

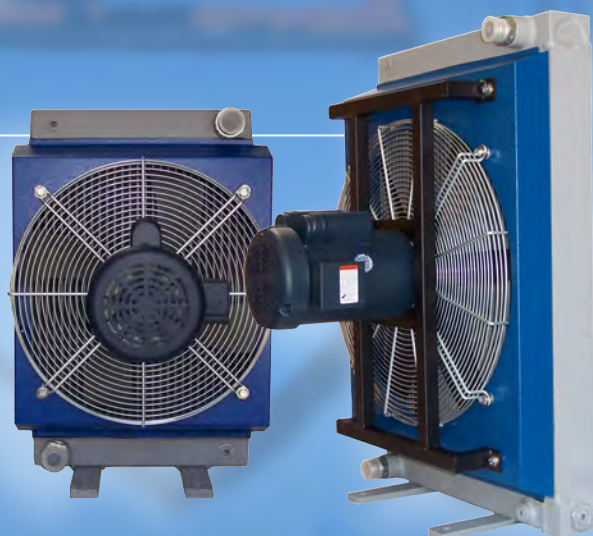
AC MOTOR FAN DRIVEN PRODUCTS

HEAT EXCHANGERS

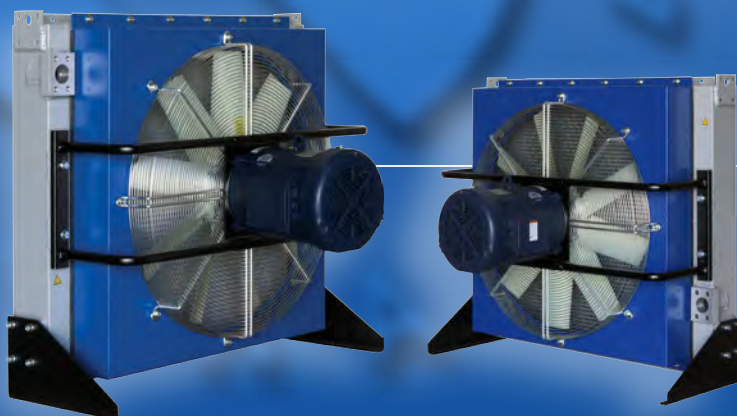
2000K & KBV SERIES



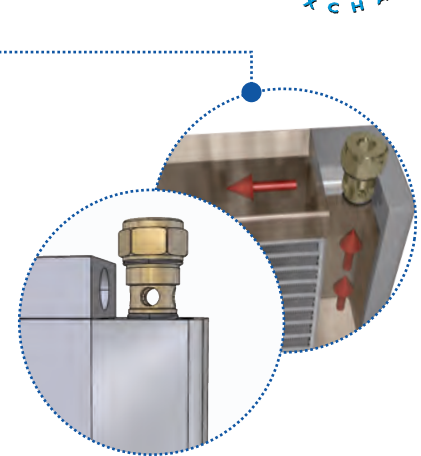
HPV SERIES I



HPH SERIES I



HPV Series II



Built-in Bypass Valve



Heavy Duty Construction



Oil Connections

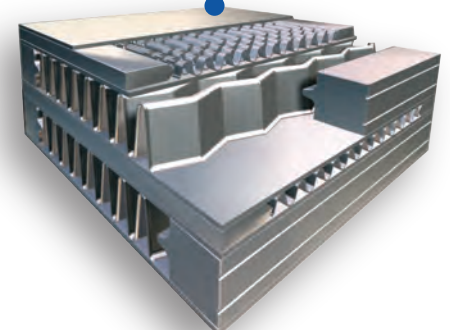
EMMEGI oil coolers are stocked with BSP Parallel thread oil connections. This allows us to draw inventory from our other Worldwide locations as needed. Product shipped from our US facility include SAE J514 37° flare adaptors. Both straight and 90° fittings are standard. A wide selection of optional types and sizes are available.

Bar & Plate Technology

Aluminum Bar & Plate construction is the most advanced heavy duty technology available today. This design has several significant features:

- > **Compact Performance:** Up to 50% smaller than traditional fin & tube construction.
- > **Rugged Construction:** 1/4" Thick bars protect the fluid channels from damage.
- > **Serviceable:** Bars extend to fin edges allowing high pressure washing.
- > **Non-Louvered Air Fins :** Low fouling (9 Fins / inch).

Ultra-low fouling air fins optional (5 Fins / inch).



2000K & KBV Series

2000K Series

No Bypass Valve



2000KBV Series

With 22 or 44 PSI Bypass Valve



*Small to Medium
Sizes*

HPH & HPV Series I & II

HPV Series I

Vertical Mounting



Medium Size
22 or 44 PSI Bypass Valve
Standard

HPH Series I

Horizontal Mounting



Medium Size
22 or 44 PSI Bypass Valve
Standard

HPV Series II



Large Sizes
Available from stock

Motor Options

IEC MOTORS

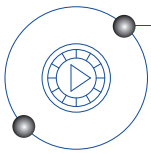
- Typically used on smaller sizes · CE marked for export as well
- TEFC standard

