

Nominal Motor H.P.	‡B.T.U. Capacity		Embraco Part #	Replacement Guide			Oil Coolers
	L/M B.P.	H. B.P.		Danfoss	Matsushita	Tecumseh	

E M	1/16	203		30-EM20	TL2A		AZ	N
	1/12	310		30-EM30	TL3A		AZ1335D	N
	1/8	426		30-EM40	TFS4A		AE1336A AE1343A	N
	1/6	565		30-EM55	TFS5A		AZ	N

P W	1/8	377		PW4.5K9	PW4.5A PW4.5K9	FN43F67R	AE1336A	N
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F F	1/5	655	2110	30-FF6BKW		FN66F11R MA16-634A‡	AE1336A AE1360A AE1343A, AE3414A AE3417A	Y
	1/5+	755	2350	30-FF7.5BKW	FFS7A FR7.5B	FN73F13R MA15-734‡	AE3425D	Y
	1/4	854	2651	30-FF8.5BKW	FFS8A FF8.5A	FN91F17R MA14-889A‡	AE1380A	Y
	1/4+	913	3244	30-FF10BKW	FFS9A FF10A		AE3430A AE1410A	Y
	1/4+	862	3200	30-FF10BX*			AE2410A AE4430A	N
	1/4+	900	3048	30-FF10SV*	c/w Service Valve		AE2410A AE4430A	N
	1/3	1150	3650	30-FF11.5BKW		FN110F22S FN110Q22S MA13-1050‡	AE1410A AE1411A	Y
	1/3+	1300	4000	30-FFI12BKW	SC12A SC15A		AE1413A AE3440A	Y
	1/3+	1350	4150	30-FFI12BX*	SC128		AE2413A, AE2415A AE4440A, AE4448A	N
	1/3+	1350	4150	30-FFI12SV*	c/w Service Valve		AE2413A, AE2415A AE4440A, AE4448A	N

‡ Camco/Matsushita

* These are high starting torque compressors that come complete with capacitor and are direct suction.
The 30-FFI12BKW is direct suction also. YOU MAY NOT REVERSE PROCESS AND SUCTION ON THESE COMPRESSORS.

‡ RATING CONDITIONS

BACK PRESSURE		
LOW		HIGH
130°F	Condensing Temperature	130°F
-10°F	Evaporator Temperature	45°F
90°F	Return Gas Temperature	90°F
90°F	Ambient Temperature	90°F
90°F	Liquid Temperature Entering Expansion Valve	90°F

ELECTRICAL ASSEMBLIES

	OLD STYLE RELAY & OVERLOAD (one piece)	HARD START KIT (OLD STYLE)	NEW STYLE RELAY & OVERLOAD (two piece)	START CAPACITOR
30-EM20	30-EM20-402	30-HS7	30-1350422	35-145A125
30-EM30	30-EM30-400	30-HS7	30-1350414	35-145A125
30-EM40	30-EM40-404	30-HS7	30-1350410	35-145A125
30-EM55	30-EM55-406	30-HS6	30-1350424	35-216A125
30-PW4.5K9	30-PWK9-154	30-HS3	30-1350339	35-324D125
30-FF6BKW	30-FF6-178	30-HS5	30-1350038	35-233A125
30-FF7.5BKW	30-FF7.5-179	30-HS4	30-1350035	35-270B125
30-FF8.5BKW	30-FF8.5-180	30-HS4	30-1350365	35-270B125
30-FF10BKW	30-FF10-181	30-HS1	30-1350132	35-460D125
30-FF10BX		30-HS16*	30-1350338	35-270B125
30-FF10SV		30-HS16*	30-1350338	35-270B125
30-FF11.5BKW	30-FF11-182	30-HS1	30-1350367	35-460D125
30-FFI12BKW	30-FF11-182	30-HS1	30-1350130	35-460D125
30-FFI12BX	30-FFI12-006	30-HS2*	30-1350131	35-378D125
30-FFI12SV	30-FFI12-006	30-HS2*	30-1350131	35-378D125

*Mandatory - Included with compressor.

Hard Start Kit includes capacitor, cap bracket, cap clip, cap end caps and leads. Start capacitors are not normally required.

However, if one is desired, it must be connected between terminals 11 and 13. The copper wire between the two terminals must be removed.

