

CYGNUS

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CYGNUS^{tech} HCYGNUS^{tech}

Air cooled water chillers, heat pumps, condensing units and reversible condensing units with R410A or R407C featuring rotary or hermetic scroll compressors. Cooling capacity 4 - 67 kW, heating capacity 5 -72 kW.



BENEFITS

- Extremely low noise levels;
- High EER/COP values and seasonal performance indices;
- Ideally suited to commercial and domestic chilled water air-conditioning applications;
- Extended operating limits;
- Optimisation of heat pump defrosting cycles thanks to the exclusive Frost Detecting System (FDS) (Minimum ambient temperature in heat pump mode= -10°C);
- Self-adaptive temperature control (SAC) for efficient operation with installations having low water contents;
- Designed for installation in confined spaces;
- Easy to use thanks to a controller with icon-based dual display;
- Easy installation and simple access to all chiller components;
- Compatible with the very latest supervisor and interface systems (BMS).

MAIN OPTIONS

- Configuration without storage tank;
- High/medium pressure head pump;
- Double pump, with one in stand-by (models 081-301);
- Condensate collection tray with hose connection (models 013-071);
- Anti-freeze heaters on evaporator, pump and tank;
- Replicated remote control interface;
- RS485 ModBus interface for connection to supervisor systems;
- X-WEB300 kit for local or remote (GSM mobile phone) monitoring plus data filing based on WEB server technology;
- Antivibration mountings.

STANDARD FEATURES

- Hermetic Rotary compressors (013-020) Scroll compressors (031- 171) tandem Scroll compressors (211-301);
- Integral hydronic kit complete with pump, tank, expansion vessel, filling/drain valve, pressure gauge, and automatic bleed valve;
- Hydraulic couplings directly accessible from the unit exterior;
- Brazed stainless steel plate evaporator;
- Axial fans with sickle shaped blades, electronic speed control;
- Heat pumps with 2nd thermostatic valve for performance optimisation in all operating conditions (models 131 to 301);
- Protection grade IPX4;
- Factory tested and supplied with refrigerant charge and antifreeze oil;
- Environmentally friendly refrigerants with R410A and R407C zero ozone depletion potential.

VERSIONS

- Chiller;
- Heat pump;
- Condensing unit (R407C);
- Reversible condensing unit (R407C);
- Split chiller system in chiller mode or reversible heat pump (R407C).

Model CY-HCY - CG-HCG-/MC		013	015	020	031	051	071	081	101	131	171	211	251	301		
R410A (CYGNUS ^{tech})	CY	Cooling capacity	kW	4.3	5.3	7.1	10.1	14.5	18.7	22.5	29.7	38.7	44.2	52.0	59.9	66.6
		Absorbed power	kW	1.3	1.7	2.3	3.0	4.5	6.1	6.6	8.9	11.4	12.6	15.7	17.4	20.7
		ESEER	-	2.98	2.86	2.94	3.31	3.34	3.22	3.55	3.58	3.55	3.72	4.03	4.24	4.23
		IPLV	-	2.62	2.57	2.65	2.67	2.68	2.63	2.94	2.94	2.91	3.03	4.01	4.33	4.36
		Max external air temp.	°C	49	47	46	47	46	46	47	46	46	47	46	46	45
R410A (CYGNUS ^{tech})	HCY	Heating capacity	kW	4.8	5.9	7.7	11.1	16.1	20.0	24.1	31.3	41.2	47.9	55.9	62.9	71.7
		Absorbed power	kW	1.3	1.6	2.2	3.1	4.5	5.9	6.5	8.5	11.1	12.7	15.1	17.2	19.9
		Min. external air temp.	°C	-8	-8	-7	-8	-8	-7	-9	-7	-8	-8	-8	-8	-7

R407C (CYGNUS)	CG	Cooling capacity	kW	4.1	4.8	6.9	9.7	13.5	16.7	21.2	28.5	37.1	43.8	49.8	57.0	65.5
		Absorbed power	kW	1.2	1.5	2.2	3.2	4.2	6.0	6.2	8.8	11.4	13.0	15.4	17.0	20.6
		ESEER	-	2.67	2.83	2.91	2.93	3.20	2.89	3.50	3.55	3.39	3.58	3.86	3.95	3.93
		IPLV	-	2.47	2.44	2.45	2.47	2.69	2.51	2.88	2.85	2.79	2.92	3.83	3.87	3.79
		Max external air temp.	°C	47	47	46	47	46	45	47	46	46	46	46	46	45
	HCG	Heating capacity	kW	4.6	5.1	7.2	10.9	14.5	19.2	22.8	30.4	40.2	46.5	54.8	60.9	70.4
		Absorbed power	kW	1.3	1.6	2.3	3.2	4.2	6.0	6.4	8.9	11.3	13.4	15.5	17.9	20.6
		Min. external air temp.	°C	-10	-9	-7	-9	-8	-7	-6	-7	-8	-7	-7	-7	-6
	MCCG	Cooling capacity	kW	3.8	4.5	6.6	9.3	12.6	15.8	19.5	26.2	34.3	40.2	45.9	52.5	61.0
		Absorbed power	kW	1.2	1.6	2.3	3.2	4.4	6.1	6.3	8.9	11.5	13.1	15.5	17.2	20.9
		Max external air temp.	°C	47	46	47	47	46	45	46	48	47	48	47	47	46
	MCHCG	Heating capacity	kW	4.9	5.6	7.7	11.5	15.3	19.8	23.8	31.8	42.1	49.0	57.1	63.6	72.7
		Absorbed power	kW	1.0	1.2	1.6	2.4	3.2	4.7	4.7	6.4	8.5	9.8	11.2	12.8	14.9
		Min. external air temp.	°C	-9	-8	-7	-9	-8	-7	-10	-9	-9	-8	-9	-9	-8

Power supply	V/Ph/Hz	230±10%/1/50			400±10%/3/50									
Noise level	dB(A)	35.6	37.7	38.9	40.7	41.9	42.9	41.5	44.5	46.8	48.2	48.6	49.4	49.0
Depth	mm	380	380	380	550	550	550	810	810	1112	1112	1112	1112	1112
Width	mm	978	978	978	1420	1420	1420	1960	1960	2060	2060	2470	2470	2470
Height	mm	985	985	985	1288	1288	1288	1203	1203	1417	1417	1595	1595	1595
Installed weight	Kg	98	101	111	151	182	184	344	361	470	505	613	638	654

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

- Chiller: evaporator water inlet-outlet 12-7 °C, external air temperature 35 °C;
- Heat pump: condenser water inlet-outlet 40-45 °C, external air temperature 7 °C dry bulb, 6 °C wet bulb;
- Condensing unit (R407C): Evaporating temperature 5 °C (DEW), external air temperature 35 °C;
- Reversible condensing unit (R407C): condensing temperature 40 °C (dew), ambient air temperature 7 °C 6 °C wet bulb.

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.

Microprocessor controller with dual icon-based display.



Higher energy efficiency and quieter operation thanks to the use of scroll compressors.



Built-in pumping module with or without storage tank.

