SPC HEATPIPES (FZC)

# SPC HIDROS - Technical Data Sheet
# Cold Room Units

## INTRODUCTION

SPC Hidros Cold Room Units are high-performance dehumidifiers for use in industrial and commercial applications. They are designed to operate in low temperature environments down to -5°C.

The range includes two models. CH units offer a standard dehumidifier design. CHZ units have external condensers to provide temperature control as well as dehumidification capabilites. Each model is available in six sizes: 85, 150, 180, 250, 320, 400. Case designs are shown in the opposite pictures.

All SPC Hidros units are fully assembled, wired and tested. They are leak tested under pressure before being charged with refrigerant R407C. Units comply to all relevant European Union Directives and are individually marked with a CE label and provided with a Conformity Declaration.

Installation of SPC Hidros units is simple; once service connections and condensate drains have been connected the unit's installation is complete. Once installed, SPC Hidros units are designed for easy maintenance and service. Each component is readily accessible and easily replaceable.

Size 85

Sizes 150 & 180

Sizes 250, 320 & 400

External Condenser

## MAIN COMPONENTS

| | |
|---|---|
| Casing | Composed of a solid frame and a set of quick release panels (for easy access to internal parts) formed from heavy-gauge galvanised steel sheet, coated with an epoxy based powder paint that is oven baked to increase durability and resistance to corrosion. Drain trays are made of stainless steel. |
| Compressor | Reciprocating hermetic type, suction gas cooled, direct start, crank case heater, thermal overload protection, with pressure tappings on suction and discharge side. The compressors are mounted on rubber antivibration mounts. |
| Evaporator | Direct-expansion evaporator coil constructed from copper tubes mechanically expanded into aluminium fins, vertically mounted, with stainless steel condensate tray at the bottom. An air filter is installed on the coil inlet as standard. |
| Condenser | Condenser coil constructed from copper tubes mechanically expanded into aluminium fins, vertically mounted. |
| Fan | Centrifugal double inlet fan, statically and dynamically balanced, with direct coupled three speed motor. |

| | |
|---|---|
| Refrigerant Circuit | This consists of a filter drier, expansion device, high and low pressure switches and a set of solenoid valves. |
| Electrical Board | This consists of compressor fuses, fan fuses, auxiliary circuit fuses, compressor contactor, fan relay, terminal block with connection for remote on-off and hygrostat control and local on-off switch. |
| Micro-processor | Standard on all units. This controls the unit from the hygrostat and defrost thermostat. It controls the compressor start and stop sequence, defrost cycles and alarms. A dedicated LED panel signals supply presence, running mode, defrost pending or alarm presence. |
| Defrost Thermostat | Standard on all units. This signals to the microprocessor control that defrost cycle is needed and controls its termination. |

# ACCESSORIES

Each model of SPC Hidros Cold Room Unit has a range of optional accessories, these are listed below.

**ACCESSORIES - CH MODEL**

| MODEL - CH | 85 | 150 | 180 | 250 | 320 | 400 |
|---|---|---|---|---|---|---|
| Inbuilt Hygrostat (operating humidity: 30-100%) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Remote Hygrostat (operating humidity: 30-100%) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Remote Electric hygrostat | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wall Mounting Version | ✓ | | | | | |
| Floor Trolley Version | ✓ | | | ✓ | ✓ | ✓ |
| Condensate Pump | | | | ✓ | ✓ | ✓ |
| Horizontal Discharge Plenum | | | | ✓ | ✓ | ✓ |

**ACCESSORIES - CHZ MODEL**

| MODEL - CHZ | 85 | 150 | 180 | 250 | 320 | 400 |
|---|---|---|---|---|---|---|
| Mechanical Hygrostat-Thermostat | ✓ | ✓ | ✓ | | | |
| Electronic Hygrostat-Thermostat | ✓ | ✓ | ✓ | | | |
| Inbuilt hygrostat (operating humidity: 30-100%) | | | | ✓ | ✓ | ✓ |
| Remote Hygrostat (operating humidity: 30-100%) | | | | ✓ | ✓ | ✓ |
| Wall Mounting Version | ✓ | | | | | |
| Low Noise Remote Condenser | ✓ | ✓ | ✓ | | | |
| Condensate Pump | | | | ✓ | ✓ | ✓ |
| Stainless Steel Frame | ✓ | | | | | |

# TECHNICAL DATA

The tables below show technical data for the SPC Hidros Cold Room Units. Detailed performance data is supplied overleaf.

### TECHNICAL DATA - CH MODEL

| MODEL - CH | 85 | 150 | 180 | 250 | 320 | 400 |
|---|---|---|---|---|---|---|
| Moisture Removal Rate (l/24h) | 84.4(1) | 155.8(1) | 189.8(1) | 268.3(1) | 356.8(1) | 456.9(1) |
| Nominal Absorbed Power - Drying Mode (kW) | 2.5(1) | 4.3(1) | 5.4(1) | 6.6(1) | 8.4(1) | 11.1(1) |
| Maximum Absorbed Power (kW) | 2.7(2) | 4.7(2) | 5.9(2) | 7.2(2) | 9.3(2) | 12.2(2) |
| Nominal Absorbed Current (A) | 5.4(1) | 12.0(1) | 14.0(1) | 19.0(1) | 20.5(1) | 24.4(1) |
| Maximum Absorbed Current (A) | 5.9(2) | 12.4(2) | 14.7(2) | 19.9(2) | 21.9(2) | 26.9(2) |
| Air Flow ($m^3/s$) | 0.528 | 1.000 | 1.139 | 1.430 | 1.903 | 2.277 |
| Available Static Pressure (Pa) | 50 | | | | | |
| Refrigerant | R407C | | | | | |
| Sound Pressure Level (dBa) | 62(5) | 66(5) | 78(5) | 72(5) | 73(5) | 74(5) |
| Operating Temperature Range (°C) | -1 to 18 | | | | | |
| Operating Humidity Range (%) | 30 to 99 | | | | | |
| Length (mm) | 570 | 1004 | | 1630 | | |
| Depth (mm) | 700 | 635 | | 1010 | | |
| Height (mm) | 850 | 1283 | | 1410 | | |
| Weight (kg) | 112 | 184 | 188 | 398 | 424 | 451 |
| Power Supply | 400 / 3 / 50 | | | | | |

