

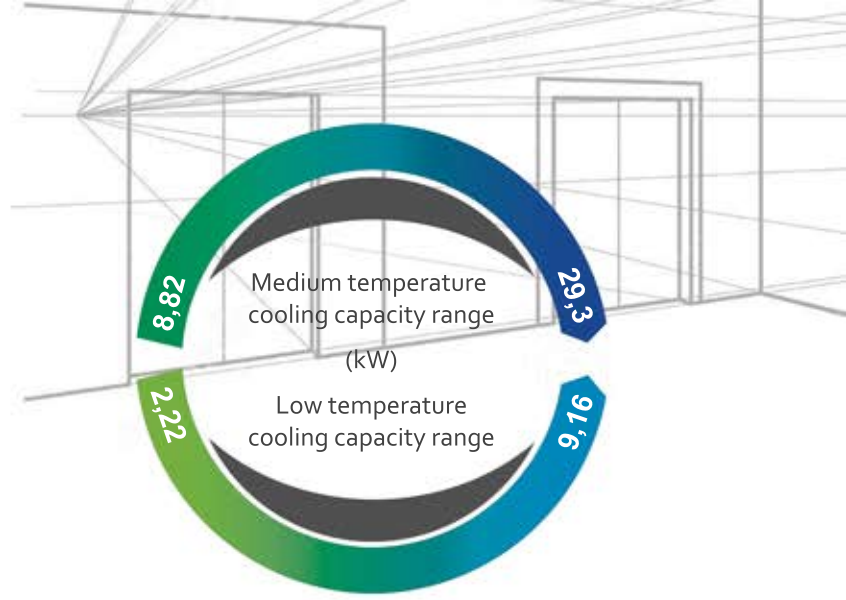


**Refra**<sup>®</sup>  
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**COMPRESSOR-RECEIVER UNITS**

## UNIT DESCRIPTION

Refrigeration units are designed for small and medium size commercial and industrial refrigeration. Our units are equipped with compact semi-hermetic reciprocating compressor - it combines high efficiency, smooth running, a wide range of applications and flexibility in refrigerant selection, solid design and high reliability. Also we provide a variety of options which can improve refrigeration system work.



## BASIC UNIT EQUIPMENT

### Compressor

Piston compressor equipped with shut-off valves on suction and discharge lines, pressure limiters for high and low pressure protection, motor with PTC sensor, oil charge, sigh glass, SE-B1 motor protection device, enclosure class IP65 plastic terminal box and elastomer damper elements for vibration damping.

### Receiver

20/27 l Horizontal liquid receiver with base plate RAL 9005 MAT, shut-off valves on condensing and liquid lines, sigh glass and safety valve.

### Connections

Copper suction and delivery pipes, insulated suction line.

## ADDITIONAL OPTIONS

- P** - Electrical cabinet without electronic controller
- F** - Compressor head cooling
- OLC-K1** - Electronic oil level control
- CR** - Capacity control
- OS** - Oil separator
- VGA** - Vibration absorber on HP line
- K** - Condensation pressure control1
- NRD** - Differential valve1
- DCH** - Check valve on discharge line1
- CHC** - Check valve on condensing line1
- LL** - Liquid level sensor
- FD** - Filter drier on liquid line
- SG** - Sigh glass on liquid line
- BV** - Liquid line ball valve
- SS** - Suction line liquid separator
- VGA** - Vibration absorber on LP line

# TECHNICAL DATA

## Low temperature with Bitzer compressors technical data

Series			CE3S								CE4S							
Model			4FES-3Y	4FES-5Y	4EES-4Y	4EES-6Y	4DES-5Y	4DES-7Y	4CES-6Y	4CES-9Y	4VES-7Y	4VES-10Y	4TES-9Y	4TES-12Y	4PES-12Y	4PES-15Y	4NES-14Y	4NES-20Y
Cooling capacity [1]		kW	3,03	3,03	3,83	3,7	4,57	4,57	5,4	5,4	5,08	5,11	6,48	6,45	6,97	6,88	8,82	8,86
Unit power consumption [1]			2,24	2,26	2,77	2,71	3,3	3,31	3,86	3,86	3,48	3,51	4,44	4,41	4,74	4,72	6,03	6,03
Compressor	Quantity	no	1															
	Refrigerant		R404A/R507															
	Type		Reciprocating															
	Oil type		BSE32															
	Oil charge	dm3	2,0								2,6							
Liquid receiver	Sigh glass	model	SW-36															
	Safety valve	model	3060/45C275															
	Volume	l	20								27							
Connections	Discharge line	mm	16	16	16	16	16	16	22	22	22	22	22	22	22	22	22	22
	Suction line		22	22	28	28	28	28	35	35	35	35	35	35	35	35	35	35
	Condensing line		16	16	16	16	18	18	18	18	22	22	22	22	22	22	22	22
	Liquid line		16	16	16	16	16	16	16	16	16	16	18	18	18	18	18	18
Electrical characteristics	Power supply	V/Ph/Hz	380-420/3~/50															
	Max. operating current	A	9,5	10,8	12,2	13,6	14,5	16,5	17,7	20,2	16,6	19,9	19,9	25,1	22,7	28,2	26,6	33,2
	Starting current	A	44,2	62,2	53,5	62,2	62,2	82,4	82,4	82,4	39/68	59/99	49/81	69/113	59/99	81/132	69/113	97/158
Sound pressure	STD [2]	dB(A)	60,6	60,6	63,3	63,6	65,66	65,66	66,11	66,11	64,3	64,3	66,3	66,3	68,3	68,3	70,3	70,3
Dimensions	Picture	no	1								2							
	Length	mm	620								800							
	Width		478								520							
	Height		756								774							
Unit weight [3]	kg		104	108	106	108	107,5	110,5	112,5	112,5	159	169	164	171	169	172	171	180

