CYGNUS

AIR COOLED WATER CHILLERS, HEAT PUMPS, CONDENSING UNITS AND REVERSIBLE CONDENSING UNITS WITH R410A OR R407C FEATURING ROTARY OR HERMETIC SCROLL COMPRESSORS. COOLING CAPACITY 4,1 - 67 kW, HEATING CAPACITY 4,3 - 72 kW.

pure energy

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.

MAIN OPTIONS

- Configuration without storage tank;
- High/low pressure head pump;
- Double pump with one in stand-by (depending on model);
- Condensate collection tray with hose connection (models 013-071);
- Anti-freeze heaters on evaporator, pump and tank;
- Remote user interface;
- RS485 ModBus interface for connection to supervisor systems;
- xWEB300 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 threaded connections directly accessible from the exterior of the unit;
- Brazed stainless steel plate evaporator;
- Axial fans with sickle shaped blades and electronic speed control;
- Heat pumps with 2^ thermostatic valve for performance optimisation in all operating conditions (models 131 to 301);
- Charging of non-freezing oil and refrigerant in compact versions CG/HCG and CY/HCY performed in factory;
- Protection grade IPX4;
- Inspections and tests performed in factory as per all MTA products and components;
- 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		013	015	020	031	051	071	081	101	131	171	211	251	301
R410A (CYGNUS*tech*)	CY	Cooling capacity	kW	4,29	5,29	7,14	10,1	14,5	18,7	22,5	29,7	38,7	44,2	52,0	59,9	66,6
		Absorbed power	kW	1,27	1,67	2,26	2,99	4,53	6,13	6,62	8,89	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	4,25	4,43	4,42
		IPLV	-	2,62	2,57	2,65	2,67	2,68	2,63	2,94	2,94	2,91	3,03	4,32	4,53	4,55
		Max external air temperature	°C	49	47	46	47	46	46	47	46	46	47	46	46	45
	HCY	Heating capacity	kW	4,56	5,57	7,25	10,5	15,3	18,9	22,8	29,7	39,0	43,9	52,9	59,7	68,0
		Absorbed power	kW	1,24	1,54	2,05	2,88	4,30	5,53	6,14	8,08	10,4	11,7	14,2	16,3	18,8
		Min. external air temperature	°C	-8	-8	-7	-8	-8	-7	-9	-7	-8	-8	-8	-8	-7

		Power supply	V/Ph/Hz	230±10%/1/50			400±10%/3/50									
		Circuit / Compressors	N°	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2
		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

		Model CG - HCG - / MC		013	015	020	031	051	071	081	101	131	171	211	251	301
R407C (CYGNUS)	CG	Cooling capacity	kW	4,07	4,80	6,93	9,75	13,5	16,7	21,2	28,5	37,1	43,8	49,8	57,0	65,5
		Absorbed power	kW	1,23	1,53	2,25	3,16	4,17	6,04	6,24	8,79	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 temperature	°C	47	47	46	47	46	45	47	46	46	46	46	46	45
	HCG	Heating capacity	kW	4,33	4,88	6,81	10,3	13,7	18,2	21,6	28,8	38,1	44,1	52,0	57,8	66,8
		Absorbed power	kW	1,24	1,51	2,14	3,05	3,98	5,66	6,05	8,40	10,7	12,7	14,6	16,9	19,5
		Min. external air temperature	°C	-10	-9	-7	-9	-8	-7	-6	-7	-8	-7	-7	-7	-6
	MCCG	Cooling capacity	kW	3,82	4,48	6,55	9,28	12,6	15,8	19,5	26,2	34,3	40,2	45,9	52,5	61,0
		Absorbed power	kW	1,25	1,56	2,30	3,22	4,37	6,13	6,30	8,87	11,5	13,1	15,5	17,2	20,9
		Max external air temperature	°C	47	46	47	47	46	45	46	48	47	48	47	47	46
	MCHCG	Heating capacity	kW	4,90	5,55	7,74	11,5	15,3	19,8	23,8	31,8	42,1	49,0	57,1	63,6	72,7
		Absorbed power	kW	1,04	1,16	1,62	2,44	3,23	4,72	4,68	6,42	8,46	9,80	11,2	12,8	14,9
		Min. external air temperature	°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%/3N/50									
		Circuit / Compressors	N°	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2
		Noise level	dB(A)	39,1	40,3	41,0	43,3	44,8	45,8	43,1	46,3	48,8	49,4	50,0	50,7	51,3
		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	100	103	113	158	189	191	347	365	475	510	619	644	661

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

Eurovent Certification (apart from MC)

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 tollerance ± 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.