



GALAXY HE

High efficiency air cooled chillers



- **Close attention to the sizing and selection of the components**
- **High energy efficiency**
- **Application in any plant environment**
- **Easy installation and maintenance**
- **Optimized performance at partial loads**
- **Low noise level**

The Galaxy HE units have been designed according to Erp Directive 2009/125/CE and meet the related seasonal efficiency levels requested by the rule. In this regards, great attention has been payed on the components design.

All units are equipped with scroll compressors, with refrigerant R410A and are designed for optimal energy efficiency, particularly high operating at partial loads.

The compactness and the presence of an extensive range of equipments and accessories, allow the use of the Galaxy HE units in any plant environment.

Thanks to the adopted construction solutions, the installation and maintenance activities are particularly facilitated, allowing time and money saving to the installation personnel.

A multistep capacity control (from 2 to 6 according to the models) allows the part load performance increasing.

All standard models have the compressors assembled into a soundproofed compartment separated from the fan section.

The noise emission is very low and it is in compliance with the required normal standard.

The use of EC fans with a permanent magnets motor, and the appropriate rotation speed control, according to the environmental conditions in which the unit operates, optimize the average seasonal efficiency and reduce considerably the noise emissions, particularly when operating at partial loads, that is the condition in which the units mainly operate.

Accessories

1 pump	Top remote control	Condensers fully Electrofin® painted
1 HP pump	Antifreeze evaporator heater + pipes	Coils with fins in copper
2 pumps	Antifreeze evaporator heater + buffer tank	Power factor regulator kit (cos φ 0,95)
2 HP pumps	Compressor crankcase heater	Electrical panel ventilation] Heating kit
1 pump + buffer tank in series	Compressor magnetothermal protection	Electronic thermostatic expansion valve
1 HP pump + buffer tank in series	Rubber antivibration mountings std	El. Exp. Valve backup battery
2 pumps + buffer tank in series	Anti-vibration supports spring type (standard unit)	Liquid receivers
2 HP pumps + buffer tank in series	A.V mounts (spring type) only pipes (ON REQUEST)	Liquid line solenoid valve
Partial heat recovery (desuperheater)	Condensing coils protection grids	Standard RS485 Modbus card (INCLUDED)
Total heat recovery	Compressors soft starter	Soundproofing kit LN
Refrigerants gauges	Coils with prevarnished fins	EC Fans (INCLUDED)