Nominal Motor H.P.	‡B.T.U. Capacity		Aspera Part #	Volts	Replacement Guide
	L/M. B.P.	H. B.P.			
1/2	2380 (LBP)		59-J2152A	115	c/w Service Valve AJ2425A
1/2		5360	59-T6213A	115	AJ4461A
1/2		5360	59-T6213SV	115	c/w Service Valve AJ4461A
1/2	3820 (MBP) +20°F	6670	59-T6215A	115	AJ4461A, AJ6435A, AJ7441A, AJ7465A, AK9434A, AK9441A
1/2	3820 (MBP) +20°F	6670	59-T6215SV	115	c/w Service Valve AJ4461A, AJ6435A, AJ7441A, AJ7465A, AK9434A, AK9441A
3/4		9100	59-J6220A115*	115	c/w Service Valve AJ4492A
3/4		9100	59-J6220A230*	208/230	c/w Service Valve AJ4492A, AH7480A
1		12200	59-J6226A*	208/230	c/w Service Valve AJ4512A, AH7511B

* Also approved for use with R502 in LBP Applications. Specifications available on request.

Note: Above compressors are all high starting torque and come complete with capacitor.

‡ RATING CONDITIONS

BACK PRESSURE		
LOW		HIGH
130°F	Condensing Temperature	130°F
-10°F	Evaporator Temperature	45°F
90°F	Return Gas Temperature	95°F
90°F	Ambient Temperature	95°F
90°F	Liquid Temperature Entering Expansion Valve	115°F

ELECTRICAL ASSEMBLIES

	RELAY	OVERLOAD	START CAPACITOR
59-J2152A	59-3ARR3B2L3	59-CSP00GJ	35-243G250
59-T6213A	59-9660180	59-MST16AFN	35-189D165
59-T6213SV	59-9660180	59-MST16AFN	35-189D165
59-T6215A	59-9660189	59-MRT18RW	35-189D165
59-T6215SV	59-9660189	59-MRT18RW	35-189D165
59-J6220A115	59-3ARR3B2L3	59-CRA993	35-340D125
59-J6220A230	59-3CR702289	59-MRA6981	35-88F330
59-J6226A	59-3AR3B10AA3	59-MST20AGN	35-72E330
59-J6226A	Run Capacitor - 36-17.5K370(R) - Inc.		

Nominal Motor H.P.	‡B.T.U. Capacity		Embraco Part #	Replacement Guide
	L/M B.P.	H. B.P.		

E M	1/10	251		30-EMI30HER	AZ
	1/8	432		30-EMI45HER	AZ
	1/6	500		30-EMI50HER	AZ
	1/5	585		30-EMI60HER	AZ

P W	1/10		1335	30-PW3.5HK9	AE3414Y
	1/8		1700	30-PW4.5HK11	AE3417Y

F F	1/5	650	2760	30-FF7.5HBK	AE3425Y
	1/4	740	3135	30-FF8.5HBK	AE3430Y
	1/4+	840	3530	30-FF10HBK	AE4430Y
	1/4+	840	3530	30-FF10HBX*	AE4430Y
	1/3	1170	4300	30-FFI12HBX*	AE4440Y

**Note: These are high starting torque compressors that come complete with capacitor and are direct suction. You may NOT reverse process and suction on these compressors.*

‡ RATING CONDITIONS

‡ RATING CONDITIONS		
BACK PRESSURE		
LOW		HIGH
130°F	Condensing Temperature	130°F
-10°F	Evaporator Temperature	45°F
90°F	Return Gas Temperature	90°F
90°F	Ambient Temperature	90°F
90°F	Liquid Temperature Entering Expansion Valve	90°F

Nominal Motor H.P.	‡B.T.U. Capacity	Aspera Part #	Volts	Replacement Guide
	H.B.P.			
1/3+	4600	59-E6210Z	115	AE4448Y
1/2	5900	59-T6213Z	115	AK4460Y
1/2+	7200	59-T6215Z	115	AK4476Y
3/4	9700	59-J6220Z	208/230	c/w Service Valve AJ4492Y
1	13200	59-J6226Z	208/230	c/w Service Valve AJ4512Y

Note: Above compressors are all high starting torque and come complete with capacitor.

‡ RATING CONDITIONS

130°F	Condensing Temperature
45°F	Evaporator Temperature
95°F	Return Gas Temperature
95°F	Ambient Temperature
115°F	Liquid Temperature Entering Expansion Valve

ELECTRICAL ASSEMBLIES

	RELAY	OVERLOAD	START CAPACITOR
59-E6210Z	59-9660183	59-MST20AGN	35-189D165
59-T6213Z	59-9660180	59-MST16AFN	35-189D165
59-T6215Z	59-9660189	59-MST18RW	35-189D165
59-J6220Z	59-3CR702289	59-MRT16AGN	35-88F330
59-J6226Z	59-3ARR10AA3	59-MST16AGN	35-72E330
59-J6226Z	Run Capacitor - 36-17.5K440(R) - Inc.		

