

MULTIFUNCTIONAL UNITS FOR 4-PIPE SYSTEMS



On complex buildings where there is simultaneous need of cooling and heating, EnergyPower is capable to provide them at the same time with the maximum efficiency in every season of the year.

EnergyPower allows to combine the three contemporary functioning modes – cooling, heating and domestic hot water production – to reach several working configurations.

Despite traditional systems, where cooling and heating are provided by two independents units (liquid Chiller and Heat Pump, or liquid Chiller and Boiler) and dedicated piping, Energy Power centres both sources on one single unit.

The result is a noticeable gain on occupied space on service areas and simplification of system configuration, with reduced on-site operations for installation and maintenance.

COOLING 49-1133 kW

HEATING 52-1156 kW

COOLING + HEATING 50-1495 kW

REFRIGERANT OPTIONS

SCROLL COMPRESSORS



GWP = 1,924



GWP = 676
Alternative to R410A
-65% GWP



GWP = 467
Alternative to R410A
-75% GWP

SCREW COMPRESSORS



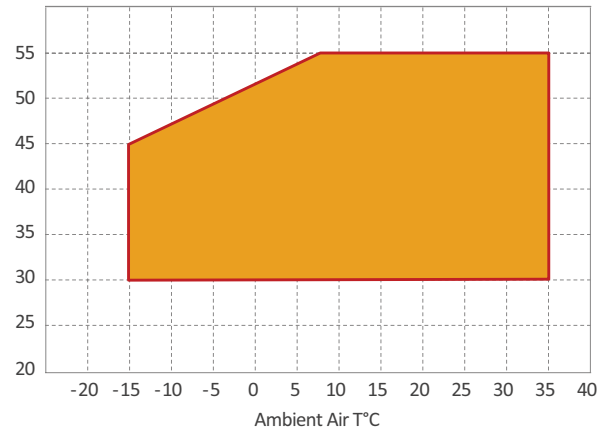
GWP = 1,300



GWP = 573
Alternative to R134A
-56% GWP



DOMESTIC HOT WATER UP TO 55°C



COMPRESSOR OPTIONS

SCROLL COMPRESSOR

TOP SCOP: EFFICIENCY AT PART LOAD

TER: TOTAL EFFICIENCY RATIO

When hot water and chilled water are produced simultaneously, the real efficiency of the unit is the sum of hot and cold performances. TER reaches its maximum value in load balancing conditions.



EER, COP are overcome by **TER** = $\frac{\text{Cooling Capacity} + \text{Thermal Capacity}}{\text{Power Input}}$

SCREW COMPRESSOR

INVERTER SCREW

Designed for high temperature applications: high power and efficiency.

Features:

- High efficiency Screw Rotor profile - hyper volumetric efficiency.
- High efficiency motor.
- Capacity control with Stepless regulation.
- ECONOMIZER.
- Low friction components: high reliability and efficiency.
- High performance INTEGRAL OIL SEPARATOR.

CHA/K/EP 182-P÷693-P



Multifunctional units for 4-Pipe systems with Scroll compressors and plate exchangers

			182-P	202-P	242-P	262-P	302-P	363-P	393-P	453-P	502-P	603-P	693-P
Cooling only (1)	Cooling capacity	kW	48,6	55,9	63,2	72,2	81,8	92,7	105	118	134	159	190
	Absorbed power	kW	16,8	19,3	21,9	24,4	27,9	32,5	38,0	42,3	46,5	57,4	68,5
	EER		2,89	2,90	2,89	2,96	2,93	2,85	2,76	2,79	2,88	2,77	2,77
Heating only (2)	Heating capacity	kW	52,2	59,7	67,0	75,5	86,0	98,4	111	127	142	171	203
	Absorbed power	kW	16,0	18,7	21,2	23,4	26,5	30,0	35,1	39,5	42,8	52,5	61,2
	COP		3,26	3,19	3,16	3,23	3,25	3,28	3,16	3,22	3,32	3,26	3,32
Cooling + Heating (3)	Cooling capacity	kW	49,6	56,5	62,9	71,8	83,3	94,0	110	126	140	168	203
	Heating capacity	kW	64,9	73,9	82,5	94,1	109	123	143	163	181	217	261
	Absorbed power	kW	15,3	17,4	19,6	22,3	25,2	29,4	32,6	37,2	40,7	49,0	58,4
	TER		7,48	7,49	7,42	7,44	7,63	7,38	7,76	7,77	7,89	7,86	7,95
Length		mm	2350	2350	2350	2350	2350	2350	2350	2350	3550	3550	3550
Width		mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
Height		mm	1920	1920	1920	2220	2220	2220	2220	2220	2220	2220	2220