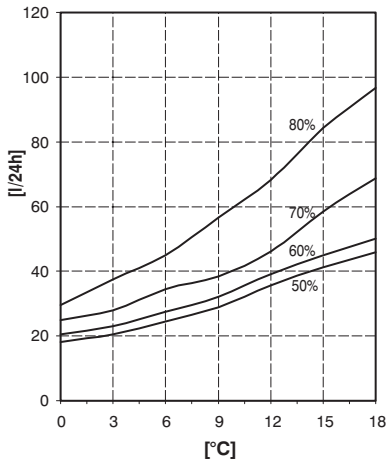
### TECHNICAL DATA - CHZ MODEL

| MODEL - CHZ | 85 | 150 | 180 | 250 | 320 | 400 |
|---|---|---|---|---|---|---|
| Moisture Removal Rate (l/24h) | 84.4(1) | 155.8(1) | 189.8(1) | 268.3(1) | 356.8(1) | 456.9(1) |
| Nominal Absorbed Power - Drying Mode (kW) | 2.2(1) | 4.9(1) | 6.0(1) | 6.6(1) | 8.41(1) | 11.1(1) |
| Cooling Capacity | 5.5(3) | 10.1(3) | 12.4(3) | 17.4(3) | 23.2(3) | 29.9(3) |
| Nominal Absorbed Power - Cooling Mode(kW) | 2.3(3) | 4.6(3) | 6.1(3) | 6.9(3) | 8.8(3) | 11.5(3) |
| Maximum Absorbed Power (kW) | 2.9(4) | 5.3(4) | 6.5(4) | 8.1(4) | 10.3(4) | 13.2(4) |
| Nominal Absorbed Current (A) | 7.0(1) | 15.2(1) | 17.2(1) | 16.4(1) | 18.0(1) | 22.8(1) |
| Maximum Absorbed Current (A) | 7.5(4) | 15.6(4) | 17.9(4) | 17.3(4) | 19.2(4) | 24.3(4) |
| Air Flow ($m^3/s$) | 0.528 | 1.000 | 1.139 | 2.888 | 3.806 | 4.555 |
| Available Static Pressure (Pa) | 50 | | | - | | |
| Refrigerant | R407C | | | | | |
| Sound Pressure Level (dBa) | 62(5) | 66(5) | 67(5) | 70(5) | 71(5) | 72(5) |
| Operating Temperature Range (°C) | -1 to 18 | | | -5 to 18 | | |
| Operating Humidity Range (%) | 30 to 99 | | | | | |
| Length (mm) | 570 | 1004 | | 1630 | | |
| Depth (mm) | 700 | 635 | | 1010 | | |
| Height (mm) | 850 | 1283 | | 1410 | | |
| Weight (kg) | 112 | 184 | 188 | 425 | 442 | 460 |
| Power Supply | 400 / 3 / 50 | | | | | |

NOTES: **(1)** Room temperature 15 °C, relative humidity 80%
**(2)** Room temperature 18°C, relative humidity 80%
**(3)** Room temperature 15°C, relative humidity 80%, ambient temperature 35°C
**(4)** Room temperature 18°C, relative humidity 80%, ambient temperature 35°C
**(5)** At 1m in free field condition over a reflecting surface

# PERFORMANCE DATA - CH85

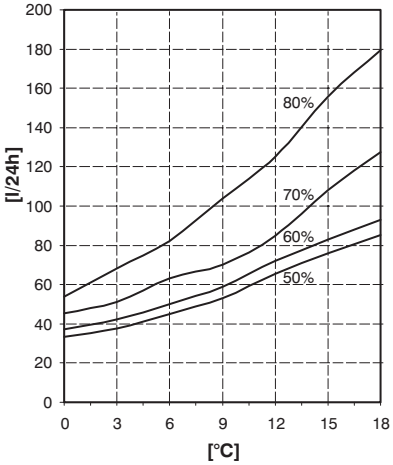
**PERFORMANCE CHART**




| | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|
| RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 18.2 | 20.5 | 24.5 | 29.0 | 35.7 | 41.2 | 46.0 |
| | | Absorbed Power (kW) | 1.4 | 1.5 | 1.7 | 1.8 | 2.0 | 2.1 | 2.4 |
| | | Air Temperature Increase (°C) | 2.9 | 3.3 | 3.7 | 4.1 | 4.7 | 5.2 | 5.8 |
| | | Ambient Thermal Load (kW) | 2.1 | 2.3 | 2.6 | 2.9 | 3.2 | 3.6 | 3.9 |
| | 60% | Moisture Removal Rate (l/24h) | 20.5 | 23.1 | 27.4 | 32.2 | 39.2 | 45.1 | 50.2 |
| | | Absorbed Power (kW) | 1.4 | 1.5 | 1.7 | 1.8 | 2.0 | 2.1 | 2.4 |
| | | Air Temperature Increase (°C) | 3.0 | 3.4 | 3.8 | 4.3 | 4.8 | 5.4 | 5.9 |
| | | Ambient Thermal Load (kW) | 2.2 | 2.4 | 2.7 | 3.0 | 3.4 | 3.7 | 4.1 |
| | 70% | Moisture Removal Rate (l/24h) | 24.9 | 28.1 | 34.4 | 38.4 | 46.1 | 58.5 | 68.7 |
| | | Absorbed Power (kW) | 1.4 | 1.6 | 1.7 | 1.9 | 2.0 | 2.2 | 2.4 |
| | | Air Temperature Increase (°C) | 3.3 | 3.7 | 4.2 | 4.6 | 5.2 | 6.1 | 6.9 |
| | | Ambient Thermal Load (kW) | 2.4 | 2.6 | 2.9 | 3.2 | 3.6 | 4.1 | 4.7 |
| | 80% | Moisture Removal Rate (l/24h) | 29.6 | 37.4 | 44.9 | 56.4 | 68.2 | 84.4(1) | 96.6 |
| | | Absorbed Power (kW) | 1.4 | 1.6 | 1.7 | 1.9 | 2.0 | 2.2(1) | 2.4 |
| | | Air Temperature Increase (°C) | 3.5 | 4.1 | 4.7 | 5.5 | 6.2 | 7.2(1) | 8.1 |
| | | Ambient Thermal Load (kW) | 2.5 | 2.9 | 3.2 | 3.7 | 4.2 | 4.9(1) | 5.5 |