Refrigeration

Nominal Motor H.P.	‡B.T.U. Capacity	Aspera Part #	Volts	Replacement Guide
	H.B.P.			
1/5+	2640	59-B6152E	115	AE9415E
1/4+	4150	59-E6195E	115	AE9423E
1/3+	4585	59-E6210E	115	AE9422E, AK9428E
1/2	6237	59-E9213E	115	MBP/HBP Applications (3509 BTU @ 20°F) AK9442E

Note: Above compressors are all high starting torque and come complete with capacitor.

ELECTRICAL ASSEMBLIES

	RELAY	OVERLOAD	START CAPACITOR
59-B6152E	59-9660172	59-MRP26LK	35-145B165
59-E6195E	59-9660182	59-MRT22AIN	35-145A125
59-E6210E	59-9660182	59-MRT22AIN	35-145B165
59-E9213E*	59-3ARR3B25U	59-MTT00JH	35-72D250

*59-E9213E may also run PSC for A/C Applications.
Use 36-20K440(R) Run Capacitor

Air Conditioning

Nominal Motor H.P.	‡B.T.U. Capacity	Aspera Part #	Volts	Replacement Guide
	H.B.P.			
1/2	5000	59-E7210F	115	AE5450E
1/2	6400	59-E7213E	115	AE5460E, AK5470E
3/4	9200	59-T7220G	115	AJ5483E, AJ5494E, AK5483E, RK5490E
1	11000	59-T7223G115	115	AK5510E, AK5511E, AK5512E, RK5512E
1	11000	59-T7223G230	208/230	
1 1/4	14800	59-J7231E	208/230	AJ5514E, AJ5515F, AJ5517E, RK5515E
1 1/2	18300	59-J7238E	208/230	AJ5518E, RK5518E
1 3/4	19400	59-J7240E	208/230	AJ5519G, AW5519E

ELECTRICAL ASSEMBLIES

	OVERLOAD	RUN CAPACITOR
59-E7210F	59-MST24AIN69	36-15K440(R)
59-E7213E	59-MRT00AIRH	36-15K440(R)
59-T7220G	59-MRTAGN3090	36-20K440(R)
59-T7223G115	59-CST00AGSF	36-25K440(R)
59-T7223G230	59-3ARR3B6V3	36-20K440(R)
59-J7231E	59-CR99243031	36-20K440(R)
59-J7238E	59-CR17183031	36-25K440(R)
59-J7240E	59-CR99313031	36-25K370(R)

‡ RATING CONDITIONS

130°F	Condensing Temperature
45°F	Evaporator Temperature
95°F	Return Gas Temperature
95°F	Ambient Temperature
115°F	Liquid Temperature Entering Expansion Valve

Nominal Motor H.P.	‡B.T.U. Capacity	Aspera Part #	Volts
	L.B.P.		
1/4+	1354	59-E2125GK	115
1/3+	2048	59-E2134GK	115
1/2	2341	59-T2155GK	115
3/4	3135	59-T2168GK	115
3/4+	3659	59-T2178GK1	115
3/4+	3659	59-T2178GK2	208/230
1	4548	59-J2192GK*	208/230
1 1/4	5960	59-J2212GK*	208/230

* Complete with Service Valve

Note: Above compressors are all high starting torque and come complete with capacitor.

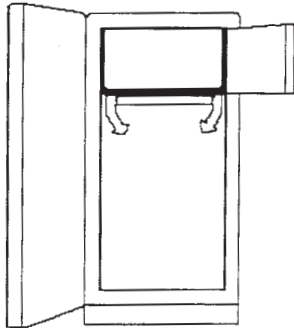
ELECTRICAL ASSEMBLIES

	RELAY	OVERLOAD	START CAPACITOR	RUN CAPACITOR
59-E2125GK	59-9660182	59-MRT22AIN	35-145B165	--
59-E2134GK	59-9660183	59-MRT20JZ	35-189D165	--
59-T2155GK	59-9660191	59-MST16RN	35-145B165	--
59-T2168GK	59-3ARR188S	59-CST3031	35-145B165	--
59-T2178GK	59-3ARR10A3	Internal	35-88F330	36-15K440(R)
59-J2192GK	59-3ARR3AB3	Internal	35-88F330	36-20K440(R)
59-J2212GK	59-ARR3AV3	Internal	35-88F330	36-20K440(R)

