

## Compressor Technical Data

**Model:** FFU80AK  
**Code:** 513200890

### Description

Refrigerant:	Blend	Displacement (cm <sup>3</sup> ):	6,76
Voltage:	220-240 V 50-60 Hz 1 ~	Lubricant Type:	ISO32
Frequency (Hz):	50	Lubricant Charge (ml):	280
Application:	L/MBP	Motor Type:	RSIR-CSIR
HP:	1/4+	Starting Torque:	LST
Efficiency:	4,74	Type of Test:	ASHRAE32
Capacity:	750,00		

### Approval

**TUV**

### Data

#### External Features

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

Oil Cooler:	
Base Plate:	Universal EG/F/AMEM version 2
Tray Holder:	No
Weight (kg):	10,80

#### Application

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

#### Mechanical Data

Bill of materials:	513200890
Starting torque:	Low Starting Torque
Bore (mm):	22,50
Stroke (mm):	8,50
Weight (kg):	10,80

#### Performance

Motor type:	RSIR-CSIR
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Winding Resistance (25°C) - Start:	8,52
Winding Resistance (25°C) - Run:	30,10



**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	189	220	751	158	1,36	1,20	1,39	4,75

**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	118	137	468	128	1,30	3,41	0,92	1,07	3,66
-30	147	172	585	137	1,31	4,27	1,08	1,25	4,27
-25	185	215	733	148	1,33	5,36	1,25	1,45	4,94
-20	232	269	919	161	1,36	6,74	1,44	1,67	5,70
-15	290	337	1.150	175	1,39	8,46	1,66	1,93	6,57
-10	362	421	1.435	190	1,43	10,58	1,91	2,22	7,56
-5	448	522	1.780	204	1,48	13,17	2,19	2,55	8,70

**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	105	123	418	123	1,28	3,05	0,86	1,00	3,40
-30	136	158	540	137	1,31	3,95	0,99	1,16	3,95
-25	174	202	690	153	1,34	5,05	1,14	1,32	4,52
-20	221	256	875	170	1,39	6,41	1,30	1,51	5,14
-15	278	323	1.103	189	1,43	8,11	1,47	1,71	5,84
-10	348	405	1.380	208	1,49	10,18	1,67	1,95	6,64
-5	432	503	1.716	227	1,55	12,70	1,91	2,22	7,56

**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	92	108	367	122	1,27	2,67	0,76	0,88	3,01
-30	124	144	492	139	1,31	3,59	0,89	1,04	3,53
-25	162	188	642	158	1,36	4,69	1,02	1,19	4,05
-20	208	241	824	179	1,41	6,04	1,16	1,35	4,60
-15	264	307	1.046	201	1,47	7,69	1,31	1,53	5,21



-10	331	385	1.315	223	1,54	9,70	1,49	1,73	5,90
-5	413	480	1.640	245	1,61	12,14	1,69	1,96	6,70



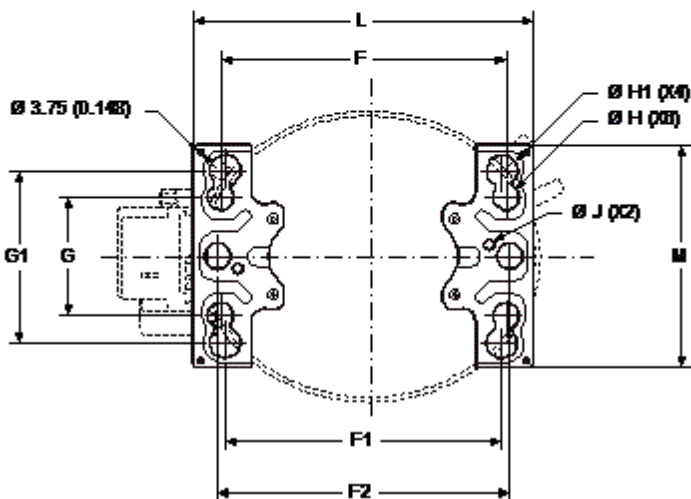
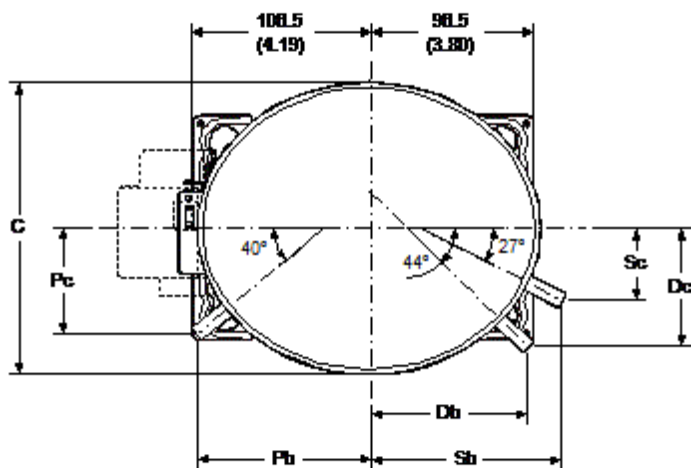
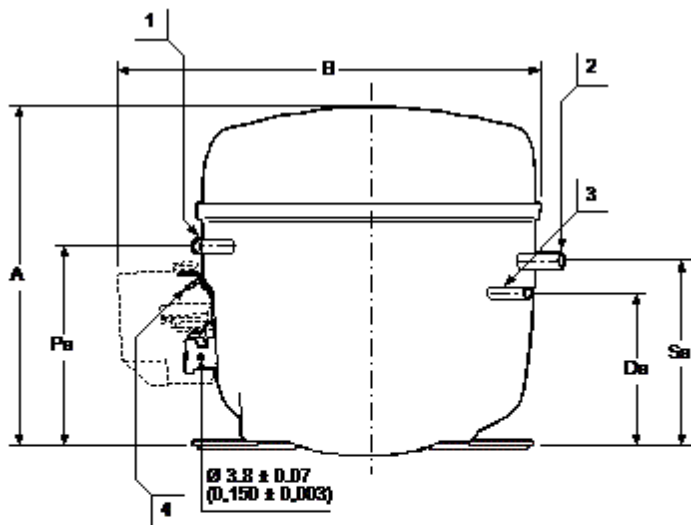


