

Compressor Technical Data

Model: FFU70HAK

Code: 513200498

Description

Refrigerant:	R-134a	Displacement (cm ³):	6,36
Voltage:	220-240 V 50-60 Hz 1 ~	Lubricant Type:	ISO10
Frequency (Hz):	50	Lubricant Charge (ml):	280
Application:	L/MBP	Motor Type:	RSIR-CSIR
HP:	1/4	Starting Torque:	LST
Efficiency:	4,88	Type of Test:	ASHRAE32
Capacity:	630,00		

Approval

IRAM

TUV

Data

External Features

	Shape	Material	Diameter (mm)
Suction Connector	Slanted	Copper	8,20
Discharge Connector	Slanted	Copper	6,50
Process Connector	Slanted	Copper	6,50

Oil Cooler:	
Base Plate:	Universal EG/F/AMEM version 2
Tray Holder:	No
Weight (kg):	10,74

Application

Maximum ambient temperature (°C):	43
Expansion device:	Capillary
Cooling:	Fan Cooling
Air flow rate:	

Mechanical Data

Bill of materials:	513200498
Starting torque:	Low Starting Torque
Bore (mm):	22,50
Stroke (mm):	8,00
Weight (kg):	10,74

Electrical Data

Motor type:	RSIR-CSIR
Winding Resistance (25°C) - Start:	10,35
Winding Resistance (25°C) - Run:	43,10

Check Point - Condensing Temperature 54,4 °C

Evaporating Temperature	Cooling Capacity			Power Consumption +/- 5%	Current Consumption +/-5%	Efficiency +/-7%		
	(°C)	(kcal/h)	(W)			(Btu/h)	(W)	(A)
-23,3	159	185	630	129	1,07	1,23	1,43	4,88

Condensing Temperature 45 °C

Evaporating Temperature	Cooling Capacity			Power Consumption +/- 5%	Current Consumption +/-5%	Gas Flow Rate +/- 5%	Efficiency +/-7%		
	(°C)	(kcal/h)	(W)				(Btu/h)	(W)	(A)
-35	86	100	343	92	0,98	1,94	0,94	1,10	3,74
-30	118	138	470	108	1,01	2,66	1,10	1,28	4,35
-25	158	184	629	123	1,04	3,57	1,28	1,49	5,10
-20	207	241	823	138	1,07	4,68	1,51	1,75	5,98
-15	267	310	1.059	151	1,11	6,05	1,76	2,05	7,00
-10	338	393	1.342	165	1,16	7,69	2,05	2,39	8,14
-5	423	491	1.677	178	1,20	9,65	2,37	2,76	9,41

Condensing Temperature 55 °C

Evaporating Temperature	Cooling Capacity			Power Consumption +/- 5%	Current Consumption +/-5%	Gas Flow Rate +/- 5%	Efficiency +/-7%		
	(°C)	(kcal/h)	(W)				(Btu/h)	(W)	(A)
-35	68	79	270	82	0,98	1,53	0,83	0,96	3,29
-30	101	118	403	103	1,01	2,28	0,99	1,15	3,92
-25	142	165	564	122	1,05	3,20	1,16	1,35	4,60
-20	191	223	759	142	1,10	4,32	1,35	1,57	5,35
-15	251	291	994	161	1,15	5,67	1,55	1,81	6,16
-10	321	373	1.274	181	1,21	7,30	1,77	2,06	7,04
-5	404	470	1.604	201	1,27	9,22	2,01	2,34	7,97