NEMA MOTORS

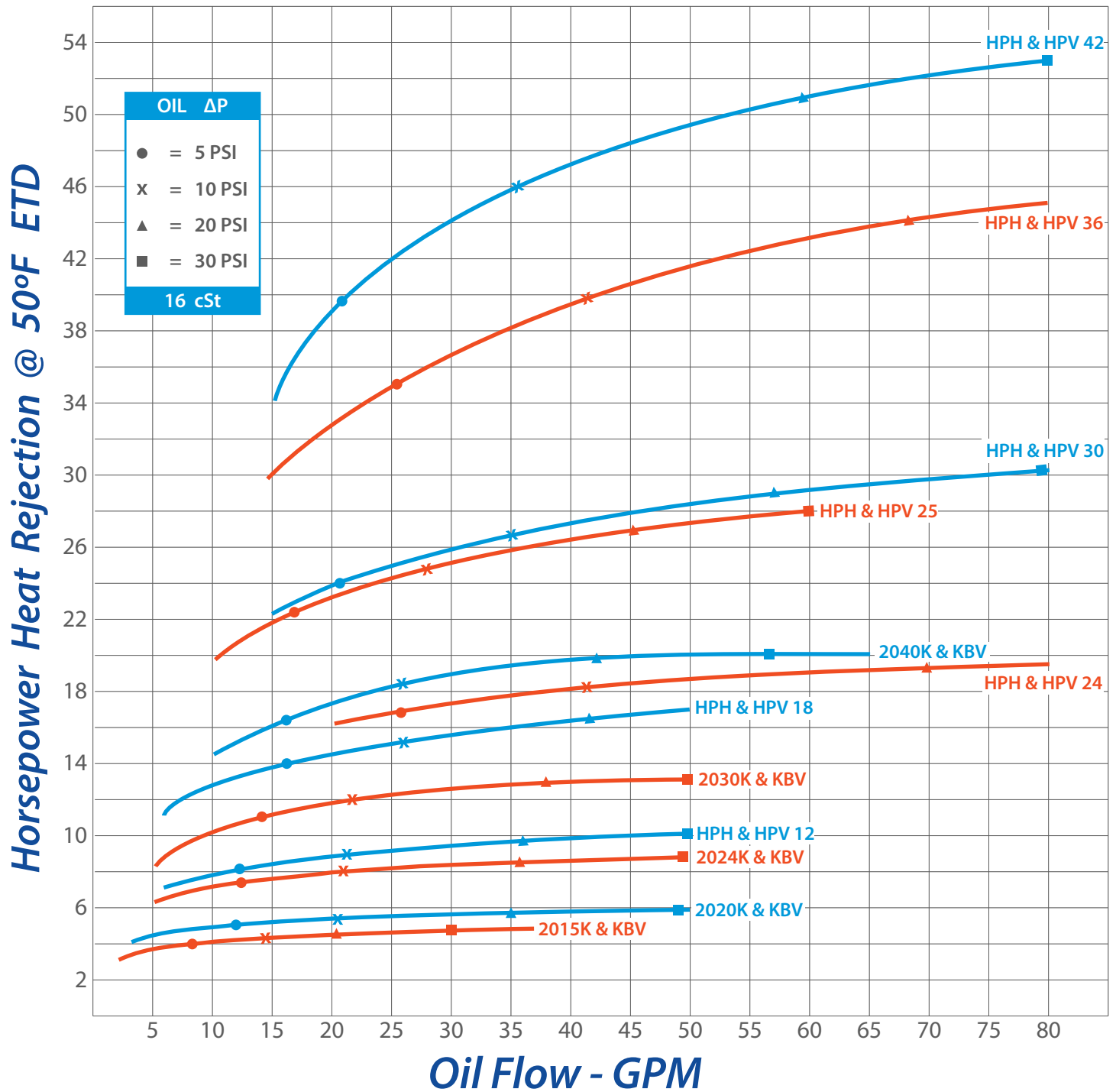
- Typically used on medium / large sizes
- TEFC standard

OTHER MOTORS

- All models
- 575V, ATEX, and explosion proof are some examples

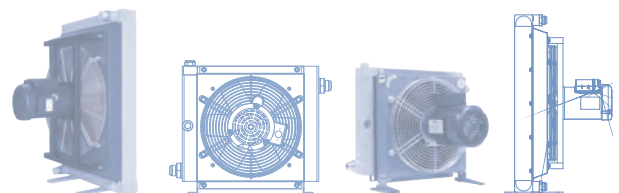


Performance Data - AC 2000K, HPH & HPV Series I

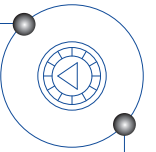


NOTES - Performance is reduced by 1/3 for 50Hz service.