‡ RATING CONDITIONS

130°F	Condensing Temperature
-10°F	Evaporator Temperature
90°F	Return Gas Temperature
90°F	Ambient Temperature
90°F	Liquid Temperature Entering Expansion Valve

Single Door Refrigerators Foam Insulation



Conventional

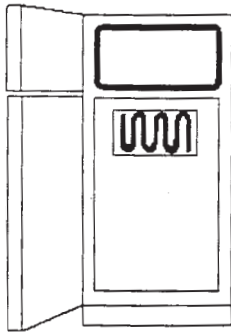
(Gravity flow from freezer)

- Conventional - Single Door (sometimes 2 doors)
- Frozen food space is closed by interior door
- Refrigerator space is cooled by gravity air flow from the evaporator coil.

UP TO 13 CUBIC FEET
13 TO 15 CUBIC FEET
OVER 15 CUBIC FEET

EMBRACO
30-PW4.5K9(11)
30-PW5.5K11(14)
30-FF6BK or FF7.5BKW

Two Door Refrigerators Foam Insulation



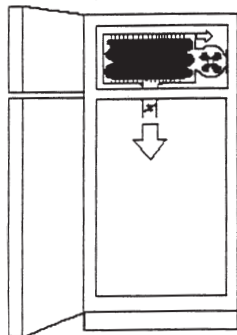
Two Temperature

- Two doors with separate evaporator coils (plates) in the freezer and in the refrigerator compartments
- Freezer space separated by solid partition from refrigerator space
- Semi-automatic (manual start, automatic stop) defrost or fully automatic

UP TO 13 CUBIC FEET
13 TO 15 CUBIC FEET
OVER 15 CUBIC FEET

EMBRACO
30-PW4.5K9(11)
30-PW5.5K11(14)
30-FF6BK or FF7.5BKW

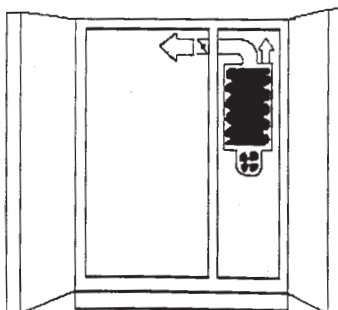
Foam Insulation - Automatic Defrost



No Frost Top Mount (coil and blower are hidden)

UP TO 14 CUBIC FEET
14 TO 17 CUBIC FEET
17 TO 20 CUBIC FEET
OVER 20 CUBIC FEET

EMBRACO
30-PW5.5K11(14)
30-FF6BK or FF7.5BKW
30-FF8.5BKW
30-FF11.5BKW



No Frost Side by Side (coil and blower are hidden)

UP TO 18 CUBIC FEET
18 TO 25 CUBIC FEET
OVER 25 CUBIC FEET

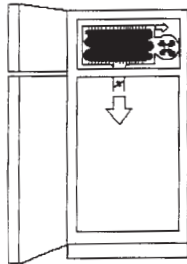
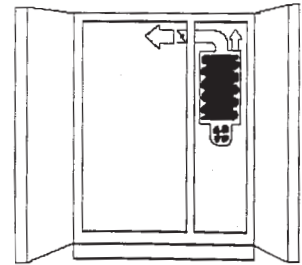
EMBRACO
30-FF8.5BKW
30-FF11.5BKW
30-FF112BKW

Two Door Refrigerators
Fiberglass Insulation

No Frost Side by Side (coil and blower are hidden)

UP TO 20 CUBIC FEET
20 TO 25 CUBIC FEET

EMBRACO
30-FF11.5BKW
30-FF12BKW



No Frost Top Mount (coil and blower are hidden)

UP TO 14 CUBIC FEET
14 TO 17 CUBIC FEET
OVER 17 CUBIC FEET

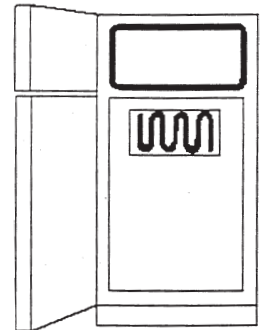
EMBRACO
30-FF6BK or FF7.5BKW
30-FF8.5BKW
30-FF11.5BKW