Condensing Temperature 65 °C

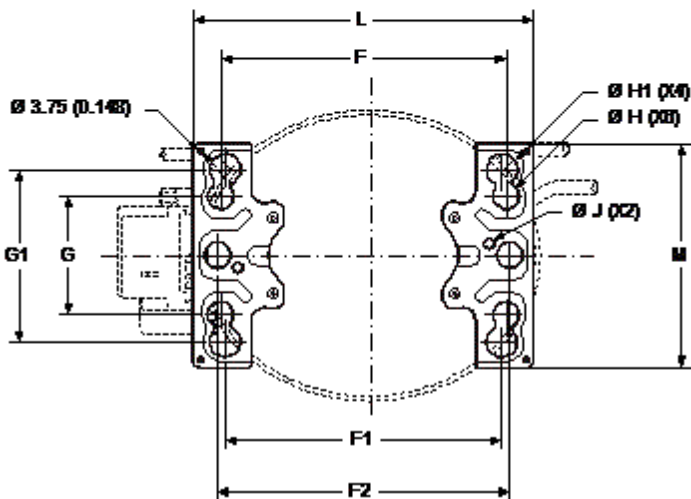
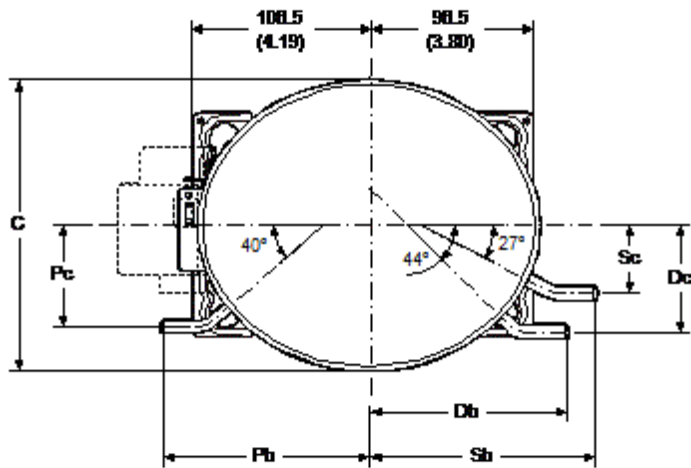
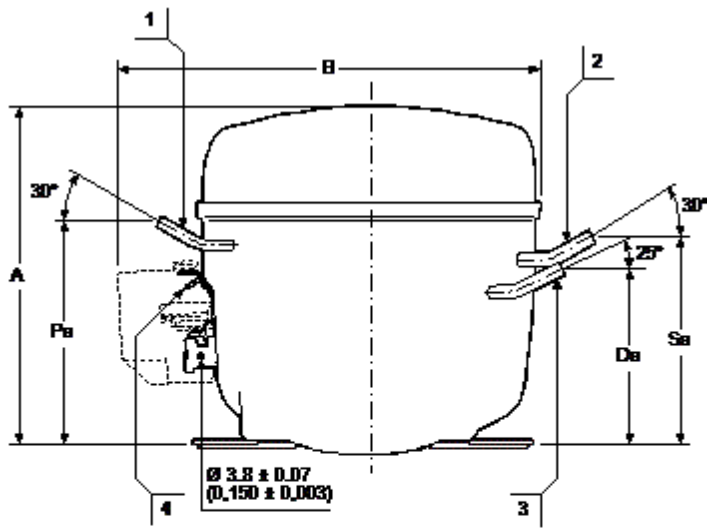
Evaporating Temperature	Cooling Capacity			Power Consumption +/- 5%	Current Consumption +/-5%	Gas Flow Rate +/- 5%	Efficiency +/-7%		
	(°C)	(kcal/h)	(W)				(Btu/h)	(W)	(A)
-35	53	62	210	83	0,97	1,19	0,64	0,74	2,53
-30	86	100	342	105	1,01	1,94	0,83	0,96	3,28
-25	126	147	502	126	1,05	2,85	1,00	1,17	3,99
-20	175	203	693	147	1,11	3,94	1,19	1,38	4,71
-15	232	270	922	169	1,18	5,26	1,37	1,60	5,45

-10	301	350	1.194	192	1,25	6,84	1,57	1,82	6,22
-5	381	444	1.514	215	1,32	8,71	1,77	2,06	7,03

Dimensions

Compressor Housing

	mm	inch		mm	inch		mm	inch		mm	inch
A	201,00	7,91	Rb	---	---	Sa	124,00	4,88	Rc	---	---
B	251,00	9,88	F	178,00	7,01	Pa	132,00	5,20	G1	1.016,00	40,00
C	173,00	6,81	G	70,00	2,76	Da	104,00	4,09	F2	170,00	6,69
E	---	---	F1	165,00	6,50	Ra	---	---	N	---	---
Sb	132,00	5,20	T	---	---	Sc	40,00	1,57	L	203,00	7,99
Pb	125,00	4,92	M	1.315,00	51,77	Pc	60,00	2,36	H	16,00	0,63
Db	115,00	4,53	J	7,00	0,28	Dc	63,00	2,48	H1	19,00	0,75

