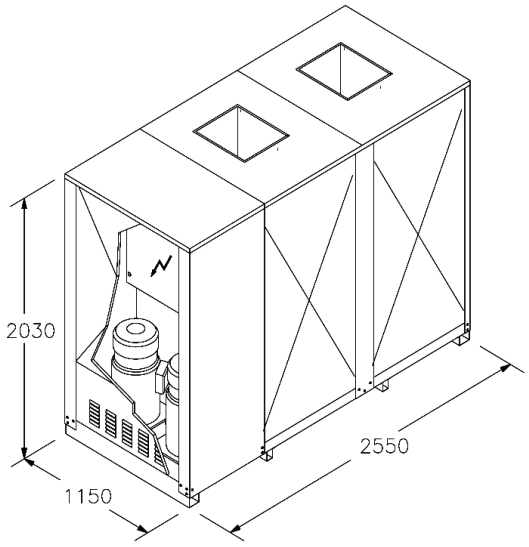
(1) This temperature can go down to 0 °C only if the appropriate kit has been installed.

### CORRECTION FACTORS

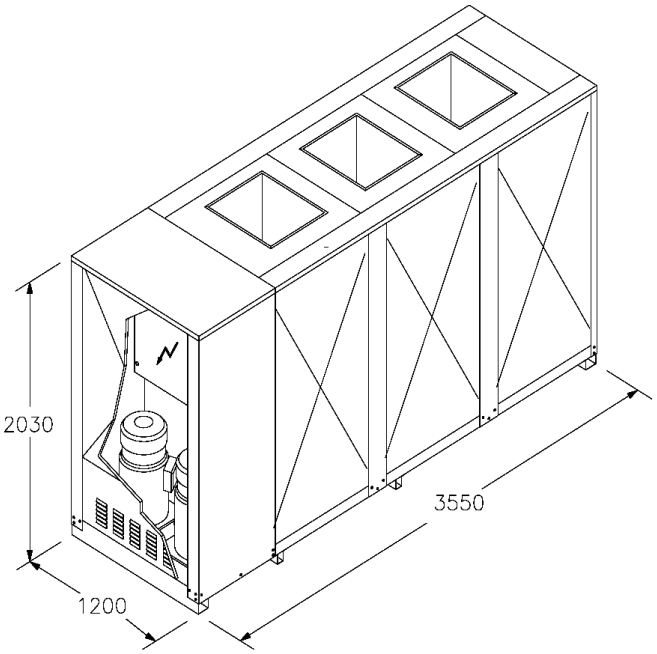
| **Ethylene glycol persentage by weight (%)** | **10** | **20** | **30** | **40** | **50** |
|---|---|---|---|---|---|
| Freezing point (°C) | -3,6 | -8,7 | -15,3 | -23,5 | -35,5 |
| Cooling capacity | 0,986 | 0,980 | 0,973 | 0,966 | 0,960 |
| Abs. power | 1,000 | 0,995 | 0,990 | 0,985 | 0,975 |
| Mixture flow rate | 1,023 | 1,054 | 1,092 | 1,140 | 1,200 |
| Pressure drop | 1,061 | 1,114 | 1,190 | 1,244 | 1,310 |