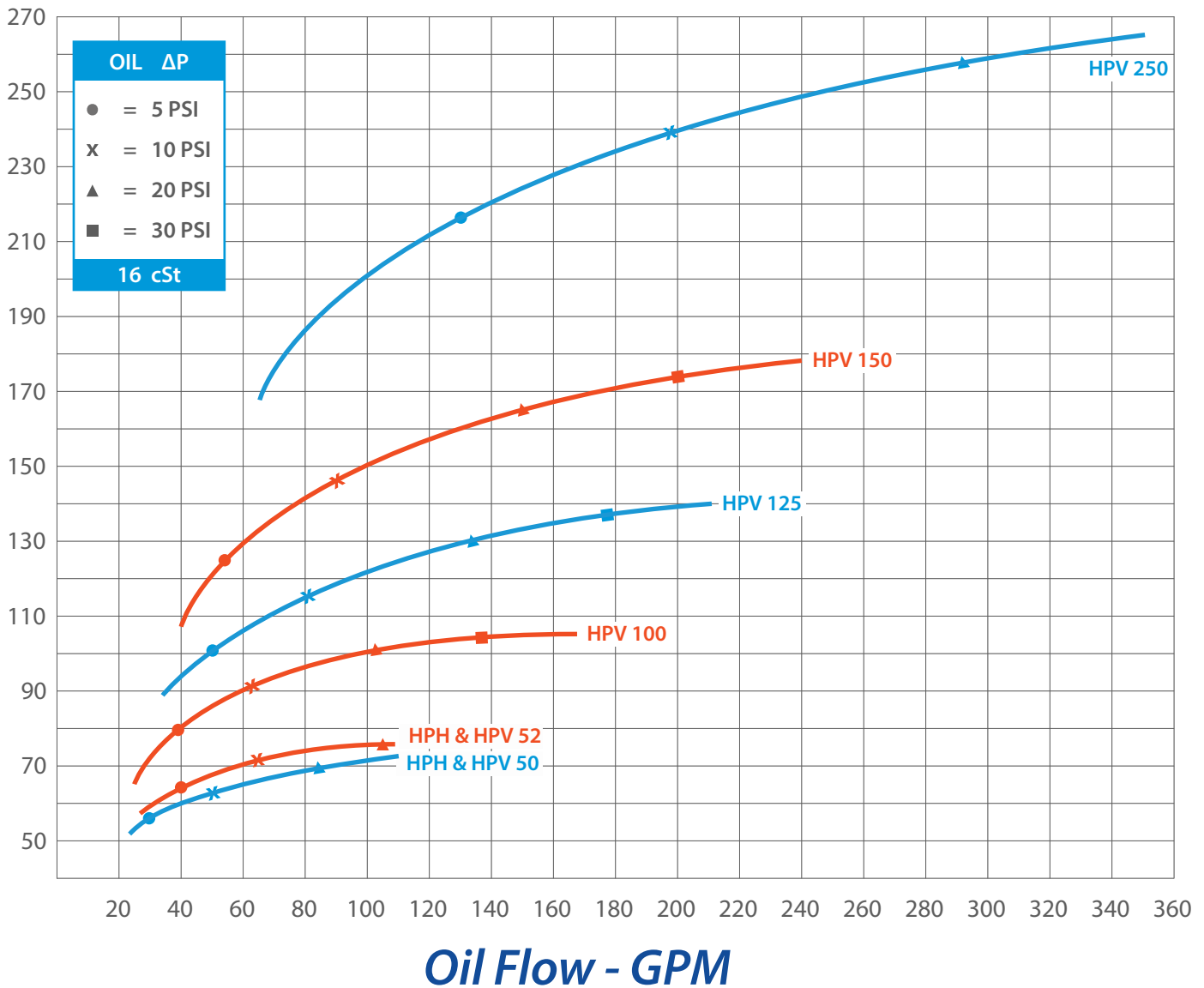
Pressure drop based on ISO VG 46 oil at typical operating temperature.



Performance Data - AC HPH & HPV Series I, HPV Series II



Horsepower Heat Rejection @ 50°F ETD



Correcting Heat Removal for Cooler Selection from Curve

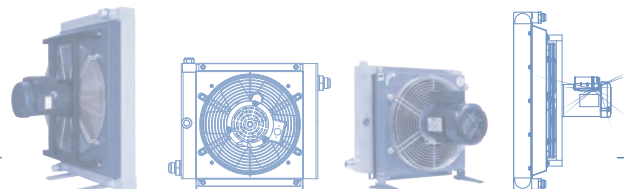
$$\text{Horsepower Heat Load} \times \frac{50^\circ\text{F}}{\text{Desired ETD } ^\circ\text{F}} = \text{Corrected Horsepower Heat Removal for Curve Selection}$$

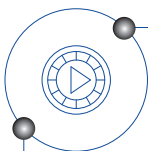
Correcting Curve to Actual Heat Removal

$$\text{Horsepower (FROM CURVE)} \times \frac{\text{Desired ETD } ^\circ\text{F}}{50^\circ\text{F}} = \text{Corrected Horsepower Heat Removal}$$

Entering Temperature Difference

$$\text{ETD } ^\circ\text{F} = \text{Oil Inlet Temperature } ^\circ\text{F} - \text{Air Entering Temperature } ^\circ\text{F}$$