No Frost Top Mount

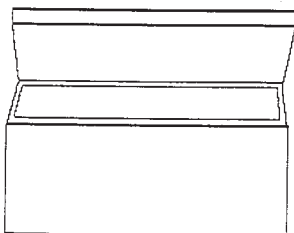
- Two doors with separate evaporator coils (plates) in the freezer and in the refrigerator compartments
- Freezer space separated by solid partition from refrigerator space
- Semi-automatic (manual start, automatic stop) defrost or fully automatic

UP TO 12 CUBIC FEET
12 TO 14 CUBIC FEET
14 TO 16 CUBIC FEET
OVER 16 CUBIC FEET

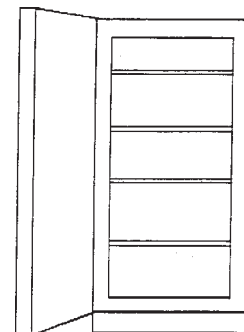
EMBRACO
30-PW5.5K11(14)
30-FF6BK or FF7.5BKW
30-FF8.5BKW
30-FF11.5BKW



Freezers
Foam Insulation



Vertical
Visible Frost



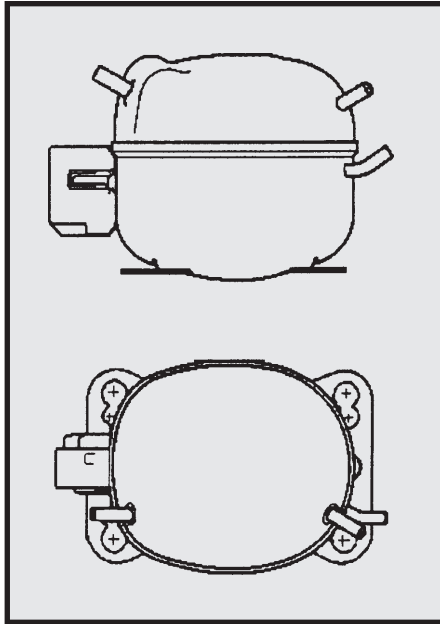
UP TO 10 CUBIC FEET
10 TO 13 CUBIC FEET
13 TO 16 CUBIC FEET
OVER 17 CUBIC FEET

EMBRACO
30-PW4.5K9(11)
30-PW5.5K11(14)
30-FF6BK
or FF7.5BKW
30-FF11.5BKW

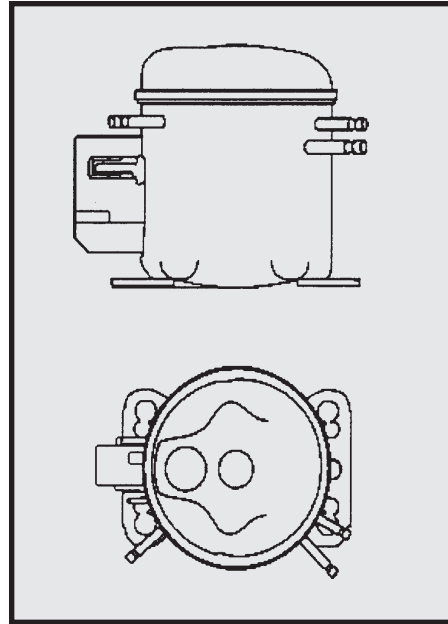
EMBRACO
UP TO 10 CUBIC FEET **30-PW4.5K9(11)**
10 TO 13 CUBIC FEET **30-PW5.5K11(14)**
13 TO 16 CUBIC FEET **30-FF6BK or FF7.5BKW**
OVER 17 CUBIC FEET **30-FF11.5BKW**
UP TO 16 CUBIC FEET **30-FF8.5BKW**
OVER 16 CUBIC FEET **30-FF11.5BKW**