# PERFORMANCE DATA - CH150

**PERFORMANCE CHART**

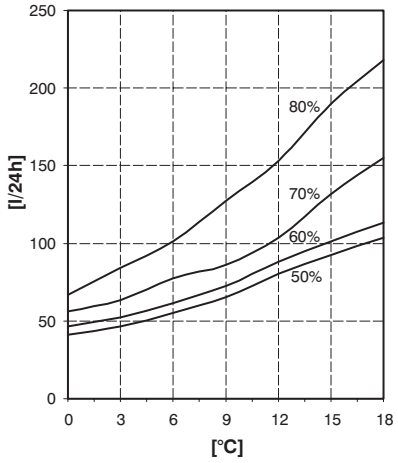



| | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|
| RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 33.2 | 37.5 | 44.8 | 53.1 | 65.5 | 75.9 | 85.2 |
| | | Absorbed Power (kW) | 2.5 | 2.7 | 3.0 | 3.2 | 3.5 | 3.8 | 4.2 |
| | | Air Temperature Increase (°C) | 2.8 | 3.1 | 3.5 | 3.9 | 4.5 | 4.9 | 5.5 |
| | | Ambient Thermal Load (kW) | 3.9 | 4.3 | 4.8 | 5.3 | 5.9 | 6.5 | 7.1 |
| | 60% | Moisture Removal Rate (l/24h) | 37.4 | 42.2 | 50.1 | 59.0 | 72.1 | 83.1 | 93.1 |
| | | Absorbed Power (kW) | 2.5 | 2.7 | 3.0 | 3.2 | 3.5 | 3.8 | 4.2 |
| | | Air Temperature Increase (°C) | 2.9 | 3.2 | 3.6 | 4.1 | 4.6 | 5.1 | 5.6 |
| | | Ambient Thermal Load (kW) | 4.1 | 4.4 | 4.9 | 5.4 | 6.1 | 6.7 | 7.4 |
| | 70% | Moisture Removal Rate (l/24h) | 45.4 | 51.2 | 63.0 | 70.3 | 84.7 | 108.1 | 127.5 |
| | | Absorbed Power (kW) | 2.6 | 2.8 | 3.1 | 3.3 | 3.6 | 3.9 | 4.3 |
| | | Air Temperature Increase (°C) | 3.2 | 3.5 | 4.0 | 4.4 | 5.0 | 5.8 | 6.6 |
| | | Ambient Thermal Load (kW) | 4.4 | 4.8 | 5.4 | 5.9 | 6.6 | 7.5 | 8.5 |
| | 80% | Moisture Removal Rate (l/24h) | 54.1 | 68.3 | 82.2 | 103.9 | 125.4 | 155.8(1) | 179.3 |
| | | Absorbed Power (kW) | 2.6 | 2.8 | 3.1 | 3.3 | 3.6 | 3.9(1) | 4.3 |
| | | Air Temperature Increase (°C) | 3.4 | 3.9 | 4.5 | 5.2 | 6.0 | 6.9(1) | 7.8 |
| | | Ambient Thermal Load (kW) | 4.6 | 5.3 | 5.9 | 6.8 | 7.7 | 8.9(1) | 10.0 |

**(1)** Indicates performance at nominal operating conditions.

# PERFORMANCE DATA - CH180

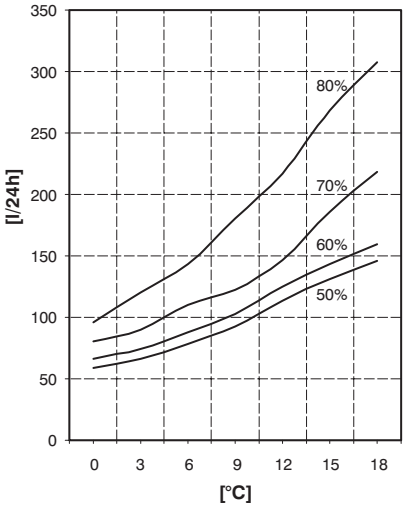
**PERFORMANCE CHART**




| | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|
| RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 41.3 | 46.4 | 55.2 | 65.2 | 80.2 | 92.6 | 103.8 |
| | | Absorbed Power (kW) | 3.1 | 3.4 | 3.7 | 4.1 | 4.4 | 4.8 | 5.3 |
| | | Air Temperature Increase (°C) | 3.1 | 3.4 | 3.9 | 4.3 | 4.9 | 5.4 | 6.0 |
| | | Ambient Thermal Load (kW) | 4.8 | 5.2 | 5.8 | 6.5 | 7.3 | 8.0 | 8.8 |
| | 60% | Moisture Removal Rate (l/24h) | 46.4 | 52.2 | 61.7 | 72.4 | 88.2 | 101.4 | 113.3 |
| | | Absorbed Power (kW) | 3.1 | 3.4 | 3.7 | 4.1 | 4.4 | 4.8 | 5.3 |
| | | Air Temperature Increase (°C) | 3.2 | 3.6 | 4.0 | 4.5 | 5.1 | 5.6 | 6.2 |
| | | Ambient Thermal Load (kW) | 4.9 | 5.4 | 6.0 | 6.7 | 7.5 | 8.3 | 9.1 |
| | 70% | Moisture Removal Rate (l/24h) | 56.4 | 63.3 | 77.5 | 86.2 | 103.6 | 131.8 | 155.2 |
| | | Absorbed Power (kW) | 3.2 | 3.5 | 3.9 | 4.2 | 4.6 | 5.0 | 5.5 |
| | | Air Temperature Increase (°C) | 3.5 | 3.9 | 4.4 | 4.8 | 5.5 | 6.3 | 7.2 |
| | | Ambient Thermal Load (kW) | 5.3 | 5.8 | 6.6 | 7.2 | 8.1 | 9.3 | 10.4 |
| | 80% | Moisture Removal Rate (l/24h) | 67.1 | 84.4 | 101.1 | 127.5 | 153.3 | 189.8(1) | 218.3 |
| | | Absorbed Power (kW) | 3.2 | 3.5 | 3.9 | 4.2 | 4.6 | 4.9(1) | 5.5 |
| | | Air Temperature Increase (°C) | 3.7 | 4.3 | 4.9 | 5.7 | 6.5 | 7.5(1) | 8.5 |
| | | Ambient Thermal Load (kW) | 5.6 | 6.5 | 7.3 | 8.4 | 9.5 | 10.9(1) | 12.2 |