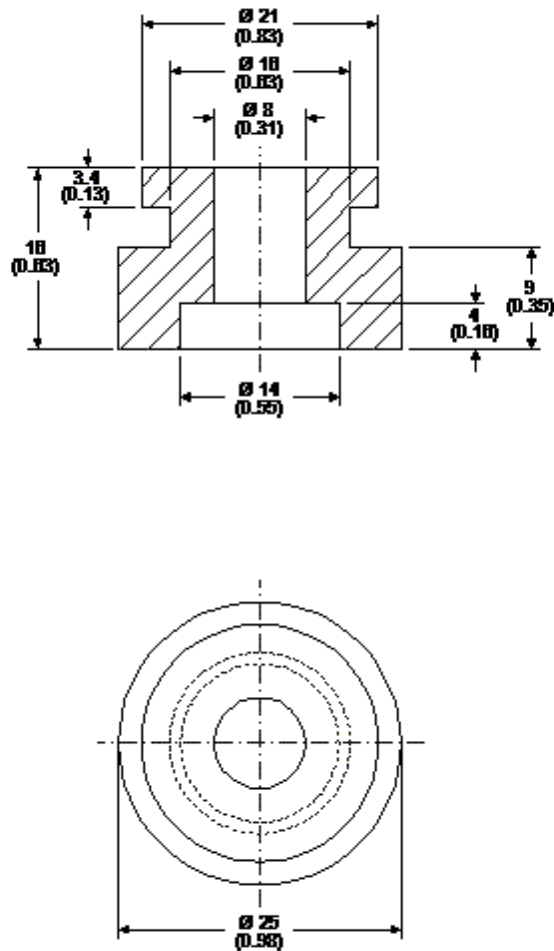


1 - Process Connector 2 - Suction Connector 3 - Discharge Connector 4 - Earthing Terminal 6 - Tray Hold

Rubber Grommet

Engineering Code	13146411
Dimensions	mm (Inch)

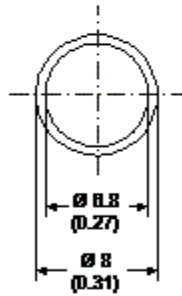
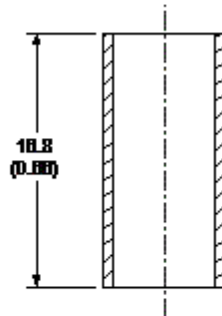
The grommets are made of special rubber and used in the nut and bolt type or in the snap on type assembly. The rummer grommet, the dimensions of which are shown in the figure below, was developed for installation in compressors with 16 and 19 mm diameters holes in the base plate.



Metal Bushing

Engineering Code	13126755
Dimensions	mm (Inch)

As an optional assembly accessory, Embraco can supply metal bushings, the purpose of which is to limit tightening of the screws upon attachment of the compressor assembly to the refrigeration system. This bushing is made of steel in the dimensions shown in the figure below, and comes with an anti-rust coating of chromated zinc.