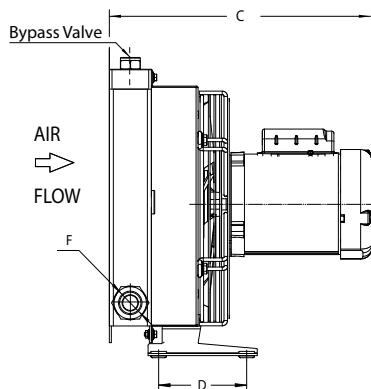
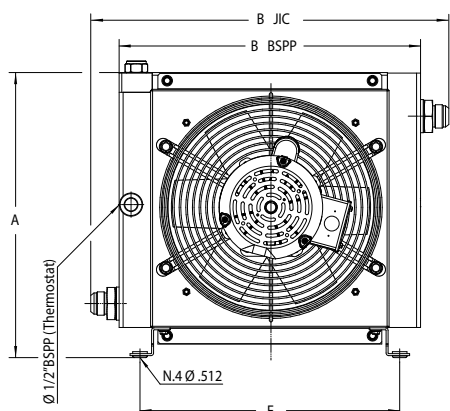




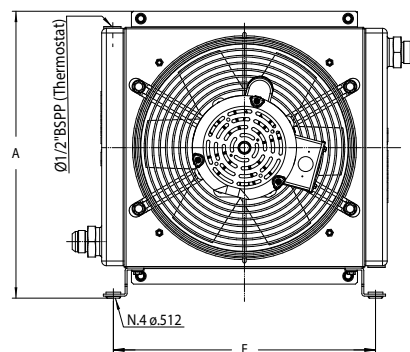
2000K & KBV Series Heat Exchangers



2000 KBV
(WITH BYPASS)



2000 K
(WITHOUT BYPASS)



MODEL	Unit of Measure	Overall Dimensions					Mounting		Oil Connections		Tech Data				
		A	B*		C Approx.		D	E	F		dB(A)	Net Weight. Lbs.			
			BSPP	JIC	Single Phase 1NS	Three Phase 3IS			BSPP	JIC		1 Phase K	3 Phase K	1 Phase KBV	3 Phase KBV
2015 K/KBV	(inch)	11.98	12.60	15.36	13.61	13.74	4.92	10.90	1" Internal	# 16 External	78	35	25	37	27
	(mm)	304	320	390	346	349	125	277							
2020 K/KBV	(inch)	11.98	12.60	15.36	14.32	14.45	4.92	10.90			78	36	26	38	28
	(mm)	304	320	390	364	367	125	277							
2024 K/KBV	(inch)	14.40	14.96	18.51	14.32	14.45	4.92	12.87			78	42	32	45	35
	(mm)	366	380	470	364	367	125	327							
2030 K/KBV	(inch)	16.91	17.51	21.08	15.08	15.34	4.92	15.43			85	46	45	49	48
	(mm)	430	445	535	383	390	125	392							
2040 K/KBV	(inch)	21.00	21.25	24.41	16.38	15.88	4.92	19.17	1.25" Internal	# 20 External	79	59	61	63	65
	(mm)	526	540	620	416	403	125	487							

Ordering Code

Model	Voltage / Airflow	Temp. Switch (optional)	Oil Connection / Thread Type	Relief Bypass
2015KBV	3IS	3	JE	22
Model Size		Leave blank for no temp. switch		KBV Only
2015K - 2040K (No Bypass)	3I 3 Phase IEC Motor 1N 1 Phase NEMA Motor	2 TM45-A1 (122°F - 100°F) 3 TM46-A1 (140°F - 118°F)	JE JIC (External Thread) BP BSPP (Internal Thread) JE90 JIC 90° (External Thread)	22 22 psi 44 44 psi
2015KBV - 2040KBV (With Bypass)	3N 3 Phase NEMA Motor S Suction B Blowing			

Indicates Standard Selection

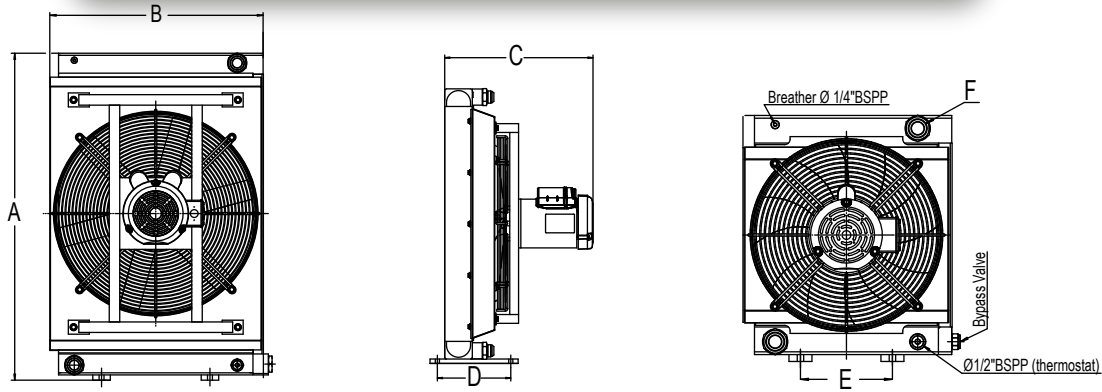
Emmegi stocks most adaptors to increase or reduce the fittings by one size. Additional cost may apply, consult factory. Examples:

JE90 = 90° Adaptors

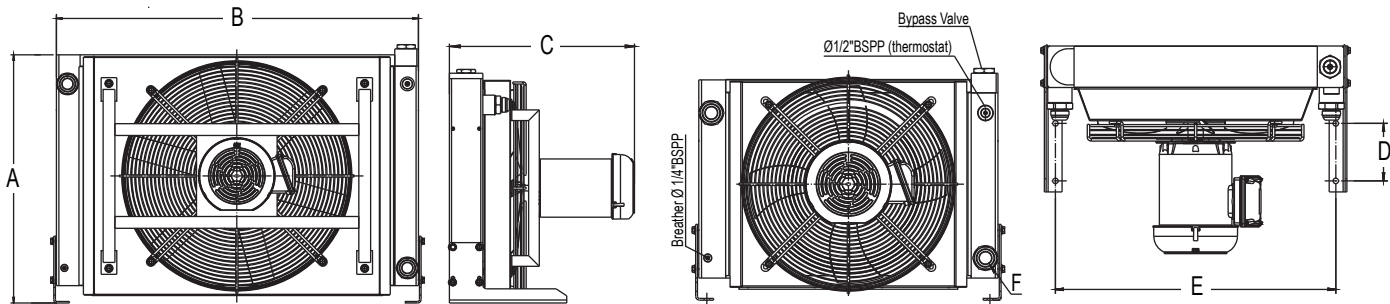
JE12 = JIC #12 Adaptors



HPH & HPV 12 - 52 Series I Heat Exchangers



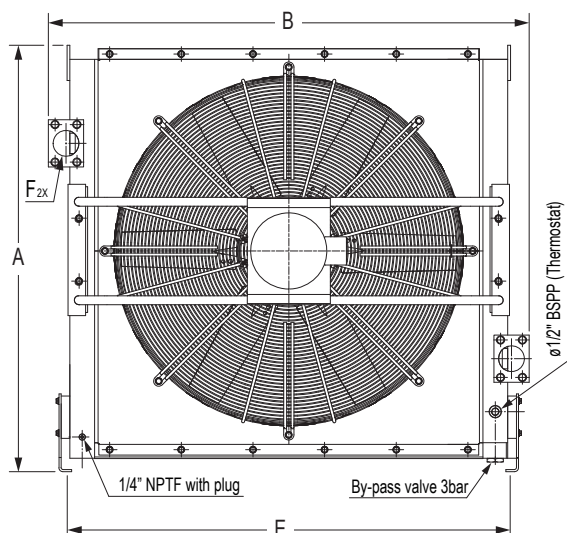
MODEL	UNIT OF MEASURE	Overall Dimensions			Mounting		Oil Connections		Tech. Data		
		A	B	C* Approx.	D	E	F		dB(A)	NET WEIGHT LBS	
							BSP	JIC		1 Phase	3 Phase
HPV 12	(inch) (mm)	15.74 400	14.05 357	15.19 386	7.87 200	5.90 150	1" Internal	# 16 External	75	41	42
HPV 18	(inch) (mm)	20.07 510	17.91 455	16.00 406	7.87 200	7.87 200			78	59	57
HPV 24	(inch) (mm)	21.06 535	17.91 455	17.29 439	9.84 250	7.87 200			1.25" Internal	# 20 External	78
HPV 25	(inch) (mm)	25.59 650	23.82 605	15.95 405	7.87 200	15.74 400	79	84			80
HPV 30	(inch) (mm)	26.97 685	18.46 469	17.09 434	9.84 250	7.87 200	80	94			89
HPV 36	(inch) (mm)	30.90 785	24.17 614	18.20 462	9.84 250	12.20 310	85	134			129
HPV 42	(inch) (mm)	36.81 935	24.02 610	18.60 472	9.84 250	12.20 310	85	174			166
HPV 50	(inch) (mm)	37.59 955	28.64 727	21.59 548	9.84 250	15.74 400	1.50" Internal	# 24 External	85	223	246
HPV 52	(inch) (mm)	37.59 955	28.67 728	22.44 570	9.84 250	15.74 400			85	245	240



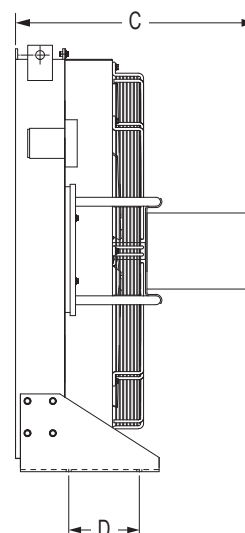
MODEL	UNIT OF MEASURE	Overall Dimensions			Mounting		Oil Connections		Tech. Data		
		A	B	C* Approx.	D	E	F		dB(A)	NET WEIGHT LBS	
							BSP	JIC		1 Phase	3 Phase
HPH 12	(inch) (mm)	14.58 370	15.35 390	15.35 390	5.79 147	17.03 433	1" Internal	# 16 External	75	41	42
HPH 18	(inch) (mm)	18.30 465	19.68 500	17.20 437	5.79 147	21.36 543			78	59	57
HPH 24	(inch) (mm)	19.21 488	20.47 520	18.42 468	5.11 130	19.05 484	1.25" Internal	# 20 External	78	74	71
HPH 25	(inch) (mm)	24.09 612	25.59 650	18.61 473	5.79 147	27.27 693			79	84	80
HPH 30	(inch) (mm)	19.42 493	26.37 670	17.71 450	5.11 130	24.96 634			80	94	89
HPH 36	(inch) (mm)	24.40 620	30.31 770	21.56 545	5.11 130	34.84 884			85	134	129
HPH 42	(inch) (mm)	24.84 631	36.22 920	20.45 520	5.11 130	34.84 884			85	174	166
HPH 50	(inch) (mm)	29.86 758	37.00 940	23.62 600	5.90 150	35.59 904	1.50" Internal	# 24 External	85	223	246
HPH 52	(inch) (mm)	29.01 737	37.00 940	24.58 624	5.90 150	35.59 904			85	245	240

* C dimension varies with motor type and displacement.