Galaxy HE STD Technical Data

GALAXY HE STD			082A	102A	122A	152A	123A	133A	153A	134A	154A	126A	
COOLING	A35 / W7	Cooling capacity	41,15	47,5	63,45	81,25	94,02	104,36	121,53	139,81	160,04	176,34	
		Total power input (1)	12,85	15,1	19,85	27	29	33,84	39,32	44,86	53,78	60,65	
		EER (EN 14511-2013)	3,15	3,1	3,16	2,95	3,19	3,05	3,05	3,07	2,93	2,86	
	A35 / W18	Cooling capacity	kW	57,08	65,63	88,25	111,0	129,8	142,04	165,76	191,38	217,57	241,98
		Total power input (1)	kW	13,68	16,32	21,27	29,7	31,6	37	43	49	59,06	66,36
		EER (EN 14511-2013)	4,06	3,92	4,1	3,7	4,0	3,75	3,75	3,79	3,58	3,53	
SEER		4,38	4,34	4,5	4,1	4,9	4,7	4,7	4,9	4,7	4,89		
η		172	171	175	163	192	186	186	194	185	192		
Max current	A	33,4	42,4	52,4	69,4	75,8	86,4	101,4	115,8	135,8	148,6		
Current at start	A	119,7	148,7	148,0	213,0	173,0	207,0	247,0	240,5	283,5	250,5		
Scroll Compressors	n°	2	2	2	2	3	3	3	4	4	6		
Refrigerant Circuits	n°	1	1	1	1	1	1	1	2	2	2		
Capacity steps	n°	2	2	2	2	3	3	3	4	4	6		
Supply voltage	V/Ph/Hz	400/3/50											
Sound power Lw - STANDARD (2)	dB(A)	77,9	79	80,8	82,0	81,8	82,5	83,2	83,9	84,6	84,4		
Sound pressure Lp - STANDARD (2)	dB(A)	46,1	47,3	49,0	50,1	50,0	50,6	51,3	51,9	52,6	52,4		
Sound power Lw - LN version (2)	dB(A)	76	76,7	79,0	79,6	79,5	79,9	80,3	81,5	81,8	81,7		
Sound pressure Lp - LN version (2)	dB(A)	44,3	44,9	47,1	47,7	47,6	48,1	48,4	49,5	49,8	49,7		
USER PLANT HEAT EXCHANGER													
Type of fluid		clean water											
Brazed plate exchanger	n°	1	1	1	1	1	1	1	1	1	1	1	
Water flow (A35/W7)	l/s	1,97	2,27	3,0	3,9	4,5	5,0	5,8	6,7	7,65	8,43		
Pressure drops (A35/W7)	kPa	23,3	22,04	18,3	18,0	17,0	20,9	28,3	37,2	38,31	46,51		
FAN SECTION													
Fans	n°	1	1	2	2	2	2	2	3	3	3		
Air flow	m³/s	6,38	6,38	13,0	13,0	12,8	12,8	12,5	18,6	18,63	18,29		
Rotation speed	min ⁻¹	932	932	932,0	932,0	932,0	932,0	932,0	932,0	932	932		
Unit power input	kW	1,31	1,31	1,27	1,27	1,31	1,31	1,35	1,37	1,37	1,45		
Unit current input	A	2,23	2,23	2,16	2,16	2,23	2,23	2,29	2,32	2,32	2,47		
SIZES AND WEIGHT													
Length	mm	1955	1955	3005	3005	3005	3005	3005	4255	4255	4255		
Width	mm	1123	1123	1123	1123	1123	1123	1123	1123	1123	1123		
Height	mm	1954	1954	1954	1954	1954	1954	1954	1954	1954	1954		
Weight	Kg	515	536	677	736	844	854	895	1049	1117	1299		

A35/W7 Ambient temperature: 35 °C - Medium (water) temperature: 12/7 °C
