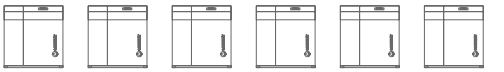
DCECO W HP

DCECO HP3

DHW
Pool Heating
Free Cooling *
Active Cooling

* External free cooling management

Cascade



DCECO W + HP POWER RANGE

25-100kw (85-341MBH)

- Inverter technology
- Domestic hot water production
- Heating and pool production Integrated active cooling production
- External passive (free) cooling production management Internet connection through the ecoSMART Easynet Integrated photovoltaic hybridisation
- Simultaneous heating and cooling production
- Hybrid source management through ecoSMART e-source
- Cascade management up to 6 units through cascade manager ecoSMART Supervisor
- Three-phase (400V) power supply
- Collection System: Ground; Open Loop; Air; Hybrid

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DCECO W HP 25-100 / TECHNICAL DATA

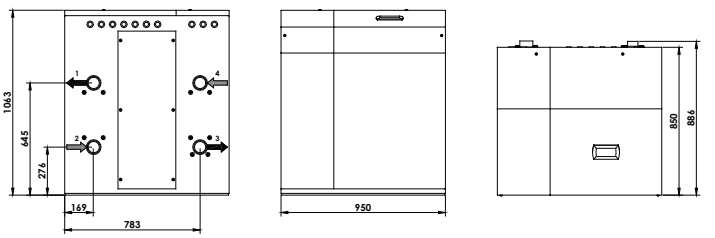
- Modulating thermal power control within a wide range (25-100%) and modulating flow rate control of both brine and production circuits (20-100%).
- Inverter technology and scroll compressor.
- Integrated management of up to 5 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
- Management of aerothermal collection modulating units, in case of air source or hybrid configurations by means of the ecoSMART e-source.
- Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
- Management of cascade systems up to 6 units by means of the ecoSMART Supervisor.
- Integrated management of simultaneous cooling/heating systems according to scheme.
- Free cooling (Passive cooling) management.
- Integrated active cooling in models 3.
- Three-phase version available.
- Integrated photovoltaic hybridisation.
- Integrated energy meters to measure the electrical consumption, the heating/cooling thermal power, the COP and the monthly and annual SPF.

Model DCECO W HP 15-70		UNITS	HP3
APPLICATION	Place of installation	-	Indoors
	Type of brine system[1]	-	Ground source / Air source / Hybrid source
	DHW with external tank	-	✓
	Heating and Pool	-	✓
	External Passive cooling management	-	✓
	Integrated Active cooling	-	✓
PERFORMANCE	Modulation range of the compressor	%	25 to 100
	Heating power output[1] , B0W35 (B32W95 °F)	MBH	72 to 296
	COP[1] , B0W35 (B32W95 °F)	-	4.5
	Active cooling power output[1] , B35W7 (B95W45 °F)	MBH	76 to 308 (6.3 to 25.7 tons)
	EER[1] , B35W7 (B95W45 °F)	-	4.6
	Max. DHW temperature without / with support	°F	140 / 158
	Noise power emission level[3]	db	59 to 72
	Energy label / ŋs / SCOP W35 average climate control	-	A+++ / 199% / 5.08
	Energy label / ŋs / SCOP W55 average climate control	-	A++ / 147% / 3.78
OPERATION LIMITS	Distribution / Set heating outlet temperature range[2]	°F	50 to 140 / 68 to 41
	Distribution / Set cooling outlet temperature range [2]	°F	41 to 95 / 44.6 to 77
	Brine inlet temperature range in heating applications [2]	°F	-4 to 95
	Brine inlet temperature range in cooling applications [2]	°F	50 to 140
	Minimum / Maximum refrigerant circuit pressure	bar	516 / 1639
	Production / Pre-load circuit pressure	bar	7.3 to 72.5
	Brine / Pre-load circuit pressure	bar	7.3 to 72.5
WORKING FLUIDS	R410A Refrigerant load	lbs	20
	Compressor oil type / load	lbs	POE 160SZ / 17
	Nominal primary flow rate, B0W35 [1] (ΔT = 3 °C (37.4°F))	GPM	21 to 85.2
	Nominal secondary flow rate, B0W35 [1] (ΔT = 5 °C (41°F))	GPM	16 to 65.8
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz[5]	-	✓
	Maximum recommended external protection[7]	-	C1A
	Transformer primary circuit fuse	A	0.63
	Transformer secondary circuit fuse	A	4.0
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz[5]	-	✓
	Maximum recommended external protection[7]	-	C63A
	Maximum consumption [2] , B0W35 (B32W95°F)	kW / A	20.3 / 31.8
	Maximum consumption [2] , B0W55 (B32W131°F)	kW / A	29.6 / 45.1
	Maximum consumption	kW / A	33.7 / 52.9
	Minimum / Maximum starting current[4]	A	10.8 / 16.7
	Correction of cosine Ø	-	0.96 / 1
DIMENSIONS/WEIGHT	Height x width x depth	ft	3.5x3.1x2.9
	Empty weight (without assembly)	lbs	1025

1. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver. B0W35 refers to temp of brine entering evaporator and temperature of water leaving condenser, in °C.
2. With variable speed circulating pumps, managed by the DCECO HP heat pump.
3. According to EN 12102.
4. Starting current depends on working condition of the hydraulic circuits.
5. The admissible voltage range for proper operation of the heat pump is ±10%.
6. Maximum consumption can vary significantly according to working conditions, or if the compressor's range of operation is restricted.
7. External protection exclusively regarding the DCECO heat pump controller electrical consumption. This protection should be updated in case of using the controller single-phase electrical supply to wire other equipments depending on the features of such equipments.
8. In case of air source or hybrid source configuration, it is required to combine the DCECO HP heat pump with the ecoSMART e-source.