[1] Cond. Temp. +40 °C Evap. Temp. -35 °C Suction gas temperature 20 °C, without liquid subcooling

[2] Db(A)10 m

[3] Unit weight - ~Basic delivery weight

## Medium temperature with Bitzer compressors technical data

Series			CE3S								CE4S							
Model			4FES-3Y	4FES-5Y	4EES-4Y	4EES-6Y	4DES-5Y	4DES-7Y	4CES-6Y	4CES-9Y	4VES-7Y	4VES-10Y	4TES-9Y	4TES-12Y	4PES-12Y	4PES-15Y	4NES-14Y	4NES-20Y
Cooling capacity [1]		kW	9,1	9,1	11,6	11,4	13,8	13,8	16,7	16,7	17,2	17,2	20,99	20,9	23,8	23,7	28,6	28,6
Unit power consumption [1]			4,17	4,09	5,34	5,14	6,3	6,16	7,51	7,51	7,59	7,32	9,28	9,02	10,27	10,17	12,48	12,2
Compressor	Quantity	no	1															
	Refrigerant		R404A/R507															
	Type		Reciprocating															
	Oil type		BSE32															
	Oil charge	dm3	2,0								2,6							
Liquid receiver	Sigh glass		Yes															
	Safety valve		Instaled PS 27,5 bar															
	Volume	l	20								27							
Connections	Discharge line	mm	16	16	16	16	16	16	22	22	22	22	22	22	22	22	22	22
	Suction line		22	22	28	28	28	28	35	35	35	35	35	35	35	35	35	35
	Condensing line		16	16	16	16	18	18	18	18	22	22	22	22	22	22	22	22
	Liquid line		16	16	16	16	16	16	16	16	16	16	18	18	18	18	18	18
Electrical characteristics	Power supply	V/Ph/Hz	380-420/3~/50															
	Max. operating current	A	9,5	10,8	12,2	13,6	14,5	16,5	17,7	20,2	16,6	19,9	19,9	25,1	22,7	28,2	26,6	33,2
	Starting current	A	44,2	62,2	53,5	62,2	62,2	82,4	82,4	82,4	39/68	59/99	49/81	69/113	59/99	81/132	69/113	97/158
Sound pressure	STD [2]	dB(A)	60,6	60,6	63,3	63,6	65,66	65,66	66,11	66,11	64,3	64,3	66,3	66,3	68,3	68,3	70,3	70,3
Dimensions	Picture	no	1								2							
	Length	mm	620								800							
	Width		478								520							
	Height		756								774							
Unit weight [3]	kg		104	108	106	108	107,5	110,5	112,5	112,5	159	169	164	171	169	172	171	180

[1] Cond. Temp. +45 °C Evap. Temp. -10 °C Suction gas temperature 20 °C, without liquid subcooling

[2] Db(A)10 m

[3] Unit weight - ~Basic delivery weight

# TECHNICAL DATA

## Low temperature with Gea compressors technical data

Series			HGX34e				HGX44e			
Model			215-4	255-4	315-4	380-4	475-4	565-4	665-4	
Cooling capacity [1]		kW	2,22	3,01	3,88	4,96	6,67	8,23	9,16	
Unit power consumption [1]			1,89	2,38	2,98	3,72	4,64	5,5	6,49	
Compressor	Quantity	no	1							
	Refrigerant		R404A/R507							
	Type		Reciprocating							
	Oil type		FUCHS Reniso Triton SE 55							
	Oil charge	dm3	2,0			2,6				
Liquid receiver	Sigh glass	model	SW-36							
	Safety valve	model	3060/45C275							
	Volume	l	20			27				
Connections	Discharge line	mm	22	22	22	22	28	28	28	
	Suction line		28	28	28	28	35	35	42	
	Condensing line		16	16	18	18	22	22	22	
	Liquid line		16	16	16	16	18	18	18	
Electrical characteristics	Power supply	V/Ph/Hz	380-420/3~/50							
	Max. operating current	A	8,1	9,8	12,2	15,1	19	22	26	
	Starting current		51	50	64	64	83	83	115	
Sound pressure	STD [2]	dB(A)	60,6	63,3	65,66	66,11	64,3	66,3	68,3	
Dimensions	Picture	no	1			2				
	Length	mm	620			800				
	Width		478			520				
	Height		756			774				
Unit weight [3]		kg	114	114	116	115	194	194	201	