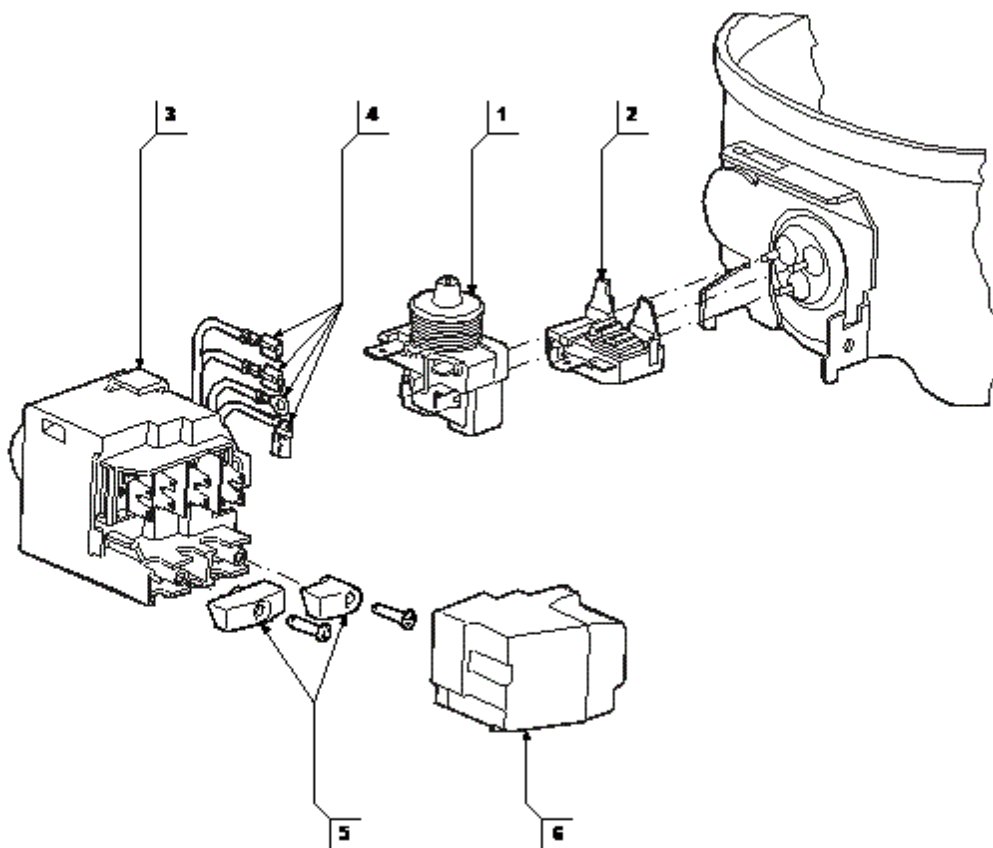


Accessories

Starting Device

Assembly Engineering Code	519109554
Starting Device - Relay	Starting Device - Relay
Overload Protector	13634491
Electrical Components Cover	

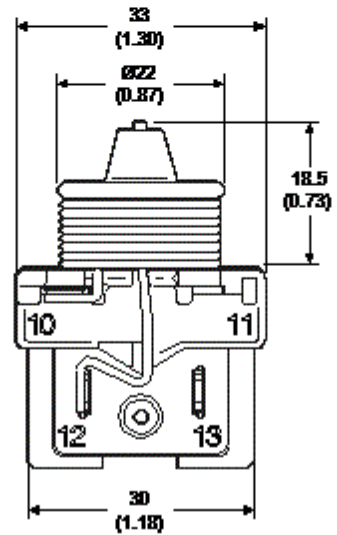
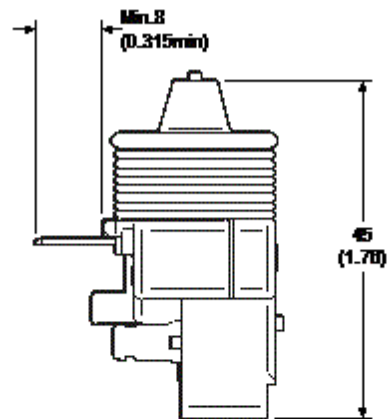
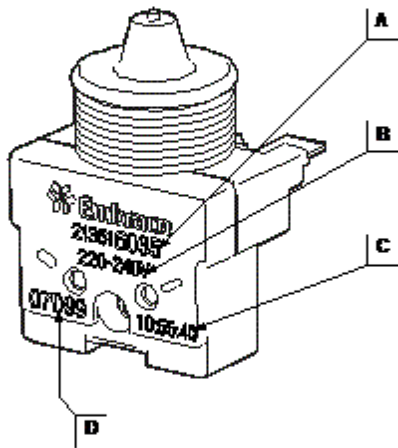
Note: 1 - Starting device - Relay 2 - Overload protector 3 - Terminal board 4 - Internal wiring 5 - Cord anchorages 6 - Terminals cover



Starting Device - Relay

Engineering Code	213516353
Pick Up Current (A)	4,3
Drop-Out Current (A)	3,3
Terminal Size "E"	6.3 x 0.8 (0.250 x 0.03)
Dimensions	mm (Inch)

Notes: A - Subassembly cod



Overload Protector

Engineering Code	13634491
Vendor Code	4TM283NFBYY-53
Opening Temperature	120°C (248°F)
Closing Temperature	61°C (141,8°F)
Tripping Current at 25°C (77°F)	9,5 A
Reaction Time	5.0s - 15.0s
Terminal Size "A"	6.3 x 0.8 (0.250 x 0.03)
Dimensions	mm (Inch)

The overload protectors are identified by the suppliers. Each thermal protector has its own distinct characteristics of opening temperature, closing temperature and trip current. 1 - Vendor number 2 - Overload protector model