# DIMENSIONS:

## Fig. A




## Fig. B



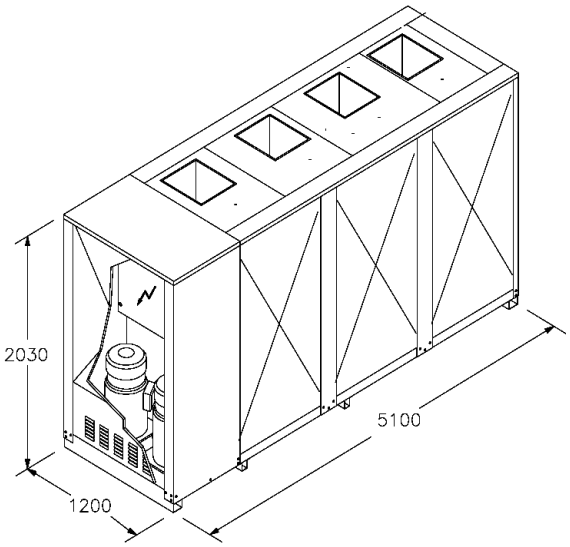

# WEIGHTS:

| VERSIONS | STD | | | | | | | LN | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mod.** | **61** | **71** | **81** | **91** | **101** | **121** | **131** | **61** | **71** | **81** | **91** | **101** | **121** | **131** |
| **Fig.** | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| Operation (1) | 710 | 750 | 790 | 870 | 1050 | 1105 | 1200 | 730 | 775 | 810 | 888 | 1075 | 1140 | 1240 |
| Transport | 710 | 750 | 790 | 870 | 1050 | 1105 | 1200 | 730 | 775 | 810 | 888 | 1075 | 1140 | 1240 |
| **PAC 1 Version** | | | | | | | | | | | | | | |
| Operation | 1035 | 1070 | 1150 | 1210 | 1505 | 1595 | 1710 | 1085 | 1120 | 1200 | 1260 | 1555 | 1645 | 1760 |
| Transport | 795 | 835 | 920 | 990 | 1180 | 1260 | 1380 | 845 | 885 | 970 | 1040 | 1230 | 1310 | 1430 |

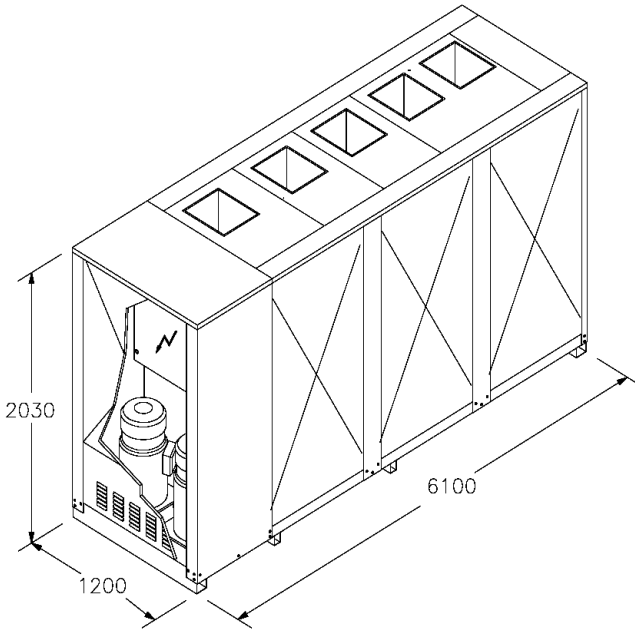
| VERSIONS | STD | | | | | | LN | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mod.** | **141** | **151** | **161** | **191** | **222** | **242** | **141** | **151** | **161** | **191** | **222** | **242** |
| **Fig.** | B | B | B | B | C | C | B | B | B | B | C | C |
| Operation (1) | 1280 | 1355 | 1490 | 1580 | 1970 | 2190 | 1320 | 1395 | 1530 | 1620 | 2050 | 2260 |
| Transport | 1280 | 1355 | 1490 | 1580 | 1970 | 2190 | 1320 | 1395 | 1530 | 1620 | 2050 | 2260 |
| **PAC1 Version** | | | | | | | | | | | | |
| Operation | 1790 | 2065 | 2190 | 2300 | 2700 | 2960 | 1840 | 2115 | 2240 | 2350 | 2750 | 3010 |
| Transport | 1450 | 1515 | 1660 | 1770 | 2180 | 2410 | 1500 | 1565 | 1710 | 1820 | 2230 | 2460 |

(1) The data has to be added to the evaporator water volume with regards to the selected model.

## Fig. C




## Fig. D




| VERSIONS | STD | | | | | LN | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Mod.** | **262** | **282** | **312** | **342** | **382** | **262** | **282** | **312** | **342** | **382** |
| **Fig.** | C | C | C | D | D | C | C | C | D | D |
| Operation (1) | 1280 | 1355 | 1490 | 1580 | 2190 | 1320 | 1395 | 1530 | 1620 | 2260 |
| Transport | 1280 | 1355 | 1490 | 1580 | 2190 | 1320 | 1395 | 1530 | 1620 | 2260 |
| **PAC1 Version** | | | | | | | | | | |
| Operation | 1790 | 2065 | 2190 | 2300 | 2960 | 1840 | 2115 | 2240 | 2350 | 3010 |
| Transport | 1450 | 1515 | 1660 | 1770 | 2410 | 1500 | 1565 | 1710 | 1820 | 2460 |

(1) The data has to be added to the evaporator water volume with regards to the selected model.

Technical data shown in this booklet are not binding. ACM Kälte Klima S.r.l. reserves the right to modify data without pririor notice.

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