A35/W18 Ambient temperature: 35 °C - Medium (water) temperature: 23/18 °C

(1) Total power input without water pumps

(2) Sound power level according to ISO3744. Average sound pressure level 10 m distance with unit standing on a reflecting surface

Galaxy HE SLN Technical Data

GALAXY HE SLN UNIT			082A	102A	122A	152A	123A	133A	153A	134A	154A	126A	
COOLING	A35 / W7	Cooling capacity		40,45	46,53	62,48	79,57	92,04	101,84	118,31	136,79	155,96	170,94
		Total power input (1)		12,65	15,03	19,31	26,97	29,00	33,88	39,6	44,51	53,85	61,25
		EER (EN 14511-2013)		3,15	3,06	3,20	2,92	3,14	2,98	2,95	3,03	2,86	2,75
	A35 / W18	Cooling capacity	kW	55,83	63,93	86,5	107,9	126,4	137,53	159,94	185,92	210,27	232,66
		Total power input (1)	kW	13,6	16,38	20,88	29,7	31,8	37,57	43,83	49,1	59,65	67,79
		EER (EN 14511-2013)		4,00	3,81	4,06	3,58	3,91	3,60	3,57	3,68	3,44	3,33
SEER			4,5	4,4	4,6	4,2	5,0	4,72	4,69	4,85	4,73	4,6	
η			175	171	179	165	196	186	185	191	186	183	
Max current	A		32,6	41,6	50,8	67,8	74,2	84,8	99,8	113,5	133,5	146,2	
Current at start	A		118,9	147,9	146,4	211,4	171,4	205,4	245,4	238,1	281,1	248,1	
Scroll Compressors	n°		2	2	2	2	3	3	3	4	4	6	
Refrigerant Circuits	n°		1	1	1	1	1	1	1	2	2	2	
Capacity steps	n°		2	2	2	2	3	3	3	4	4	6	
Supply voltage	V/Ph/Hz		400/3/50										
Sound power Lw (2)	dB(A)		73,8	74,8	76,7	77,7	77,6	78,2	78,8	79,7	80,2	80,1	
Sound pressure Lp (2)	dB(A)		42,1	43,1	44,9	45,8	45,7	46,4	46,9	47,7	48,2	48	
USER PLANT HEAT EXCHANGER													
Type of fluid			clean water										
Brazed plate exchanger	n°		1	1	1	1	1	1	1	1	1	1	
Water flow (A35/W7)	l/s		1,9	2,2	3,0	3,8	4,4	4,87	5,65	6,54	7,45	8,17	
Pressure drops (A35/W7)	kPa		22,5	21,2	17,7	17,3	16,3	19,9	26,85	35,62	36,38	43,71	
FAN SECTION													
Fans	n°		1	1	2	2	2	2	2	3	3	3	
Air flow	m³/s		5,4	5,4	11,0	11,0	10,8	10,78	10,54	15,62	15,62	15,13	
Rotation speed	min ⁻¹		812	812	812	812	812	812	812	812	812	812	
Unit power input	kW		0,8	0,8	0,8	0,8	0,8	0,81	0,83	0,83	0,83	0,85	
Unit current input	A		1,4	1,4	1,4	1,4	1,4	1,38	1,4	1,42	1,42	1,45	
SIZES AND WEIGHT													
Length	mm		1955	1955	3005	3005	3005	3005	3005	4255	4255	4255	
Width	mm		1123	1123	1123	1123	1123	1123	1123	1123	1123	1123	
Height	mm		1954	1954	1954	1954	1954	1954	1954	1954	1954	1954	
Weight	Kg		530	552	687	751	860	870	911	1066	1137	1319	