# PERFORMANCE DATA - CH250

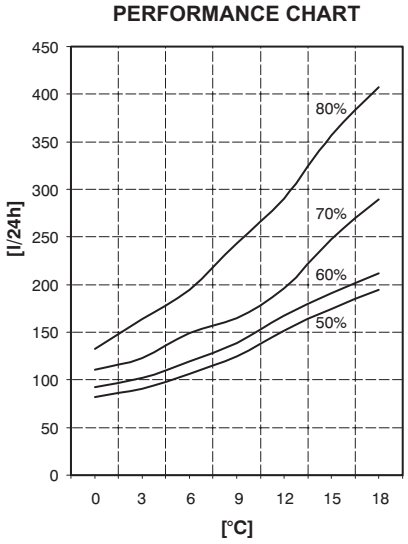
**PERFORMANCE CHART**




| | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|
| RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 59.0 | 66.1 | 78.5 | 92.4 | 113.4 | 130.8 | 146.3 |
| | | Absorbed Power (kW) | 4.4 | 4.8 | 5.2 | 5.6 | 6.0 | 6.5 | 7.1 |
| | | Air Temperature Increase (°C) | 1.7 | 1.9 | 2.1 | 2.4 | 2.7 | 2.9 | 3.2 |
| | | Ambient Thermal Load (kW) | 6.7 | 7.3 | 8.0 | 8.9 | 9.9 | 10.9 | 11.9 |
| | 60% | Moisture Removal Rate (l/24h) | 66.4 | 74.4 | 87.7 | 102.8 | 124.8 | 143.2 | 159.6 |
| | | Absorbed Power (kW) | 4.4 | 4.8 | 5.2 | 5.6 | 6.0 | 6.5 | 7.1 |
| | | Air Temperature Increase (°C) | 1.8 | 2.0 | 2.2 | 2.4 | 2.7 | 3.0 | 3.3 |
| | | Ambient Thermal Load (kW) | 6.9 | 7.5 | 8.3 | 9.2 | 10.2 | 11.2 | 12.3 |
| | 70% | Moisture Removal Rate (l/24h) | 80.5 | 90.1 | 110.0 | 122.1 | 146.4 | 186.0 | 218.5 |
| | | Absorbed Power (kW) | 4.5 | 4.9 | 5.3 | 5.7 | 6.2 | 6.7 | 7.2 |
| | | Air Temperature Increase (°C) | 1.9 | 2.1 | 2.4 | 2.6 | 3.0 | 3.4 | 3.9 |
| | | Ambient Thermal Load (kW) | 7.4 | 8.1 | 9.1 | 9.9 | 11.0 | 12.6 | 14.1 |
| | 80% | Moisture Removal Rate (l/24h) | 95.8 | 120.1 | 143.5 | 180.5 | 216.7 | 268.3(1) | 307.3 |
| | | Absorbed Power (kW) | 4.5 | 4.9 | 5.3 | 5.7 | 6.2 | 6.6(1) | 7.2 |
| | | Air Temperature Increase (°C) | 2.1 | 2.4 | 2.7 | 3.1 | 3.5 | 4.1(1) | 4.6 |
| | | Ambient Thermal Load (kW) | 7.9 | 9.0 | 10.1 | 11.5 | 13.0 | 14.9(1) | 16.7 |

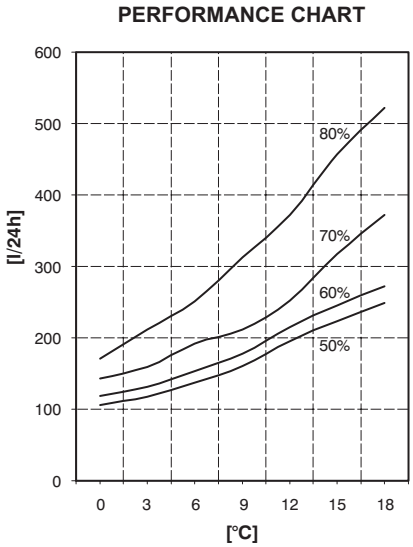
**(1)** Indicates performance at nominal operating conditions.

# PERFORMANCE DATA - CH320




| | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|
| RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 81.8 | 90.7 | 106.8 | 124.7 | 152.2 | 174.4 | 194.3 |
| | | Absorbed Power (kW) | 5.5 | 6.0 | 6.6 | 7.1 | 7.7 | 8.3 | 9.1 |
| | | Air Temperature Increase (°C) | 1.7 | 1.9 | 2.1 | 2.3 | 2.6 | 2.9 | 3.2 |
| | | Ambient Thermal Load (kW) | 8.5 | 9.3 | 10.2 | 11.3 | 12.7 | 13.9 | 15.3 |
| | 60% | Moisture Removal Rate (l/24h) | 92.0 | 102.1 | 119.3 | 138.6 | 167.6 | 191.0 | 211.9 |
| | | Absorbed Power (kW) | 5.5 | 6.0 | 6.6 | 7.1 | 7.7 | 8.3 | 9.1 |
| | | Air Temperature Increase (°C) | 1.8 | 1.9 | 2.2 | 2.4 | 2.7 | 3.0 | 3.3 |
| | | Ambient Thermal Load (kW) | 8.8 | 9.6 | 10.6 | 11.7 | 13.1 | 14.4 | 15.8 |
| | 70% | Moisture Removal Rate (l/24h) | 111.2 | 123.3 | 149.3 | 164.5 | 196.0 | 247.6 | 289.8 |
| | | Absorbed Power (kW) | 5.7 | 6.2 | 6.7 | 7.3 | 7.9 | 8.9 | 9.3 |
| | | Air Temperature Increase (°C) | 1.9 | 2.1 | 2.4 | 2.6 | 2.9 | 3.4 | 3.8 |
| | | Ambient Thermal Load (kW) | 9.5 | 10.4 | 11.6 | 12.6 | 14.1 | 16.3 | 18.3 |
| | 80% | Moisture Removal Rate (l/24h) | 132.3 | 164.4 | 194.8 | 243.2 | 290.0 | 356.8(1) | 407.6 |
| | | Absorbed Power (kW) | 5.7 | 6.2 | 6.7 | 7.3 | 7.9 | 8.4(1) | 9.3 |
| | | Air Temperature Increase (°C) | 2.1 | 2.4 | 2.7 | 3.1 | 3.5 | 4.1(1) | 4.6 |
| | | Ambient Thermal Load (kW) | 10.1 | 11.5 | 13.0 | 14.9 | 16.9 | 19.3(1) | 21.7 |

