

# HERCULES

Air-cooled chillers with R407C equipped scroll or semi-hermetic piston compressors. Cooling capacity 205 - 440 kW.

HERCULES FEATURES EITHER SCROLL OR PISTON COMPRESSORS, AN INTERNALLY MOUNTED TANK, MULTIPLE PUMP CONFIGURATIONS AND GENEROUS OPERATING LIMITS. NUMEROUS ACCESSORIES ALLOW HERCULES TO BE PERSONALISED TO ALL INDUSTRIAL NEEDS.



## RELIABILITY YOU CAN RELY ON

Hercules features direct expansion shell-and-tube evaporators that are among the most technologically advanced on the market. Thanks to their construction and the possibility to be serviced they ensure stable and reliable operation in even the harshest industrial applications. All evaporators are protected from freezing by means of the microprocessor's antifreeze function and a differential pressure switch.

## AN ALL-IN-ONE SOLUTION

Storage tank, single or double pumps, expansion vessel, pressure relief valve, pressure gauge: Hercules allows all hydronic components to be installed inside the unit. This translates into savings in time otherwise required to select the hydraulic circuit components, plus less complex installation procedures and hence a reduction in installation times and costs.

## SUITABLE FOR ALL INDUSTRIAL CONDITIONS

The ample operating limits with outlet water temperatures from 0 °C (-10 °C on request) and the large number of configurations, such as the -20 °C ambient version, the H version for ambient temperatures of up to +50 °C, or the low noise SN and SSN versions, allow Hercules to meet the requirements of the most diverse operating conditions.

## HIGH ENERGY EFFICIENCY

Thanks to the use of two compressors on each circuit and the extensive heat exchange surface dimensions, Hercules offers optimal energy efficiency and consequently maximum operating economy.

The electronic thermostatic valve, available as an option, ensures high energy savings and high precision capacity control, extending the unit's operating limits.

## ADVANCED MICROPROCESSOR

The new programmable 32-byte "xDRIVE" microprocessor is equipped with a LINUX operating system and a backlit semi-graphic user terminal. The use of icons, multifunction keys with dynamic description and moving images, render xDRIVE extremely user friendly.

xDRIVE features the ModBUS-RTU communication protocol as standard, allowing connection with the most widely utilised Building Management Systems (BMS). It also features an Ethernet port as standard, with HTML supervision pages preloaded for connection to a company intranet or the Internet.

## VERSIONS

- N - standard;
- SN - low noise;
- SSN - super-silent;
- H - high ambient temperatures (+50 °C);
- Low ambient temperature version (-20 °C).

## ACCESSORIES

- Electronic fan speed regulation;
- Electronic thermostatic valve;
- Pre-coated condensing coils for aggressive atmospheres;
- Storage tank with single or double pumps;
- Pumps with reduced or increased head pressure;
- Antifreeze heaters;
- Crankcase heaters;
- Phase monitor;
- Power factor correction capacitors;
- Antivibration dampers kit;
- Remote control kit;
- Supervisor kits;
- XWEB500 kit;
- Master-slave control for parallel connection and temperature control of up to 4 units.

Model HERCULES		0702	0802	0902	1002	1102	1202	1302	1402	
SCROLL	Cooling capacity (1)	kW	205	251	277	294	330	352	407	436
	Absorbed power (1)	kW	52,2	59,7	64,0	70,7	78,3	90,0	92,5	105
	Max external air temperature (1)	°C	41	42	42	42	42	41	42	41
	Cooling capacity (2)	kW	160	195	218	232	260	279	320	343
	Absorbed power (2)	kW	57,4	65,3	69,8	76,4	84,5	96,2	101	114
	Max external air temperature (2)	°C	45	46	46	46	46	45	46	45
	ESEER	-	3,77	3,95	4,16	4,19	4,22	4,17	4,09	4,09
	I.P.L.V.	-	4,29	4,47	4,63	4,63	4,83	4,76	4,59	4,63
PISTON	Cooling capacity (1)	kW	210	253	282	298	337	359	414	440
	Absorbed power (1)	kW	61,6	68,8	76,8	86,3	96	108	114	128
	Max external air temperature (1)	°C	39	41	40	40	38	38	39	39
	Cooling capacity (2)	kW	159	193	217	231	259	275	314	339
	Absorbed power (2)	kW	58,2	65,2	73,4	82,0	90,6	100	109	120
	Max external air temperature (2)	°C	45	46	45	45	44	44	45	45
	ESEER	-	3,24	3,51	3,53	3,48	3,60	3,53	3,41	3,46
	I.P.L.V.	-	3,74	4,03	4,02	3,96	4,07	3,98	3,87	3,93
Power supply	V/Ph/Hz	400±10%/3/50								
Noise level	dB(A)	65,6	64,6	64,6	64,6	64,6	64,6	65,3	65,3	
Depth	mm	2188	2188	2188	2188	2188	2188	2188	2188	
Width	mm	3495	3495	3495	3495	4595	4595	4595	4595	
Height	mm	1989	1989	1989	1989	1989	1989	1989	1989	
Installed weight Scroll version	Kg	1865	2069	2208	2265	2551	2551	2731	2811	
Installed weight Reciprocating version	Kg	1933	2079	2240	2319	2625	2645	2734	2743	

All data refers to standard units at the following nominal conditions:

- (1) Evaporator water inlet-outlet 20-15 °C, external air temperature 25 °C;
- (2) Evaporator water inlet-outlet 12-7 °C, external air temperature 35 °C;

Sound pressure level in hemispherical field at 10 m from condenser side and 1.6 m from ground. Values with tolerance ± 2 dB. The sound levels refer to operation of the unit under full load in nominal conditions and with circulation pump.

## A COMPRESSOR FOR ALL NEEDS

Hercules chillers are available with 4 hermetic scroll compressors or 2 semi-hermetic piston compressors.

Thanks to their reduced number of moving parts, scroll compressors offer very high reliability and very low noise levels. With parallel installation on two circuits, and thanks to the absence of suction and discharge valves, these compressors achieve very high efficiency levels combined with significant energy savings, also at partial loads.

Piston compressors are extremely flexible and reliable, and feature constant efficiency in relation to changing operating conditions. Their accessible housing allows for easy maintenance and repair interventions.

## SCROLL OR PISTON COMPRESSORS



scroll compressor



piston compressor

Semi-graphic user terminal with multifunction keys and dynamic icons



Shell and tube evaporator: a reliable solution



Add-on pumping module with or without storage tank



XWEB supervision system for easy connectivity