A35/W7 Ambient temperature: 35 °C - Medium (water) temperature: 12/7 °C
A35/W18 Ambient temperature: 35 °C - Medium (water) temperature: 23/18 °C

(1) Total power input without water pumps

(2) Sound power level according to ISO3744. Average sound pressure level 10 m distance with unit standing on a reflecting surface



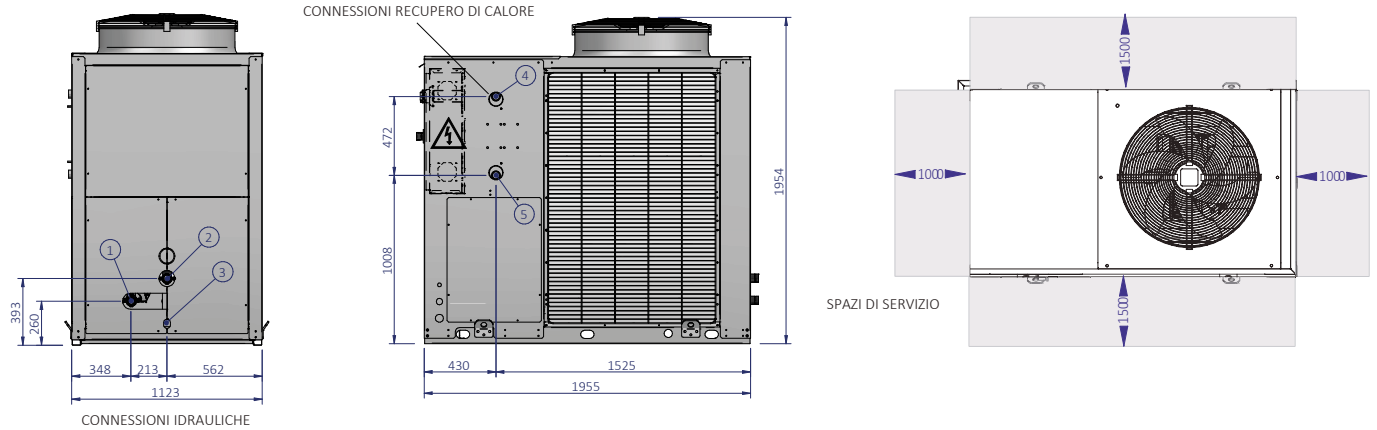
Hydronic kit main technical data

Galaxy EC STD/LN/SLN unit		082A	102A	122A	152A	123A	133A	153A	134A	154A	126A
HYDRONIC KIT (OPTIONAL)											
Storage water tank	l	150	150	150	300	300	300	300	300	300	300
Plant side expansion vessel	l	6	6	6	10	10	10	10	18	18	18
Max. water pressure	kPa	600	600	600	600	600	600	600	600	600	600
Nitrogen pre-charge pressure kPa 150	kPa	150,0	150,0	150,0	150,0	150,0	150,0	150,0	150,0	150,0	150,0
VERSIONS: 1 pump std											
Pump n°	n°	1	1	1	1	1	1	1	1	1	1
Available external pressure	kPa	134	129	116	116	106	92	65	77	64	69
Power input (each)	kW	1,1	1,1	1,1	1,5	1,5	1,5	1,5	2,0	2,0	2,5
Current input (each)	A	2,2	2,2	2,2	2,7	2,7	2,7	2,7	3,7	3,7	5,0
Empty weight	Kg	49	49	49	66	66	66	70	70	82	82
VERSIONS: 1 pump HP											
Pump n°	n°	1	1	1	1	1	1	1	1	1	1
Available external pressure	kPa	165	161	150	155	146	133	148	171	159	128
Power input (each)	kW	1,40	1,40	1,40	2,00	2,00	2,00	2,50	3,30	3,30	3,30
Current input (each)	A	2,7	2,7	2,7	3,7	3,7	3,7	5,0	6,0	6,0	6,0
Empty weight	Kg	52	52	52	70	70	70	75	75	87	87
VERSIONS: 2 pumps std											
Pump n°	n°	2	2	2	2	2	2	2	2	2	2
Available external pressure	kPa	134	129	116	116	106	92	65	77	64	69
Power input (each)	kW	1,1	1,1	1,1	1,5	1,5	1,5	1,5	2,0	2,0	2,5
Current input (each)	A	2,2	2,2	2,2	2,7	2,7	2,7	2,7	3,7	3,7	5,0
Empty weight	Kg	77	77	77	100	100	100	108	108	120	120
VERSIONS: 2 pumps HP											
Pump n°	n°	2	2	2	2	2	2	2	2	2	2
Available external pressure	kPa	165	161	150	155	146	133	148	171	159	128
Power input (each)	kW	1,4	1,4	1,4	2,0	2,0	2,0	2,5	3,3	3,3	3,3
Current input (each)	A	2,7	2,7	2,7	3,7	3,7	3,7	5,0	6,0	6,0	6,0
Empty weight	Kg	83	83	83	108	108	108	118	118	130	130