# PERFORMANCE DATA - CH400

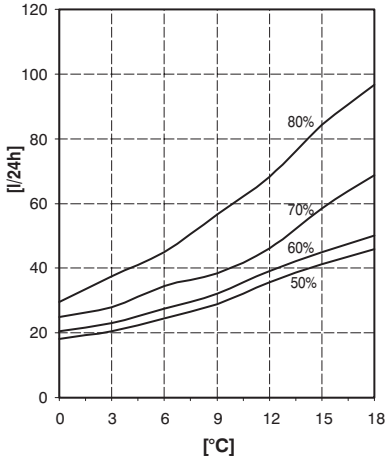



| | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|
| RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 105.3 | 116.9 | 137.5 | 160.5 | 195.6 | 223.8 | 249.2 |
| | | Absorbed Power (kW) | 7.2 | 7.9 | 8.6 | 9.3 | 10.1 | 10.9 | 11.9 |
| | | Air Temperature Increase (°C) | 1.8 | 2.0 | 2.3 | 2.5 | 2.8 | 3.1 | 3.4 |
| | | Ambient Thermal Load (kW) | 10.8 | 11.9 | 13.1 | 14.5 | 16.3 | 17.9 | 19.7 |
| | 60% | Moisture Removal Rate (l/24h) | 118.4 | 131.5 | 153.7 | 178.4 | 215.1 | 245.1 | 271.9 |
| | | Absorbed Power (kW) | 7.2 | 7.9 | 8.6 | 9.3 | 10.1 | 10.9 | 11.9 |
| | | Air Temperature Increase (°C) | 1.9 | 2.1 | 2.4 | 2.6 | 2.9 | 3.2 | 3.6 |
| | | Ambient Thermal Load (kW) | 11.2 | 12.3 | 13.6 | 15.1 | 16.9 | 18.6 | 20.3 |
| | 70% | Moisture Removal Rate (l/24h) | 143.1 | 158.8 | 192.3 | 211.7 | 251.8 | 317.6 | 371.6 |
| | | Absorbed Power (kW) | 7.4 | 8.1 | 8.8 | 9.6 | 10.3 | 11.2 | 12.2 |
| | | Air Temperature Increase (°C) | 2.1 | 2.3 | 2.6 | 2.8 | 3.2 | 3.7 | 4.1 |
| | | Ambient Thermal Load (kW) | 12.1 | 13.3 | 15.0 | 16.3 | 18.2 | 20.9 | 23.5 |
| | 80% | Moisture Removal Rate (l/24h) | 170.4 | 211.7 | 250.9 | 312.9 | 372.6 | 456.9(1) | 522.6 |
| | | Absorbed Power (kW) | 7.4 | 8.1 | 8.8 | 9.6 | 10.3 | 11.1(1) | 12.2 |
| | | Air Temperature Increase (°C) | 2.2 | 2.6 | 2.9 | 3.4 | 3.8 | 4.4(1) | 4.9 |
| | | Ambient Thermal Load (kW) | 12.9 | 14.8 | 16.7 | 19.2 | 21.7 | 24.8(1) | 27.9 |

**(1)** Indicates performance at nominal operating conditions.

# PERFORMANCE DATA - CHZ85

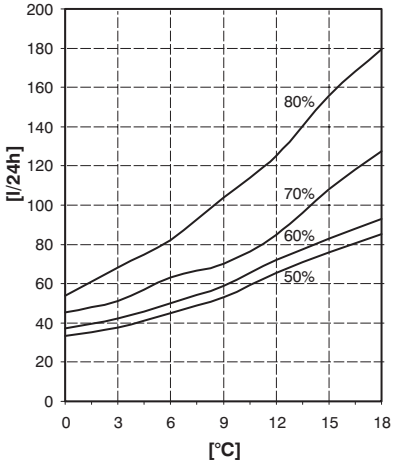
**PERFORMANCE CHART**




| | | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|
| DRYING MODE | RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 18.2 | 20.5 | 24.5 | 29.0 | 35.7 | 41.2 | 46.0 |
| | | | Absorbed Power (kW) | 1.4 | 1.5 | 1.7 | 1.8 | 2.0 | 2.1 | 2.4 |
| | | | Air Temperature Increase (°C) | 2.9 | 3.3 | 3.7 | 4.1 | 4.7 | 5.2 | 5.8 |
| | | | Ambient Thermal Load (kW) | 2.1 | 2.3 | 2.6 | 2.9 | 3.2 | 3.6 | 3.9 |
| | | 60% | Moisture Removal Rate (l/24h) | 20.5 | 23.1 | 27.4 | 32.2 | 39.2 | 45.1 | 50.2 |
| | | | Absorbed Power (kW) | 1.4 | 1.5 | 1.7 | 1.8 | 2.0 | 2.1 | 2.4 |
| | | | Air Temperature Increase (°C) | 3.0 | 3.4 | 3.8 | 4.3 | 4.8 | 5.4 | 5.9 |
| | | | Ambient Thermal Load (kW) | 2.2 | 2.4 | 2.7 | 3.0 | 3.4 | 3.7 | 4.1 |
| | | 70% | Moisture Removal Rate (l/24h) | 24.9 | 28.1 | 34.4 | 38.4 | 46.1 | 58.5 | 68.7 |
| | | | Absorbed Power (kW) | 1.4 | 1.6 | 1.7 | 1.9 | 2.0 | 2.2 | 2.4 |
| | | | Air Temperature Increase (°C) | 3.3 | 3.7 | 4.2 | 4.6 | 5.2 | 6.1 | 6.9 |
| | | | Ambient Thermal Load (kW) | 2.4 | 2.6 | 2.9 | 3.2 | 3.6 | 4.1 | 4.7 |
| | | 80% | Moisture Removal Rate (l/24h) | 29.6 | 37.4 | 44.9 | 56.7 | 68.2 | 84.4(1) | 96.6 |
| | | | Absorbed Power (kW) | 1.4 | 1.6 | 1.7 | 1.9 | 2.0 | 2.2(1) | 2.4 |
| | | | Air Temperature Increase (°C) | 3.5 | 4.1 | 4.7 | 5.5 | 6.2 | 7.2(1) | 8.1 |
| | | | Ambient Thermal Load (kW) | 2.5 | 2.9 | 3.2 | 3.7 | 4.2 | 4.9(1) | 5.5 |
| COOLING MODE | RELATIVE HUMIDITY | 60% | Cooling Capacity (kW) | 2.0 | 2.5 | 3.1 | 3.7 | 4.4 | 5.2 | 6.0 |
| | | | Absorbed Power (kW) | 1.5 | 1.6 | 1.8 | 2.0 | 2.1 | 2.2 | 2.4 |
| | | 80% | Cooling Capacity (kW) | 2.2 | 2.7 | 3.3 | 4.0 | 4.7 | 5.5(1) | 6.3 |
| | | | Absorbed Power (kW) | 1.5 | 1.7 | 1.9 | 2.0 | 2.1 | 2.3(1) | 2.4 |