## Dimensions

### Compressor Housing

	mm	inch		mm	inch		mm	inch		mm	inch
A	201,00	7,91	Rb	---	---	Sa	1.093,00	43,03	Rc	---	---
B	251,00	9,88	F	170,00	6,69	Pa	118,00	4,65	G1	1.016,00	40,00
C	173,00	6,81	G	70,00	2,76	Da	90,00	3,54	F2	174,00	6,85
E	---	---	F1	165,00	6,50	Ra	---	---	N	---	---
Sb	113,00	4,45	T	---	---	Sc	427,00	16,81	L	203,00	7,99
Pb	104,00	4,09	M	1.315,00	51,77	Pc	63,00	2,48	H	16,00	0,63
Db	925,00	36,42	J	7,00	0,28	Dc	70,00	2,76	H1	19,00	0,75





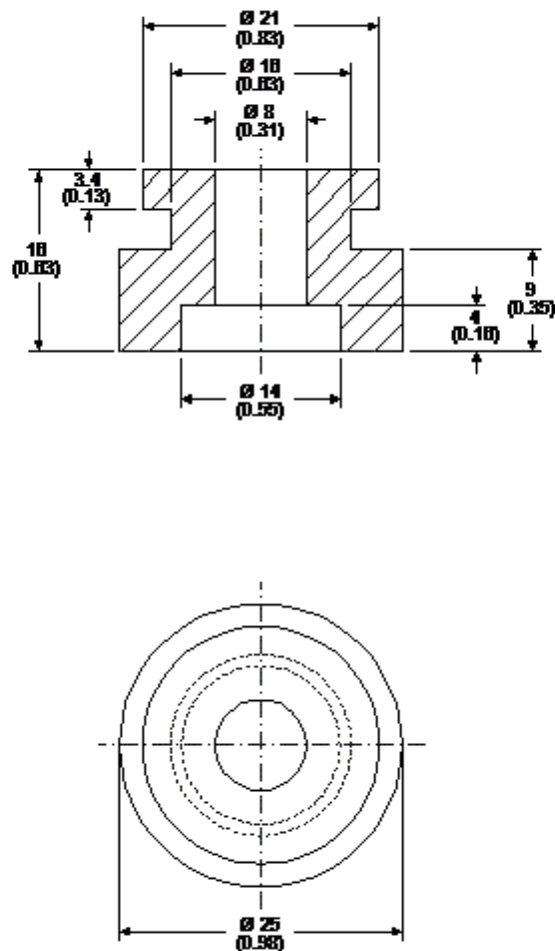
1 - Process Connector 2 - Suction Connector 3 - Discharge Connector 4 - Earthing Terminal 6 - Tray Hold



**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.

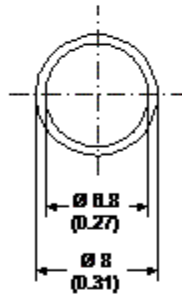
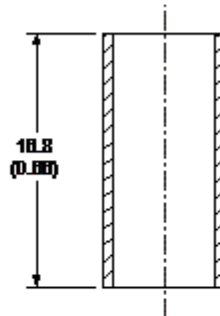




**Metal Bushing**

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.