Hydronic kit main technical data

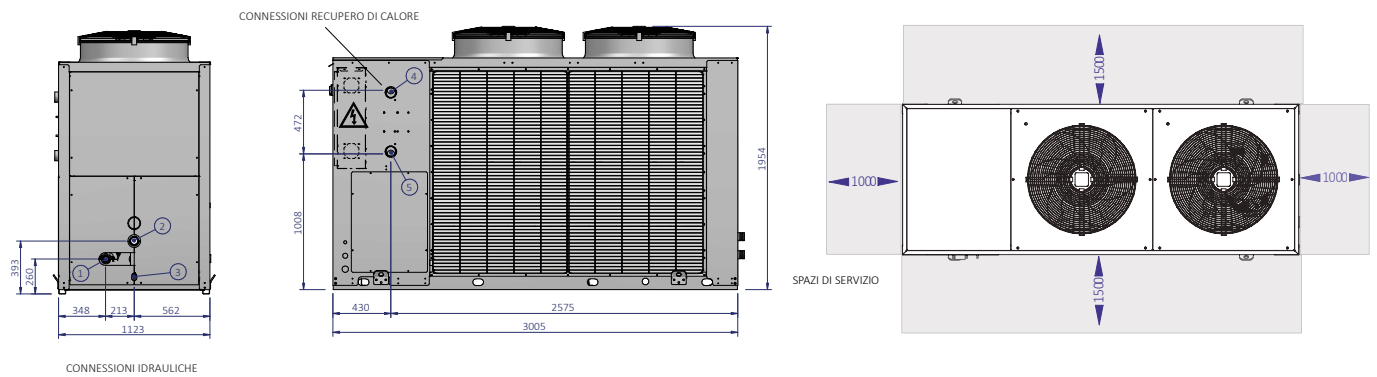
Galaxy EC STD/LN/SLN unit		082A	102A	122A	152A	123A	133A	153A	134A	154A	126A
VERSIONS: 1 pump std + buffer tank											
Pump n°	n°	1	1	1	1	1	1	1	1	1	1
Available external pressure	kPa	134	129	116	116	106	92	65	77	64	69
Power input (each)	kW	1,1	1,1	1,1	1,5	1,5	1,5	1,5	2,0	2,0	2,5
Current input (each)	A	2,2	2,2	2,2	2,7	2,7	2,7	2,7	3,7	3,7	5,0
Empty weight	Kg	85	85	85	116	116	116	120	120	131	131
VERSIONS: 1 pump HP + buffer tank											
Pump n°	n°	1	1	1	1	1	1	1	1	1	1
Available external pressure	kPa	165	161	150	155	146	133	148	171	159	128
Power input (each)	kW	1,4	1,4	1,4	2,0	2,0	2,0	2,5	3,3	3,3	3,3
Current input (each)	A	2,7	2,7	2,7	3,7	3,7	3,7	5,0	6,0	6,0	6,0
Empty weight	Kg	88	88	88	120	120	120	125	125	137	137
VERSIONS: 2 pump std + buffer tank											
Pump n°	n°	2	2	2	2	2	2	2	2	2	2
Available external pressure	kPa	134	129	116	116	106	92	65	77	64	69
Power input (each)	kW	1,1	1,1	1,1	1,5	1,5	1,5	1,5	2,0	2,0	2,5
Current input (each)	A	2,2	2,2	2,2	2,7	2,7	2,7	2,7	3,7	3,7	5,0
Empty weight	Kg	104	104	104	141	141	141	148	148	160	160
VERSIONS: 2 pumps HP + buffer tank											
Pump n°	n°	2	2	2	2	2	2	2	2	2	2
Available external pressure	kPa	165	161	150	155	146	133	148	171	159	128
Power input (each)	kW	1,4	1,4	1,4	2,0	2,0	2,0	2,5	3,3	3,3	3,3
Current input (each)	A	2,7	2,7	2,7	3,7	3,7	3,7	5,0	6,0	6,0	6,0
Empty weight	Kg	110	110	110	150	150	150	160	160	172	172

Galaxy HE STD/SLN sizes and operating spaces



MODEL	GALAXY HE	
	STD	SLN
82	X	X
102	X	X

MODEL	STD-SERIE					
	1	2	3	4 (HRP)	5 (HRP)	
Galaxy HE	80	1" 1/2 V	1" 1/2 V	1" 1/2 M	1" 1/2 V	1" 1/2 V
	102	1" 1/2 V	1" 1/2 V	1" 1/2 M	1" 1/2 V	1" 1/2 V