# PERFORMANCE DATA - CHZ150

**PERFORMANCE CHART**

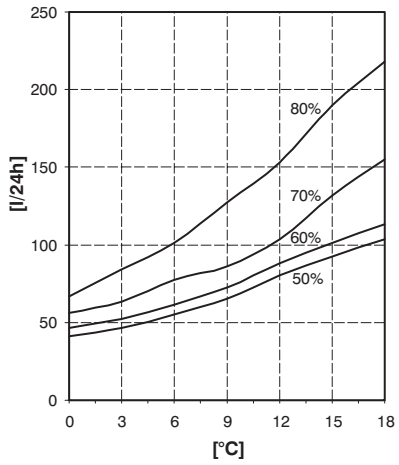



| | | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|
| DRYING MODE | RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 33.2 | 37.5 | 44.8 | 53.1 | 65.5 | 75.9 | 85.2 |
| | | | Absorbed Power (kW) | 2.5 | 2.7 | 3.0 | 3.2 | 3.5 | 3.8 | 4.2 |
| | | | Air Temperature Increase (°C) | 2.8 | 3.1 | 3.5 | 3.9 | 4.5 | 4.9 | 5.5 |
| | | | Ambient Thermal Load (kW) | 3.9 | 4.3 | 4.8 | 5.3 | 5.9 | 6.5 | 7.1 |
| | | 60% | Moisture Removal Rate (l/24h) | 37.4 | 42.2 | 50.1 | 59.0 | 72.1 | 83.1 | 93.0 |
| | | | Absorbed Power (kW) | 2.5 | 2.7 | 3.0 | 3.2 | 3.5 | 3.8 | 4.2 |
| | | | Air Temperature Increase (°C) | 2.9 | 3.2 | 3.6 | 4.1 | 4.6 | 5.1 | 5.6 |
| | | | Ambient Thermal Load (kW) | 4.1 | 4.4 | 4.9 | 5.4 | 6.1 | 6.7 | 7.4 |
| | | 70% | Moisture Removal Rate (l/24h) | 45.4 | 51.2 | 63.0 | 70.3 | 84.7 | 108.1 | 127.5 |
| | | | Absorbed Power (kW) | 2.6 | 2.8 | 3.1 | 3.3 | 3.6 | 3.9 | 4.3 |
| | | | Air Temperature Increase (°C) | 3.2 | 3.5 | 4.0 | 4.4 | 5.0 | 5.8 | 6.6 |
| | | | Ambient Thermal Load (kW) | 4.4 | 4.8 | 5.4 | 5.9 | 6.6 | 7.5 | 8.5 |
| | | 80% | Moisture Removal Rate (l/24h) | 54.1 | 68.3 | 82.2 | 103.9 | 125.4 | 155.8(1) | 179.3 |
| | | | Absorbed Power (kW) | 2.6 | 2.8 | 3.1 | 3.3 | 3.6 | 3.9(1) | 4.3 |
| | | | Air Temperature Increase (°C) | 3.4 | 3.9 | 4.5 | 5.2 | 6.0 | 6.9(1) | 7.8 |
| | | | Ambient Thermal Load (kW) | 4.6 | 5.3 | 5.9 | 6.8 | 7.7 | 8.9(1) | 10.0 |
| COOLING MODE | RELATIVE HUMIDITY | 60% | Cooling Capacity (kW) | 3.8 | 4.7 | 5.7 | 6.9 | 8.2 | 9.6 | 11.2 |
| | | | Absorbed Power (kW) | 2.7 | 3.0 | 3.2 | 3.5 | 3.7 | 3.9 | 4.2 |
| | | 80% | Cooling Capacity (kW) | 4.1 | 5.0 | 6.1 | 7.3 | 8.6 | 10.1(1) | 11.7 |
| | | | Absorbed Power (kW) | 2.8 | 3.0 | 3.3 | 3.5 | 3.8 | 4.0(1) | 4.3 |

**(1)** Indicates performance at nominal operating conditions.

# PERFORMANCE DATA - CHZ180

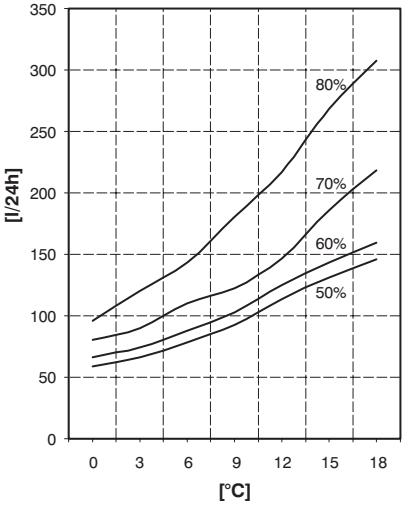
**PERFORMANCE CHART**




| | | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|
| DRYING MODE | RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 41.3 | 46.4 | 55.2 | 65.2 | 80.2 | 92.8 | 103.8 |
| | | | Absorbed Power (kW) | 3.1 | 3.4 | 3.7 | 4.1 | 4.4 | 4.8 | 5.3 |
| | | | Air Temperature Increase (°C) | 3.1 | 3.4 | 3.9 | 4.3 | 4.9 | 5.4 | 6.0 |
| | | | Ambient Thermal Load (kW) | 4.8 | 5.2 | 5.8 | 6.5 | 7.3 | 8.0 | 8.8 |
| | | 60% | Moisture Removal Rate (l/24h) | 46.4 | 52.2 | 61.7 | 72.4 | 88.2 | 101.4 | 113.3 |
| | | | Absorbed Power (kW) | 3.1 | 3.4 | 3.7 | 4.1 | 4.4 | 4.8 | 5.3 |
| | | | Air Temperature Increase (°C) | 3.2 | 3.6 | 4.0 | 4.5 | 5.1 | 5.6 | 6.2 |
| | | | Ambient Thermal Load (kW) | 4.9 | 5.4 | 6.0 | 6.7 | 7.5 | 8.3 | 9.1 |
| | | 70% | Moisture Removal Rate (l/24h) | 56.4 | 63.3 | 77.5 | 86.2 | 103.6 | 131.8 | 155.2 |
| | | | Absorbed Power (kW) | 3.2 | 3.5 | 3.9 | 4.2 | 4.6 | 5.0 | 5.5 |
| | | | Air Temperature Increase (°C) | 3.5 | 3.9 | 4.4 | 4.8 | 5.5 | 6.3 | 7.2 |
| | | | Ambient Thermal Load (kW) | 5.3 | 5.8 | 6.6 | 7.2 | 8.1 | 9.3 | 10.4 |
| | | 80% | Moisture Removal Rate (l/24h) | 67.1 | 84.4 | 101.1 | 127.5 | 153.3 | 189.8(1) | 218.3 |
| | | | Absorbed Power (kW) | 3.2 | 3.5 | 3.9 | 4.2 | 4.6 | 4.9(1) | 5.5 |
| | | | Air Temperature Increase (°C) | 3.7 | 4.3 | 4.9 | 5.7 | 6.5 | 7.5(1) | 8.5 |
| | | | Ambient Thermal Load (kW) | 5.6 | 6.5 | 7.3 | 8.4 | 9.5 | 10.9(1) | 12.2 |
| COOLING MODE | RELATIVE HUMIDITY | 60% | Cooling Capacity (kW) | 4.8 | 5.9 | 7.1 | 8.5 | 10.1 | 11.8 | 13.6 |
| | | | Absorbed Power (kW) | 3.3 | 3.7 | 4.0 | 4.3 | 4.7 | 5.0 | 5.3 |
| | | 80% | Cooling Capacity (kW) | 5.1 | 6.3 | 7.6 | 9.0 | 10.6 | 12.4(1) | 14.3 |
| | | | Absorbed Power (kW) | 3.5 | 3.8 | 4.1 | 4.5 | 4.8 | 5.1(1) | 5.4 |