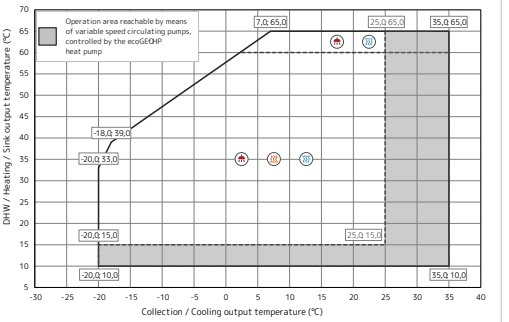
Note: primary circuit and secondary circuit circulation pumps not included.

Dimensions and hydraulic connections

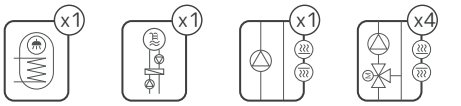


1. Secondary Outlet - 2 " M
2. Secondary Inlet - 2 " M
3. Primary Outlet - 2 " M
4. Primary Inlet - 2 " M

Operational chart

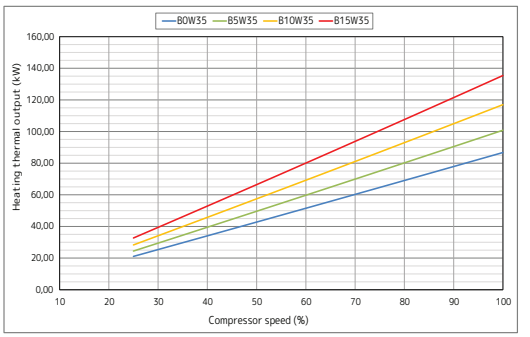


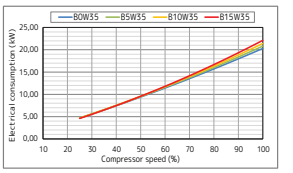
Installation management

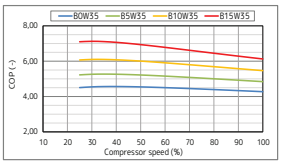


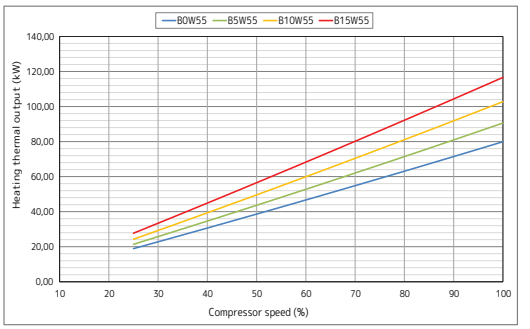
Performance curves

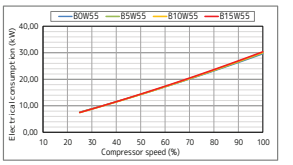
Thermal performance

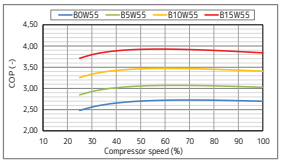


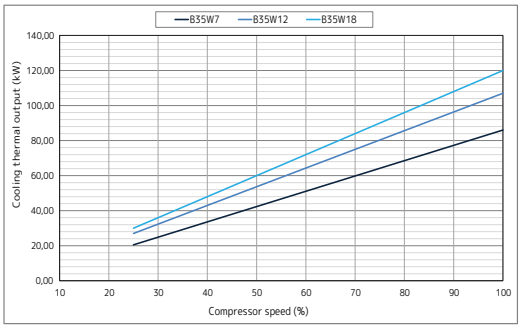


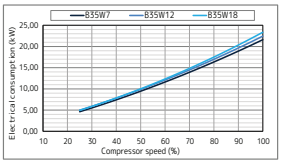


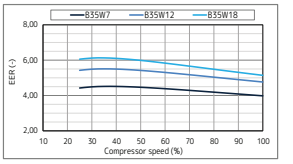




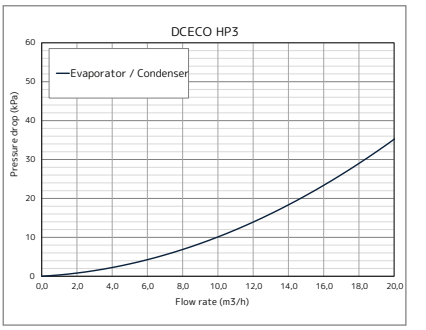








Hydraulic performance



Conversions for heating/cooling capacities, pressure, and flow rate:
1 kw = 3.412 MBH
1 kw = 0.284 tons
kPa = 0.145 psi
1 m^3/hr = 4.4 GPM