Embraco Style

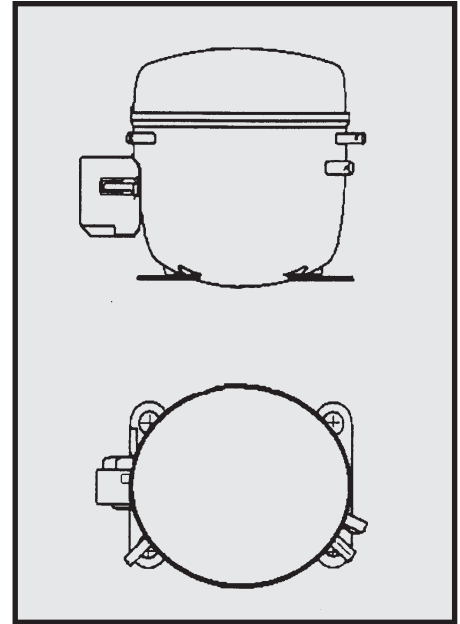
"EM" Series



"PW" Series

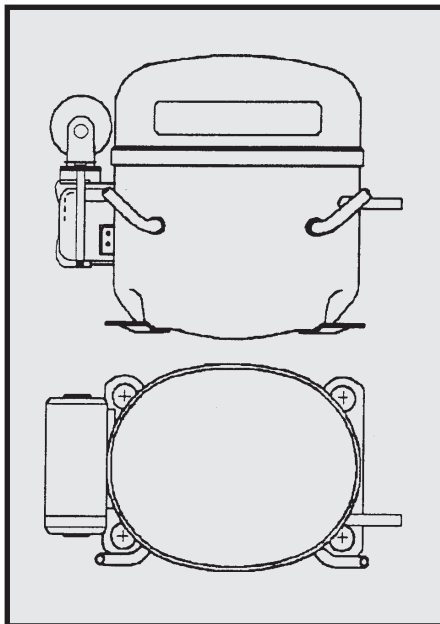


"FF" Series

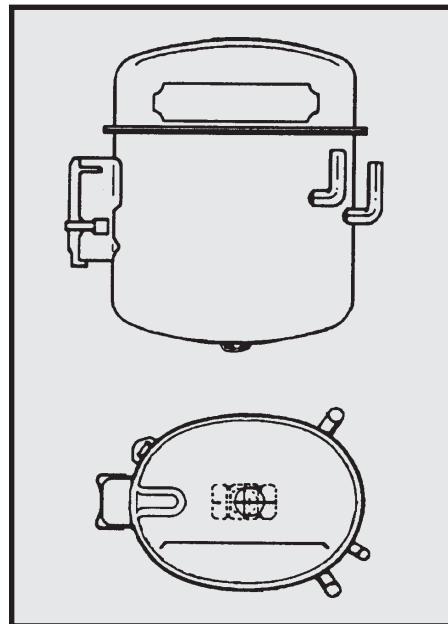


Aspera Style

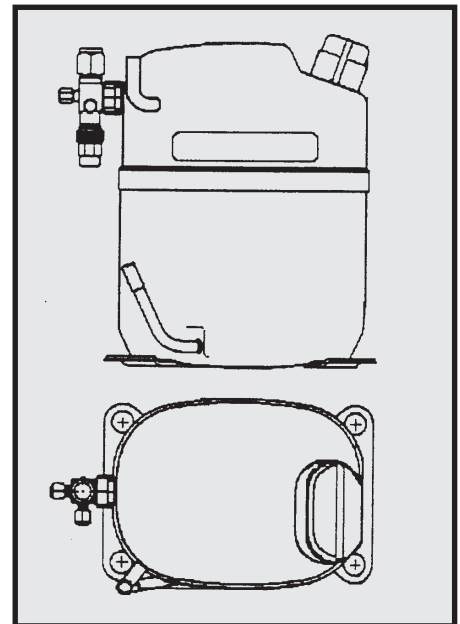
"B" & "E" Series



"T" Series



"J" Series



NOTE: THE FOLLOWING "CANS" ARE EXACT IN DESIGN AND SIZE

TECUMSEH "AE" - ASPERA "B" AND "E"

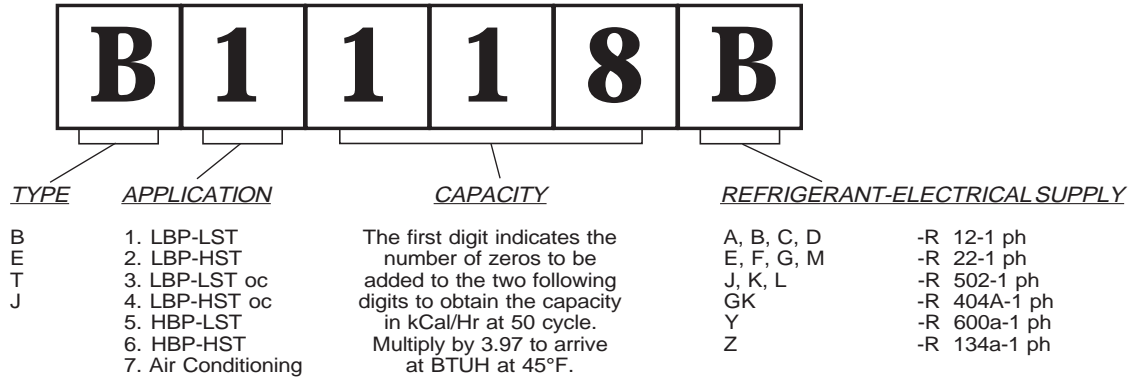
TECUMSEH "AK" - ASPERA "T"