# PERFORMANCE DATA - CHZ250

**PERFORMANCE CHART**

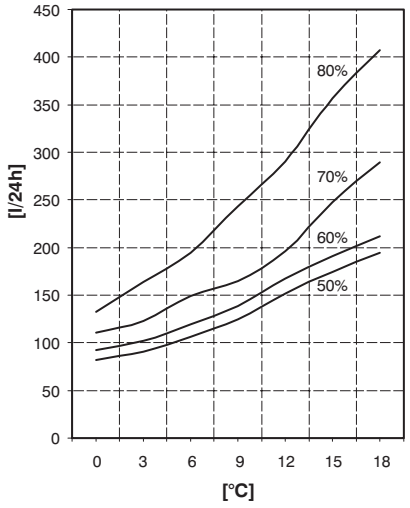



| | | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|
| DRYING MODE | RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 59.0 | 66.1 | 78.5 | 92.4 | 113.4 | 130.8 | 146.3 |
| | | | Absorbed Power (kW) | 4.4 | 4.8 | 5.2 | 5.6 | 6.0 | 6.5 | 7.1 |
| | | | Air Temperature Increase (°C) | 1.7 | 1.9 | 2.1 | 2.4 | 2.7 | 2.9 | 3.2 |
| | | | Ambient Thermal Load (kW) | 6.7 | 7.3 | 8.0 | 8.9 | 9.9 | 10.9 | 11.9 |
| | | 60% | Moisture Removal Rate (l/24h) | 66.4 | 74.4 | 87.7 | 102.6 | 124.8 | 143.2 | 159.6 |
| | | | Absorbed Power (kW) | 4.4 | 4.8 | 5.2 | 5.6 | 6.0 | 6.5 | 7.1 |
| | | | Air Temperature Increase (°C) | 1.8 | 2.0 | 2.2 | 2.4 | 2.7 | 3.0 | 3.3 |
| | | | Ambient Thermal Load (kW) | 6.9 | 7.5 | 8.3 | 9.2 | 10.2 | 11.2 | 12.3 |
| | | 70% | Moisture Removal Rate (l/24h) | 80.5 | 90.1 | 110.0 | 122.1 | 146.4 | 186.0 | 218.5 |
| | | | Absorbed Power (kW) | 4.5 | 4.9 | 5.3 | 5.7 | 6.2 | 6.7 | 7.2 |
| | | | Air Temperature Increase (°C) | 1.9 | 2.1 | 2.4 | 2.6 | 3.0 | 3.4 | 3.9 |
| | | | Ambient Thermal Load (kW) | 7.4 | 8.1 | 9.1 | 9.9 | 11.0 | 12.6 | 14.1 |
| | | 80% | Moisture Removal Rate (l/24h) | 95.8 | 120.1 | 143.5 | 180.5 | 216.7 | 268.3(1) | 307.3 |
| | | | Absorbed Power (kW) | 4.5 | 4.9 | 5.3 | 5.7 | 6.2 | 6.6(1) | 7.2 |
| | | | Air Temperature Increase (°C) | 2.1 | 2.4 | 2.7 | 3.1 | 3.5 | 4.1(1) | 4.6 |
| | | | Ambient Thermal Load (kW) | 7.9 | 9.0 | 10.1 | 11.5 | 13.0 | 14.9(1) | 16.7 |
| COOLING MODE | RELATIVE HUMIDITY | 60% | Cooling Capacity (kW) | 6.8 | 8.3 | 10.1 | 12.0 | 14.1 | 16.5 | 19.2 |
| | | | Absorbed Power (kW) | 5.0 | 5.4 | 5.7 | 6.1 | 6.4 | 6.8 | 7.1 |
| | | 80% | Cooling Capacity (kW) | 7.3 | 8.9 | 10.7 | 12.7 | 14.9 | 17.4(1) | 20.1 |
| | | | Absorbed Power (kW) | 5.1 | 5.5 | 5.8 | 6.2 | 6.5 | 6.9(1) | 7.2 |