CHA/K/EP 604-P÷2406-P



Multifunctional units for 4-Pipe systems with Scroll compressors and plate exchangers

			604-P	724-P	804-P	904-P	1004-P	1104-P	1206-P	1506-P	1806-P	2006-P	2206-P	2406-P
Cooling only (1)	Cooling capacity	kW	167	190	216	241	264	301	339	395	459	522	583	643
	Absorbed power	kW	57	69	75	85	93	104	114	140	169	193	210	225
	EER		2,93	2,75	2,88	2,84	2,84	2,89	2,97	2,82	2,72	2,70	2,78	2,86
Heating only (2)	Heating capacity	kW	180	204	231	257	281	318	361	427	515	570	632	693
	Absorbed power	kW	55	64	72	79	86	97	109	128	159	168	195	208
	COP		3,25	3,20	3,22	3,25	3,28	3,28	3,31	3,34	3,24	3,39	3,24	3,33
Cooling + Heating (3)	Cooling capacity	kW	170	195	214	243	270	303	334	405	465	543	594	652
	Heating capacity	kW	220	255	281	318	351	396	436	527	613	712	777	849
	Absorbed power	kW	50	60	67	75	81	93	102	122	148	169	183	197
	TER		7,80	7,50	7,39	7,48	7,67	7,52	7,55	7,64	7,28	7,43	7,49	7,62
Length		mm	3350	3350	3350	3350	3350	5000	5000	5000	6200	6200	7200	7200
Width		mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height		mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100

CHA/Y/EP 1352÷4402



Multifunctional units for 4-Pipe systems with Inverter Screw compressors and shell and tube exchangers

			1352	1402	1602	1802	1952	2302	2702	3302	3902	4402
Cooling only (1)	Cooling capacity	kW	278	312	366	423	484	564	676	822	978	1133
	Absorbed power	kW	89	100	116	133	153	177	210	258	315	365
	EER		3,12	3,12	3,16	3,18	3,16	3,19	3,22	3,19	3,10	3,10
Heating only (2)	Heating capacity	kW	283	320	375	431	490	572	672	838	990	1156
	Absorbed power	kW	86	91	107	122	139	159	190	231	271	313
	COP		3,29	3,52	3,50	3,53	3,53	3,60	3,54	3,63	3,65	3,69
Cooling + Heating (3)	Cooling capacity	kW	276	318	370	429	492	575	686	834	996	1181
	Heating capacity	kW	359	404	469	544	621	726	865	1054	1261	1495
	Absorbed power	kW	83	87	99	115	130	152	179	220	265	314
	TER		7,65	8,30	8,47	8,46	8,56	8,56	8,66	8,58	8,52	8,52
Length		mm	5550	5550	6700	7750	8900	8900	10050	11100	11100	11100
Width		mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height		mm	2100	2100	2100	2100	2100	2500	2500	2500	2500	2500

1, Chilled water from 12 to 7°C, ambient air temperature 35°C. 2, Heated water from 40 to 45°C, ambient air temperature 7°C d.b./6°C w.b. 3, Chilled water from 12 to 7°C, heated water from 40 to 45°C.