HPV 100 - 250 Series II Heat Exchangers

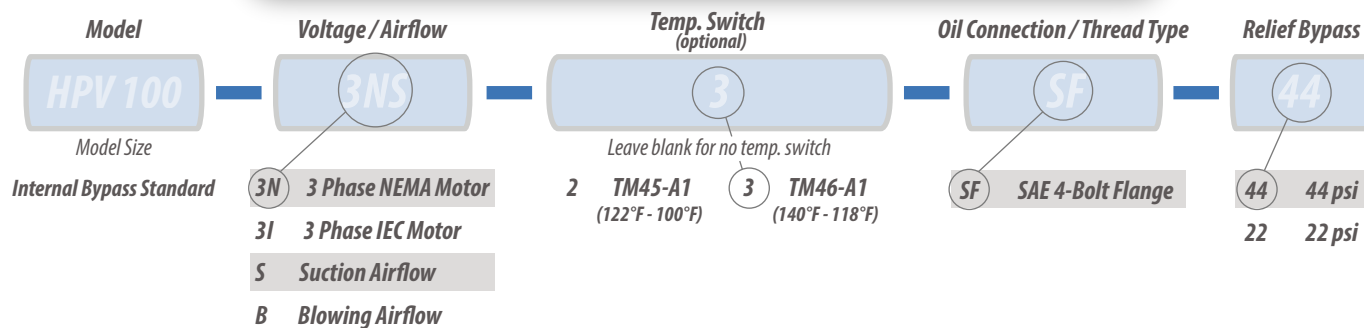


AIR
FLOW



MODEL	Unit of Measure	Overall Dimensions				Mounting		Oil Connections	Tech Data	
		A	B	C Approx.		D	E	F	dB(A)	Net Weight Lbs. 3 Phase AC Fan Motor
				Three Phase 3NS	Three Phase 3IS					
HPV 100	(inch)	39.13	43.70	24.00	26.45	7.87	41.65	2" SAE Flange	94	370
	(mm)	994	1110	864	672	200	1058			
HPV 125	(inch)	40.20	44.88	29.50	30.00	7.87	43.62	2" SAE Flange	98	450
	(mm)	1021	1140	749	762	200	1108			
HPV 150	(inch)	47.56	53.62	29.12	29.66	7.87	49.53	3" SAE Flange	99	555
	(mm)	1208	1362	740	753	200	1258			
HPV 250	(inch)	66.61	52.36	32.96	—	10.00	49.37	3" SAE Flange	101	800
	(mm)	1692	1330	837	—	254	1254			

Ordering Code



Indicates Standard Selection

TECHNICAL DATA FOR ALL 2000 K/KBV & HPV MODELS

Compatible fluids

- Mineral Oils : HL & HLP.
- Water - Oil Emulsion.
- Water - Glycol.
- Consult Factory for other fluids.

Ratings

- Operating Pressure : 280 PSI
- Test Pressure: 500 PSI
- Maximum Operating Temperature: 248°F