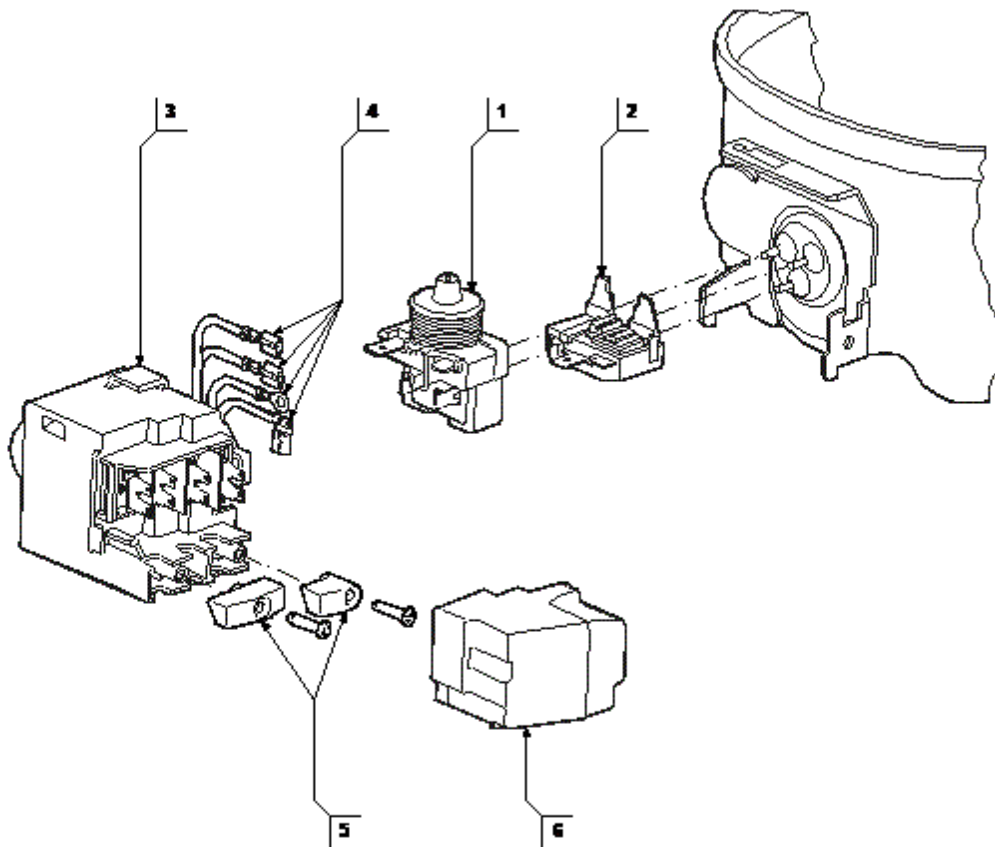


## Accessories

### Starting Device

Assembly Engineering Code	519109559
Starting Device - Relay	Starting Device - Relay
Overload Protector	13634513
Electrical Components Cover	

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

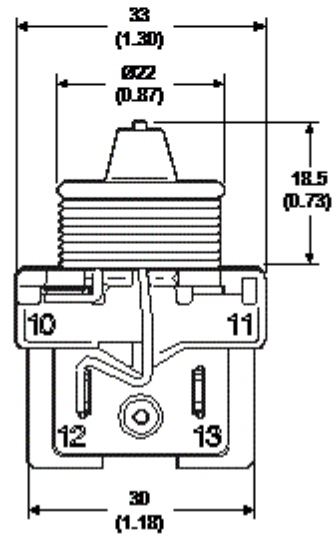
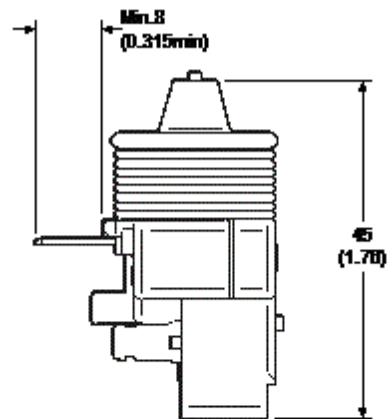
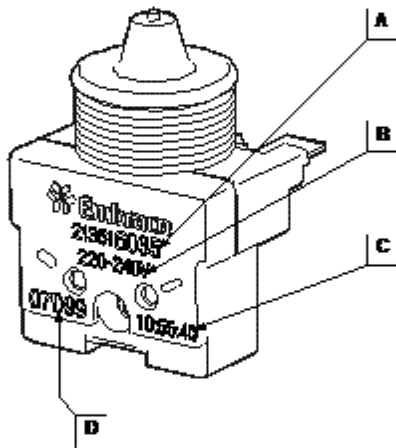




**Starting Device - Relay**

Engineering Code	213516086
Pick Up Current (A)	5,5
Drop-Out Current (A)	4,2
Terminal Size "E"	6.3 x 0.8 (0.250 x 0.03)
Dimensions	mm (Inch)

Notes: A - Subassembly cod





**Overload Protector**

Engineering Code	13634513
Vendor Code	4TM743KDBYY-53
Opening Temperature	105°C (221°F)
Closing Temperature	52°C (125,6°F)
Triping Current at 25°C (77°F)	9 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

