

HERCULES

EVI DC Air Source High Temperature Heat Pump

The **Hercules** EVI DC air source high temperature heat pump range are mid-sized units, particularly suited to commercial applications. The range includes four models from 42kW to 180kW.

Our R-513A heat pump model is designed to replace existing gas fired boilers, providing operating conditions of 80°C flow and 70°C return water temperatures, at 7°C dry bulb ambient condition and can continue to run smoothly in ambient temperatures as low as minus 15°C.

Used as part of an existing low temperature hot water heating system, it removes the need to replace pipework and radiators or heating coils in air handling units. Its higher operating temperatures also make it particularly suited for providing stored hot water at 60°C.

R-513A refrigerant is a non-ozone depleting, low global warming potential (GWP) of 573. It also carries a "non-dangerous" safety classification of A1 - low toxicity and non-flammable.



Key features:

- Designed for retro fit installations and new building applications enabling the replacement of existing gas fired boilers without the need to replace the existing Low Temperature Hot Water (LTHW) heating system
- Maintains traditional radiator / heating coil sizing
- Multi compressors with latest EVI DC Inverters providing stepped load soft start ultra-low starting current.
- Ability to set water outlet temperature up to 80 °C and / or dial down water temperatures to meet heating system optimal performance
- Delta between water outlet and inlet temperatures simply adjusted by changing pump water flow rate.
- SCOP of 3.45
- Highly efficient ultra-low noise fans with noise level less than 60 dB(A)
- In-built condensation trays and drains
- In-built trace heating and defrost cycle
- Can be mounted directly on adjustable anti-vibration mounts
- Robust all solid metal construction
- Refrigerant R513A with a GWP 573, ODP of 0 and Class 1 Flammability (No flame propagation)
- 485 BMS interface port for direct BMS connection
- Volt free contacts for Run and Fault
- Easy to access User Interface Panel
- Bluetooth Mobile App Interface providing control and monitoring
- Installer friendly electrical and mechanical connections
- Full G5/5 compliance tested to the 100th harmonic
- Listed on the ENA database
- EU/UK CE compliant

Model		Hercules 42	Hercules 85	Hercules 120	Hercules 180
Electrical Systems (V/Phase/Hz)		400 / 3 / 50	400 / 3 / 50	400 / 3 / 50	400 / 3 / 50
Ambient temperature range (°C)		-15 ~ 43	-15 ~ 43	-15 ~ 43	-15 ~ 43
A7W30-35 (BS EN 14511)	Rated heating output @ 7°C (kW)	42	85	120	180
	Input power (kW)	9.9	21.17	28.04	42.25
	COP	4.25	4.25	4.27	4.26
A7W70-80	Rated heating output @ 7°C (kW)	42	85	120	180
	Input power (kW)	25.6	51.14	68.18	102.27
	COP	1.76	1.76	1.76	1.76
A7W70-75	Rated heating output @ 7°C (kW)	42	85	120	180
	Input power (kW)	19.53	41.86	55.81	83.72
	COP	2.15	2.15	2.15	2.15
A-4W70-80	Rated heating output @ -4°C (kW)	40	72	96	144
	Input power (kW)	26.5	47.68	63.57	95.36
	COP	1.51	1.51	1.51	1.51
A-4W70-75	Rated heating output @ -4°C (kW)	40	72	96	144
	Input power (kW)	22.47	40.45	53.93	80.89
	COP	1.78	1.78	1.78	1.78
SCOP		3.46	3.46	3.46	3.46
Refrigerant		R-513A	R-513A	R-513A	R-513A
Global Warming Product (GWP)		573	573	573	573
Refrigerant Safety Classification		A1	A1	A1	A1
Toxicity Classification		B1	B1	B1	B1
Maximum Outlet Temperature (°C)		80	80	80	80
Maximum Inlet Temperature (°C)		70	70	70	70
Noise level at 1 meter dB(A)		57	68	69	70
Compressor number		2	4	4	8
Compressor control		EVI DC Inverters	EVI DC Inverters	EVI DC Inverters	EVI DC Inverters
Maximum operating current (Amps)		<50	<100	<130	<200
Starting current per compressor (Amps)		<12.0	<12.0	<12.0	<12.0
Air out type		Top Discharge	Top Discharge	Top Discharge	Top Discharge
Fan motor quantity (No.)		2	2	2	6
Air volume flow rate total (l/s)		6,667	13,056	13,056	20,000
External fan static (Pa)		60	60	60	60
Coils		V Banked	V Banked	V Banked	V Banked
Water pipe connections		2*DN65	2 * DN80	2*DN80	2*DN100
Maximum water working pressure (MPa)		1	1	1	1
Circulating water flow rate with 10°C Δt (m³/h)		3.9	7.7	10.3	15.6
Circulating water flow rate with 5°C Δt (m³/h)		7.7	15.5	20.6	31.0
Water side pressure loss (kPa)		≤50	≤50	≤50	≤50
Dimensions (W mm x D mm x H mm)		2020 x 990 x 1950	2200 x 1400 x 2400	2200 x 1400 x 2400	2700 x 2100 x 2004
Weight (kg)		650	1150	1500	2300
Certification		CE, G5/5	CE, G5/5	CE, G5/5	CE, G5/5
Colour		Dark Grey	Dark Grey	Dark Grey	Dark Grey