ACM SERIES MOTOR DATA



HEAT-EXCHANGERS

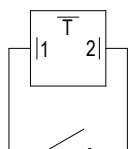
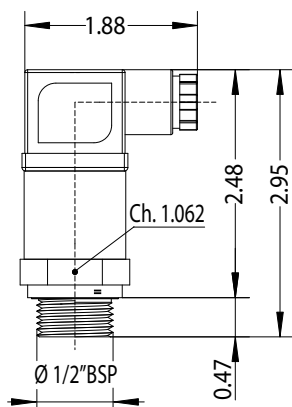
EMMEGI Model	Catalog Motor Code	HP KW @ 50Hz	RPM	Motor Frame	Operating Voltage - Frequency	Phase	Thermal Protection	Full Load Amps
2015K & KBV 2020K & KBV	1NS	0.33	3450	NEMA 56SC	115-208-230V 60Hz	1	No	5.2 / 2.87-2.60
	1IS	0.33	3400	IEC 63	115-208/230V 60Hz		No	3.1 / 1.40-1.55
	3IS	0.25	3430	IEC D63C	230/460V 60Hz	3	No	0.84 / 0.42
		0.187	2760		200/400V 50Hz			1.0 / 0.5
2024K & KBV HPH & HPV 12	1NS	0.33	3450	NEMA 56SC	115-208/230V 60Hz	1	No	5.2 / 2.87-2.60
	1IS	0.33	3400	IEC 63	115-208-230V 60Hz		No	3.1 / 1.40-1.55
	3IS	0.33	3430	IEC D63C	230/460V 60Hz	3	No	1.1 / 0.55
		0.25	2760		200/400V 50Hz			1.3 / 0.65
2030K & KBV	1NS	0.5	3450	NEMA S56C	115-208-230V 60Hz	1	No	7.0 / 3.87-3.5
	1IS	0.5	3440	IEC 71	115-208/230V 60Hz		No	5.26 / 2.37-2.63
	3IS	0.5	3425	IEC D71C	230/460V 60Hz	3	No	1.8 / 0.9
		0.37	2790		200/400V 50Hz			1.8 / 0.95
2040K & KBV HPH & HPV 18 HPH & HPV 24	1NS	0.5	1725	NEMA S56C	115-208-230V 60Hz	1	No	7.0 / 3.87-3.5
	1IS	0.5	3440	IEC 71	115-208/230V 60Hz		No	5.26 / 2.37-2.63
	3NS	0.5	1725	NEMA S56C	208-230/460V 60Hz	3	No	1.86-1.69 / 0.84
	3IS	0.5	1695	IEC D71C	230/460V 60Hz	3	No	1.8 / 0.9
		0.370	1380		200/400V 50Hz			1.8 / 0.95
HPH & HPV 25	1NS	0.75	1725	NEMA 56C	115-208-230V 60Hz	1	Auto	10.65 / 5.86-5.3
	3NS	0.75	1725	NEMA 56C	208-230/460V 60Hz	3	No	2.7-2.4 / 1.22
HPH & HPV 30	3IS	0.75	1690	IEC D71C	230/460V 60Hz	3	No	2.5 / 1.25
		0.56	1390		200/400V 50Hz			2.9 / 1.45
HPH & HPV 36 HPH & HPV 42	1NS	1.5	1725	NEMA 56C	115-208-230V 60Hz	1	No	15.8 / 7.88
	3NS	1.5	1740	NEMA 56C	208-230/460V 60Hz	3	No	4.47-4.04 / 2.02
		1.12	1450		190/380V 50Hz			4.8 / 2.4
	3IS	1.5	1725	IEC D90SC	230/460V 60Hz	3	No	4.2 / 2.1
		1.12	1450		200/400V 50Hz			5.0 / 2.5
HPH & HPV 50	1NS	2.0	1725	NEMA 56C	115-230V 60Hz	1	No	15.8 / 7.88
	3NS	2.0	1725	NEMA 56C	208-230/460V 60Hz	3	No	5.44 / 2.7
HPH & HPV 52	3IS	2.0	1710	IEC D90C	230/460V 60Hz	3	No	5.4 / 2.7
		1.49	1425		380V 50Hz			3.16
HPV 100	3NS	5.0	1750	NEMA 184C	230/460V 60Hz	3	No	14.4-13.0 / 6.49
		3.7	1470		190/380V 50Hz			15.8 / 7.88
	3IS	5.5	1750	IEC DF112MC	230/460V 60Hz	3	No	14.0 / 7.0
		4.1	1470		200/400V 50Hz			12.6 / 6.3
HPV 125	3NS	7.5	1760	NEMA 213TC	208-230/460V 60Hz	3	No	18.1 / 9.07
			1470		190/380V 50Hz			19.4 / 10.3
HPV 150	3IS	7.5	1760	IEC DF132SC	230/460V 60Hz	3	No	18.4 / 9.2
			1470		200/400V 50Hz			16.8 / 8.4
HPV 250	3NS	10	1765	NEMA 215TC	208-230/460V 60Hz	3	Auto	27.0-24.4 / 12.2
			1470		190/380V 50Hz			22.4 / 11.2

Electrical rating may vary with motor manufacturer. Motor nameplates have actual ratings.
All standard models = Totally Enclosed Fan Cooled (TEFC)

Optional Temperature Controls



Bimetallic monocontact thermo-switch series TM4/A1



TM4/A1 Series temperature switches are normally open. They close on rise when the fluid temperature: exceeds the higher set point (turning the fan on). They re-open at the lower set point (Turning the fan off). The 22° F hysteresis prevents the fan from over-cycling. The top of the switch may be rotated in 90° increments for ease of wiring.



Technical Data

Working temperature : from -68°F to 248°F

Commutation frequency : 20 cycles/min

Switching accuracy : +/-7°F

Fixed hysteresis value : about 22°F

Body material : brass

Thread connection : 1/2 BSPP (seal included)

Max pressure : 2900 PSI

Mounting : in any position

Weight : 2.5 oz.

Electrical Data

Electrical connections : DIN 43650

Electrical protection : DIN 40050 IP65

Maximum contact load 230V -10A & DC12V - 10A & DC24V - 5A

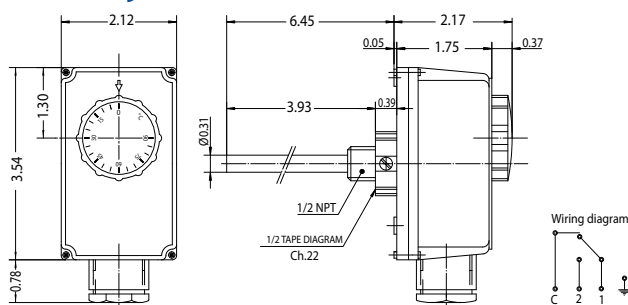
Normally closed switches are available: Consult factory

Part Number	Temperature Range	Model Code Feature Adder
TM 44 / A1	104 - 82°F	- 1
TM 45 / A1	122 - 100°F	- 2
TM 46 / A1	140 - 118°F	- 3
TM 47 / A1	158 - 136°F	- 4
TM 48 / A1	176 - 154°F	- 5
TM 49 / A1	194 - 172°F	- 6

Normally closed switches are available: Consult factory.