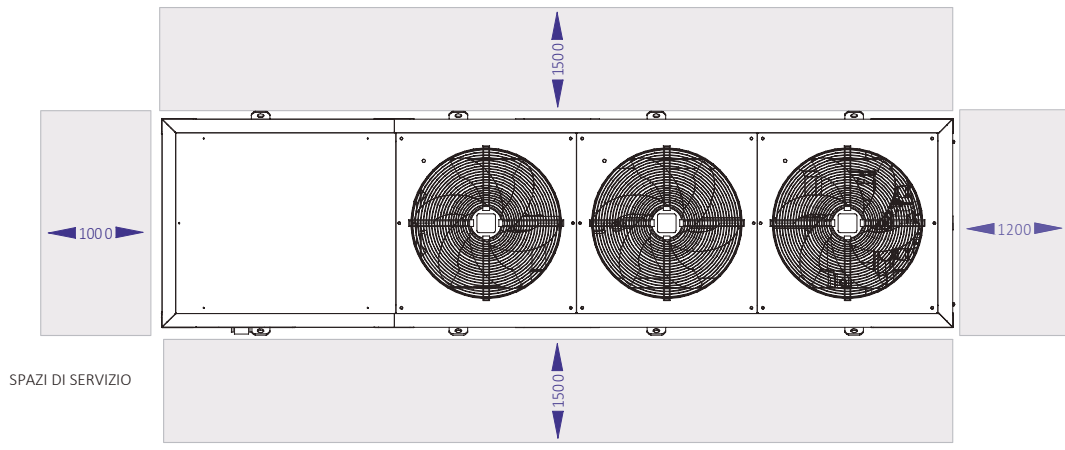
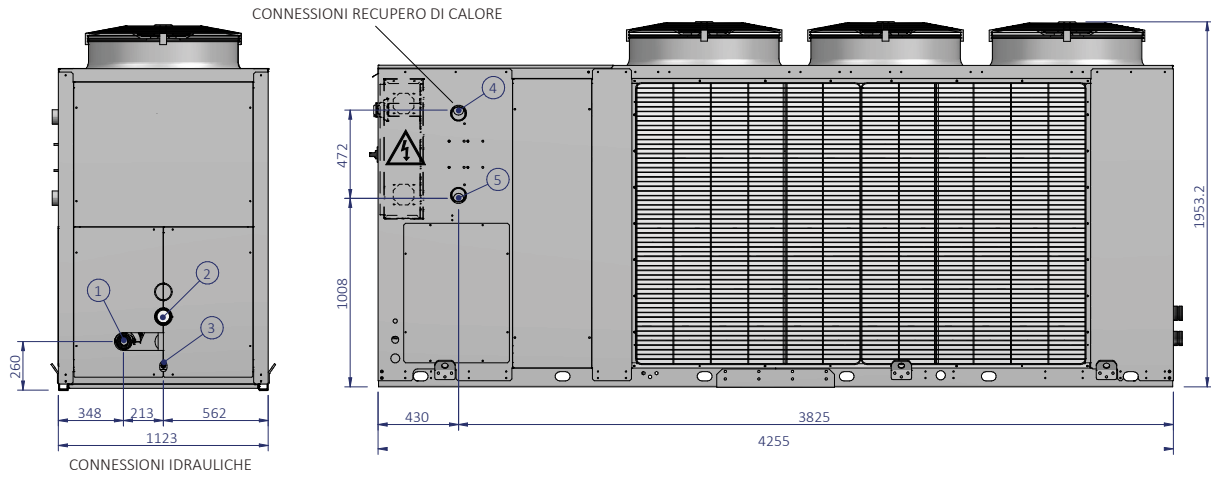


MODEL	GALAXY HE	
	STD	SLN
122	X	X
152	X	X
123	X	X
133	X	X
153	X	X

MODEL	STD-SERIE			HRP		HRT		
	1	2	3	4 (HRP)	5 (HRP)	4	5	
Galaxy HE	122	2"	2"	1/2"	1" 1/2	1" 1/2	2"	2"
	152	2"	2"	1/2"	1" 1/2	1" 1/2	2"	2"
	123	2"	2"	1/2"	1" 1/2	1" 1/2	2"	2"
	133	2"	2"	1/2"	1" 1/2	1" 1/2	2"	2"
	153	2"	2"	1/2"	1" 1/2	1" 1/2	2"	2"

- 1 User side_ Medium inlet connection
- 2 User side _ Medium outlet connection
- 3 User side_ Vessel drain connection
- 4 (HRP) Partial heat recovery _ Medium outlet connection

- 5 (HRP) Partial heat recovery _ Medium inlet connection
- n.a. Not available
- V Victaulic
- M Filettato maschio



MODEL	GALAXY HE	
	STD	SLN
134	X	X
152	X	X
126	X	X

MODEL	STD-SERIE				
	1	2	3	4	5
Galaxy HE 134	2" 1/2 V	2" 1/2 V	1/2" M	2" 1/2 V	2" 1/2 V
Galaxy HE 152	2" 1/2 V	2" 1/2 V	1/2" M	2" 1/2 V	2" 1/2 V
Galaxy HE 126	2" 1/2 V	2" 1/2 V	1/2" M	2" 1/2 V	2" 1/2 V

- 1 User side_ Medium inlet connection
- 2 User side_ Medium outlet connection
- 3 User side_Vessel drain connection
- 4 (HRP) Partial heat recovery _ Medium outlet connection

- 5 (HRP) Partial heat recovery _ Medium inlet connection
- n.a. Not available
- V Victaulic
- M Filettato maschio