TECUMSEH "AJ" - ASPERA "J"

Aspera Nomenclature

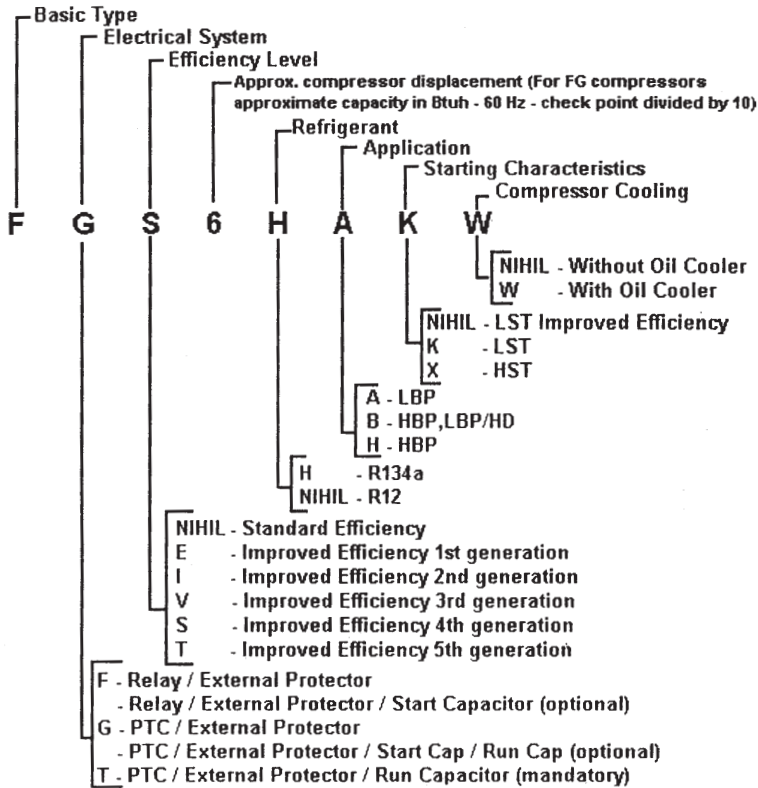
LEGEND

LST - Low Starting Torque
 HST - High Starting Torque
 OC - With Oil Cooler Tubes