Optional Temperature Controls

Adjustable Thermostat TC2



Part Number	Temperature range	Model Code Feature Adder
TC2 L100	0 - 194°F	- 8

Unipolar, liquid filled, encased, switch contacts, immersion thermostat, bulbwell included.

Technical Data

Differential: ΔT 5.4°F;

Contacts: Ag 1000/1000;

Maximum contact load 230V: 10A

Switch of cutoff contacts loading;

Fairlead: PG9;

Max. head temperature: 176°F

Max. sensing bulb temperature: 266°F

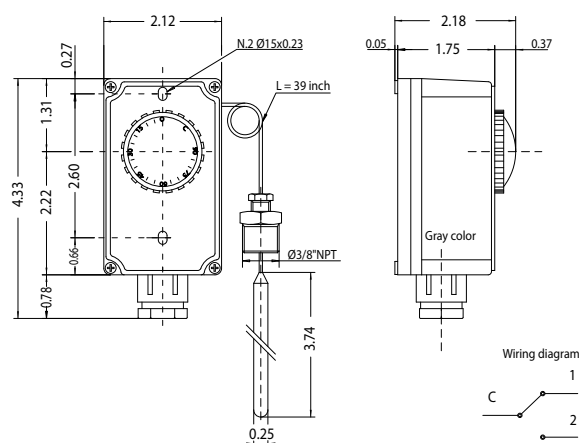
Temperature rate of change: 1 K/min

Degree of protection: IP 40

Number of automatic cycles: II (100.000)



Adjustable Thermostat TC2 L= 39 inch



Part Number	Temperature range	Model Code Feature Adder
TC2 L39	0 - 194°F	- 9

Technical Data

Temperature range: 0 - 194°F

Differential: ΔT 5.4°F;

Contacts rating: 10(2.5)A/230V

Fairlead: M20x1.5 mm;

Max. head temperature: 176°F

Max. sensing bulb temperature: 302°F

Temperature rate of change: 1 K/min

Degree of protection: IP 40

Silver contacts



Product Lines

AC Fan Driven



**2000K & KBV
AC Motors**
Heat Removals to 16 HP.
Optional Internal Bypass Valve.
Totally Enclosed Motors.
Oil Flows to 50 GPM.



**HPV Series I
AC Motors**
Heat Removals to 70 HP.
Internal Bypass Valve Standard.
Totally Enclosed Motors.
Oil Flows to 100 GPM.



**HPV Series II
AC Motors**
Heat Removals to 265 HP.
Internal Bypass Valve Standard.
Totally Enclosed Motors.
Oil Flows to 350 GPM.

DC Fan Driven



**2000K & KBV
DC Motors**
Heat Removals to 35 HP.
Optional Internal Bypass Valve.
Oil Flows to 125 GPM.



**HPV Series
DC Motors**
Heat Removals to 36 HP.
Internal Bypass Valve Standard.
Oil Flows to 80 GPM.



**S & SBV Series
DC Motors**
Heat Removals to 38 HP.
Optional Internal Bypass Valve.
Oil Flows to 100 GPM.

Hydraulic Fan Driven



**2000K & KBV
Hydraulic Motors**
Heat Removals to 30 HP.
Optional Internal Bypass Valve.
Wide range of Hydraulic Motor
Displacements available.
Oil Flows to 50 GPM



**HPV Series I
Hydraulic Motors**
Heat Removals to 130 HP.
Internal Bypass Valve Standard.
Oil Flows to 100 GPM.



**HPV Series II
Hydraulic Motors**
Heat Removals to 300 HP.
Optional Internal Bypass Valve.
Oil Flows to 350 GPM.

Cooling Systems



Silent Evo II
Off-line cooling systems with
oil cooler & recirculation.
Pump heat removals to 60 HP.



RID Series
Gearbox cooling systems with oil
cooler, recirculation pump & filter
heat removals to 25 HP.



HPA TK
Combination reservoir, oil cooler,
& suction filter.
Ideal for closed loop hydrostatic
cooling.

Water / Oil



**WB Series
Water/Oil**
Stainless steel Water/Oil Coolers.
Compact water saving design.
Heat Removals to 360 HP.
Oil Flows to 200 GPM.



**MG Series
Water/Oil**
Sea Water duty shell & tube heat
exchangers.
Corrosion resistant copper-nickel
cooling tubes & bronze end
bonnets.



Water Modulating Valves
Control water flow through Water/Oil
heat exchangers to maintain desired
oil temperatures.
No external input required.

Accessories



AC Temperature Switches
Cycle cooling fan to maintain desired
temperatures.
Fixed & adjustable designs available.



DC Temperature Switches
12v & 24v Models.
TMR Switches are prewired & include
relay for plug & play operation.



Thermostatic Valves
Modulating valves bypass oil during
cold startup.
#8 through #24 sizes available.