[1] Cond. Temp. +40 °C Evap. Temp. -35 °C Suction gas temperature 20 °C, without liquid subcooling

[2] Db(A)10 m

[3] Unit weight - ~Basic delivery weight

## Medium temperature with Gea compressors technical data

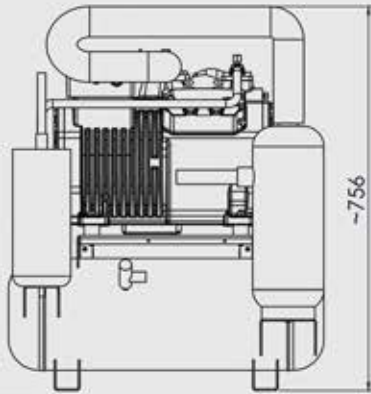
Series			HGX34e						HGX44e							
Model			215-4	215-4S	255-4	255-4S	315-4	315-4S	380-4	380-4S	475-4	475-4S	565-4	565-4S	665-4	665-4S
Cooling capacity [1]		kW	8,82	8,91	10,6	10,7	13,3	13,3	16	16,5	21	21,2	25,1	25,6	29,1	29,3
Unit power consumption [1]			4,11	4,08	4,97	4,89	6,11	6,02	7,6	7,47	9,01	9,02	10,7	10,7	12,6	12,5
Compressor	Quantity	no	1													
	Refrigerant		R404A/R507													
	Type		Reciprocating													
	Oil type		FUCHS Reniso Triton SE 55													
	Oil charge	dm3	1,3						2,3							
Liquid receiver	Sigh glass		Yes													
	Safety valve		Instaled PS 27,5 bar													
	Volume	l	20						27							
Connections	Discharge line	mm	22	22	22	22	22	22	22	28	28	28	28	28	28	
	Suction line		28	28	28	28	28	28	28	28	35	35	35	42	42	
	Condensing line		16	16	16	16	18	18	18	18	22	22	22	22	22	
	Liquid line		16	16	16	16	16	16	16	16	18	18	18	18	18	
Electrical characteristics	Power supply	V/Ph/Hz	380-420/3~/50													
	Max. operating current	A	8,1	10,5	9,8	12,2	12,2	14,7	15,1	18	19	23	22	26	26	30
	Starting current		51	76	50	76	64	76	64	76	83	115	83	133	115	133
Sound pressure	STD [2]	dB(A)	60,6	60,6	63,3	63,6	65,66	65,66	66,11	66,11	64,3	64,3	66,3	66,3	68,3	68,3
Dimensions	Picture	no	1						2							
	Length	mm	620						800							
	Width		478						520							
	Height		756						774							
Unit weight [3]		kg	114	119	114	118	116	119	115	118	194	198	194	200	201	198

[1] Cond. Temp. +45 °C Evap. Temp. -10 °C Suction gas temperature 20 °C, without liquid subcooling

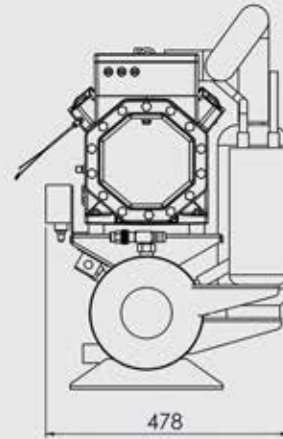
[2] Db(A)10 m

[3] Unit weight - ~Basic delivery weight

# DIMENSIONS

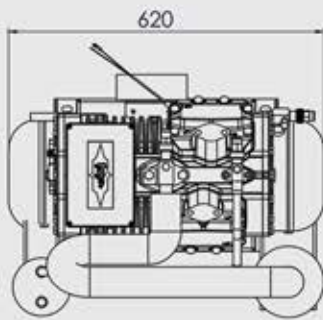


Front view



Side view

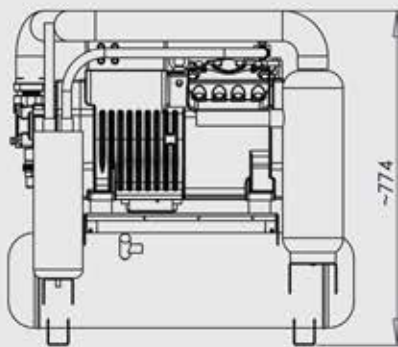
1  
Picture



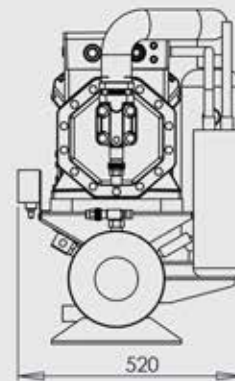
Top view



Orthographic view

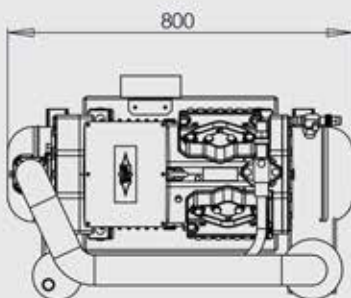


Front view



Side view

2  
Picture



Top view



Orthographic view

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