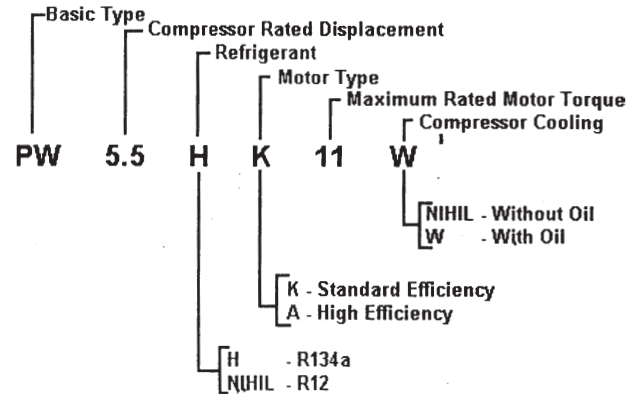


Embraco Nomenclature

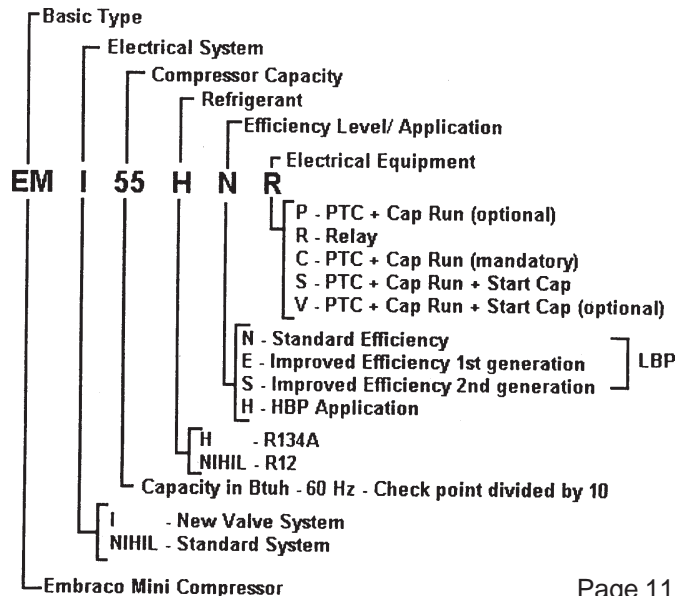
F Series



PW Series

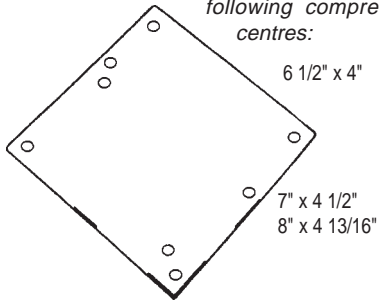


EM Series



59-AB1

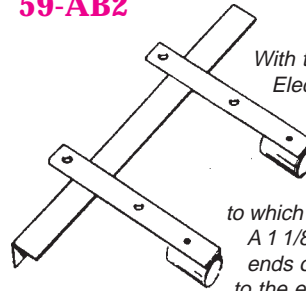
This flat mount plate is made from 16 gauge galvanized steel 8" square with 8 holes to fit the following compressor series and mounting centres:



Aspera	Series A and E
Tecumseh	Series AE
Necchi	Series A and M
Danfoss	Series PW
Americold	Series M
Aspera	Series T
Tecumseh	Series AT and CAT
Copeland	Series J
Kelvinator	Series AO

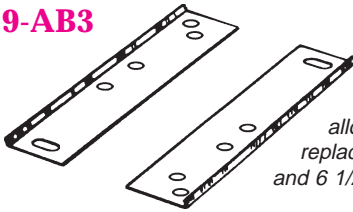
More holes can be drilled for other replacement requirement.

59-AB2



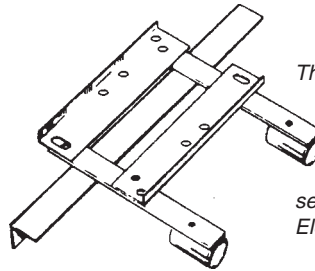
With this adapter bracket, most General Electric loaf type compressors with the "U" shaped oil cooler can be easily replaced by the Aspera series B, E and T compressors. It is constructed of a 16 gauge angle to which is spotwelded two 12 gauge strips. A 1 1/8" ID tube, sized to fit over the cut off ends of the oil cooler loop, is pop riveted to the extended end of each strip.

59-AB3



A pair of these brackets allows the "T" models to easily replace compressors with 7" x 7" and 6 1/2" x 4" mounting centres.

59-AB3 on 59-AB2

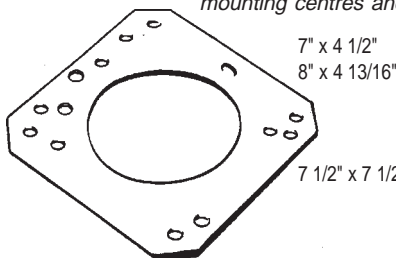


REFERENCE ONLY

This illustration shows how the pair of 59-AB3 brackets can be used with the 59-AB2 bracket. Use this configuration when replacing the loaf type compressor with an Aspera series T compressor, in a General Electric cabinet of 17 ft³ or larger.

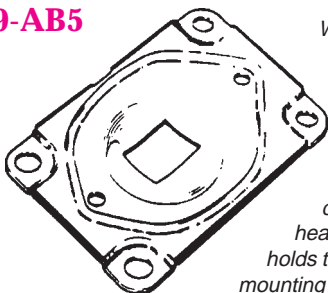
59-AB4

This heavy duty adapter plate has a multitude of uses. It is a flat plate 9 1/2" square, made from 14 gauge galvanized steel, with stamped holes to match the following common mounting centres and compressor series:



7" x 4 1/2"	Aspera	Series T
8" x 4 13/16"	Aspera	Series J
	Tecumseh	Series AJ
	Copeland	Series R and S
	Americold	Series A
7 1/2" x 7 1/2"	Aspera	Series H
	Tecumseh	Series AH and CL
	Copeland	Series Y
	Americold	Series B and E
	Bendix Westinghouse	Series B, D and E

59-AB5



With this adapter, the Series T air conditioning compressors can be used to modernize older window air conditioners. It is stamped with 12 gauge painted steel. It has one rectangular hole in the centre through which the compressor base "U" loop extends. A heavy spring clip (supplied with base) holds them together. It also has four corner mounting holes with centres of 4 13/16" x 8".

59-AB8