**(1)** Indicates performance at nominal operating conditions.

# PERFORMANCE DATA - CHZ320

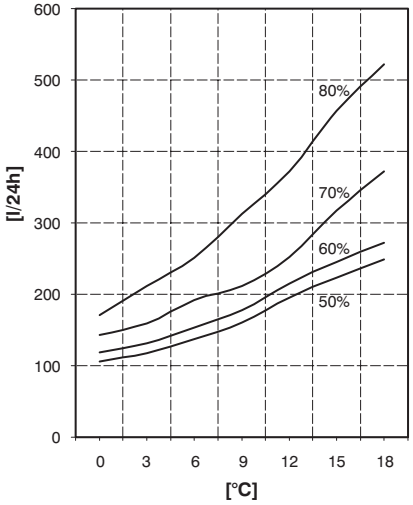
**PERFORMANCE CHART**




| | | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|
| DRYING MODE | RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 81.8 | 90.7 | 106.8 | 124.7 | 152.2 | 174.4 | 194.3 |
| | | | Absorbed Power (kW) | 5.5 | 6.0 | 6.6 | 7.1 | 7.7 | 8.3 | 9.1 |
| | | | Air Temperature Increase (°C) | 1.7 | 1.9 | 2.1 | 2.3 | 2.6 | 2.9 | 3.2 |
| | | | Ambient Thermal Load (kW) | 8.5 | 9.3 | 10.2 | 11.3 | 12.7 | 13.9 | 15.3 |
| | | 60% | Moisture Removal Rate (l/24h) | 92.0 | 102.1 | 119.3 | 138.6 | 167.4 | 191.0 | 211.9 |
| | | | Absorbed Power (kW) | 5.5 | 6.0 | 6.6 | 7.1 | 7.7 | 8.3 | 9.1 |
| | | | Air Temperature Increase (°C) | 1.8 | 1.9 | 2.2 | 2.4 | 2.7 | 3.0 | 3.3 |
| | | | Ambient Thermal Load (kW) | 8.8 | 9.6 | 10.8 | 11.7 | 13.1 | 14.4 | 15.8 |
| | | 70% | Moisture Removal Rate (l/24h) | 111.2 | 123.3 | 149.3 | 164.5 | 196.0 | 247.8 | 289.8 |
| | | | Absorbed Power (kW) | 5.7 | 6.2 | 6.7 | 7.3 | 7.9 | 8.5 | 9.3 |
| | | | Air Temperature Increase (°C) | 1.9 | 2.1 | 2.4 | 2.6 | 2.9 | 3.4 | 3.8 |
| | | | Ambient Thermal Load (kW) | 9.5 | 10.4 | 11.6 | 12.6 | 14.1 | 16.3 | 18.3 |
| | | 80% | Moisture Removal Rate (l/24h) | 132.3 | 164.3 | 194.8 | 243.2 | 290.0 | 356.8(1) | 407.6 |
| | | | Absorbed Power (kW) | 5.7 | 6.2 | 6.7 | 7.3 | 7.9 | 8.4(1) | 9.3 |
| | | | Air Temperature Increase (°C) | 2.1 | 2.4 | 2.7 | 3.1 | 3.5 | 4.1(1) | 4.6 |
| | | | Ambient Thermal Load (kW) | 10.1 | 11.5 | 13.0 | 14.9 | 16.9 | 19.3(1) | 21.7 |
| COOLING MODE | RELATIVE HUMIDITY | 60% | Cooling Capacity (kW) | 9.7 | 11.6 | 13.9 | 16.3 | 19.1 | 22.1 | 25.5 |
| | | | Absorbed Power (kW) | 6.3 | 6.8 | 7.3 | 7.8 | 8.2 | 8.7 | 9.1 |
| | | 80% | Cooling Capacity (kW) | 10.3 | 12.4 | 14.7 | 17.2 | 20.1 | 23.2(1) | 26.6 |
| | | | Absorbed Power (kW) | 6.5 | 7.0 | 7.4 | 7.9 | 8.4 | 8.8(1) | 9.2 |

# PERFORMANCE DATA - CHZ400

**PERFORMANCE CHART**




| | | | TEMPERATURE (°C) | 0 | 3 | 6 | 9 | 12 | 15 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|
| DRYING MODE | RELATIVE HUMIDITY | 50% | Moisture Removal Rate (l/24h) | 105.3 | 116.9 | 137.5 | 160.5 | 195.6 | 223.8 | 249.2 |
| | | | Absorbed Power (kW) | 7.2 | 7.9 | 8.6 | 9.3 | 10.1 | 10.9 | 11.9 |
| | | | Air Temperature Increase (°C) | 1.8 | 2.0 | 2.3 | 2.5 | 2.8 | 3.1 | 3.4 |
| | | | Ambient Thermal Load (kW) | 10.8 | 11.9 | 13.1 | 14.5 | 16.3 | 17.9 | 19.7 |
| | | 60% | Moisture Removal Rate (l/24h) | 118.4 | 131.5 | 153.7 | 178.4 | 215.1 | 245.1 | 271.9 |
| | | | Absorbed Power (kW) | 7.2 | 7.9 | 8.6 | 9.3 | 10.1 | 10.9 | 11.9 |
| | | | Air Temperature Increase (°C) | 1.9 | 2.1 | 2.4 | 2.6 | 2.9 | 3.2 | 3.6 |
| | | | Ambient Thermal Load (kW) | 11.2 | 12.3 | 13.6 | 15.1 | 16.9 | 18.6 | 20.3 |
| | | 70% | Moisture Removal Rate (l/24h) | 143.1 | 158.8 | 192.3 | 211.7 | 251.8 | 317.8 | 371.6 |
| | | | Absorbed Power (kW) | 7.4 | 8.1 | 8.8 | 9.6 | 10.3 | 11.2 | 12.2 |
| | | | Air Temperature Increase (°C) | 2.1 | 2.3 | 2.6 | 2.8 | 3.2 | 3.7 | 4.1 |
| | | | Ambient Thermal Load (kW) | 12.1 | 13.3 | 15.0 | 16.3 | 18.2 | 20.9 | 23.5 |
| | | 80% | Moisture Removal Rate (l/24h) | 170.4 | 211.7 | 250.9 | 312.9 | 372.6 | 456.9(1) | 522.6 |
| | | | Absorbed Power (kW) | 7.4 | 8.1 | 8.8 | 9.6 | 10.3 | 11.1(1) | 12.2 |
| | | | Air Temperature Increase (°C) | 2.2 | 2.6 | 2.9 | 3.4 | 3.8 | 4.4(1) | 4.9 |
| | | | Ambient Thermal Load (kW) | 12.9 | 14.8 | 16.7 | 19.2 | 21.7 | 24.8(1) | 27.9 |
| COOLING MODE | RELATIVE HUMIDITY | 60% | Cooling Capacity (kW) | 13.1 | 15.6 | 18.4 | 21.4 | 24.8 | 28.6 | 32.7 |
| | | | Absorbed Power (kW) | 8.3 | 8.9 | 9.5 | 10.1 | 10.7 | 11.3 | 11.9 |
| | | 80% | Cooling Capacity (kW) | 13.9 | 16.5 | 19.3 | 22.5 | 26.0 | 29.9(1) | 34.1 |
| | | | Absorbed Power (kW) | 8.5 | 9.1 | 9.7 | 10.3 | 10.9 | 11.5(1) | 12.1 |

**(1)** Indicates performance at nominal operating conditions.