

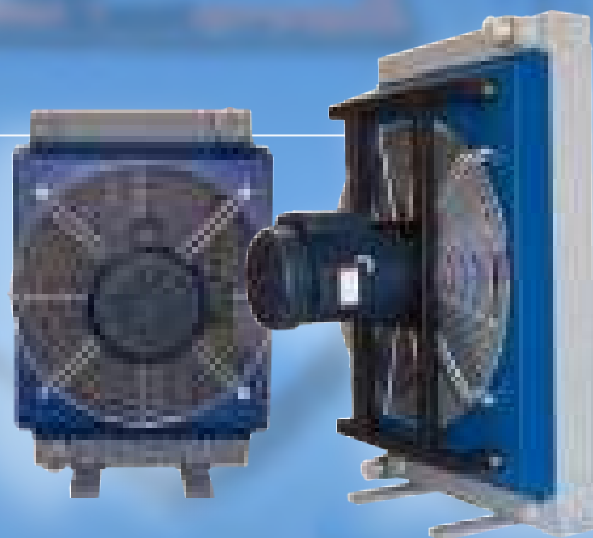
AC MOTOR FAN DRIVEN PRODUCTS

HEAT EXCHANGERS

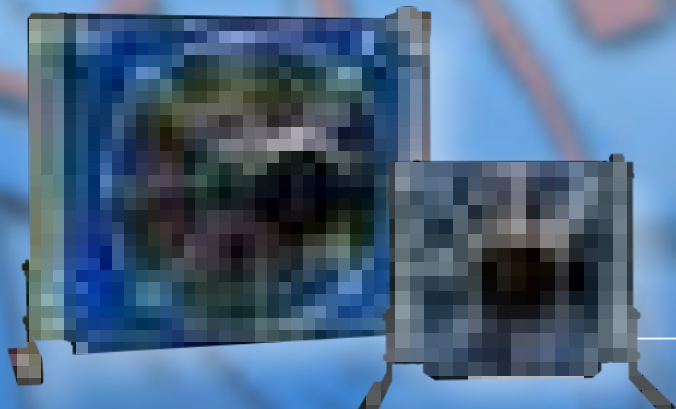
2000K & KBV SERIES



HPV SERIES I



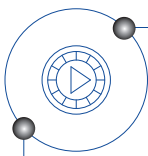
HPH SERIES I



HPV Series II



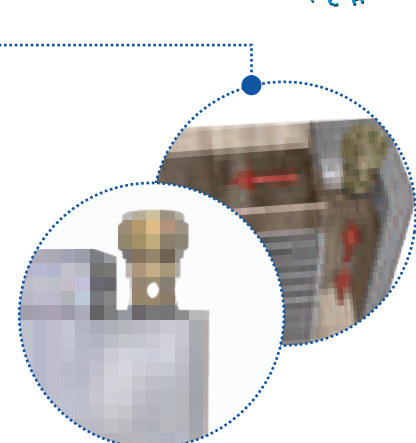
HEAT-EXCHANGERS



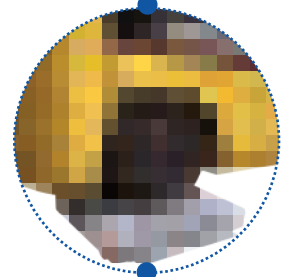
EMMEGI Heat Exchanger Features



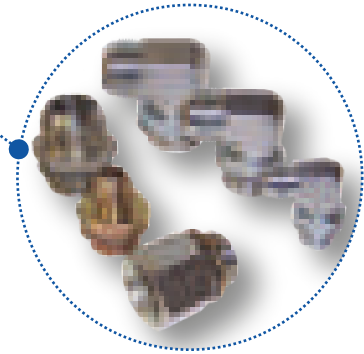
HEAT-EXCHANGERS



Built-in Bypass Valve



Heavy Duty Construction



Oil Connections

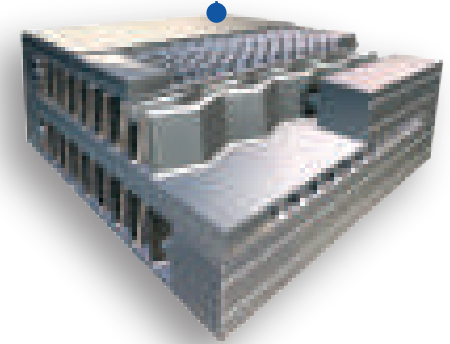
EMMEGI oil coolers are stocked with BSP Parallel thread oil connections. This allows us to draw inventory from our other Worldwide locations as needed. Product shipped from our US facility include SAE J514 37° flare adaptors. Both straight and 90° fittings are standard. A wide selection of optional types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

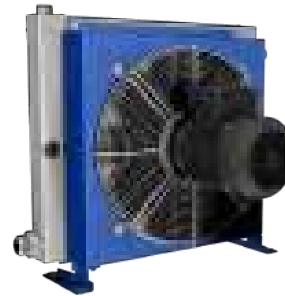
2000K Series

No Bypass Valve



2000KBV Series

With 22 or 44 PSI Bypass Valve



Small to Medium
Sizes

HPH & HPV Series I & II

HPV Series I

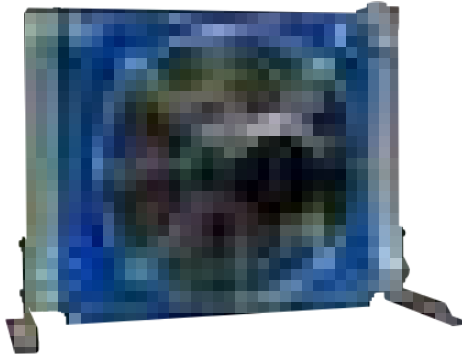
Vertical Mounting



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

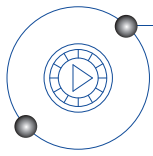
- Typically used on smaller sizes
- CE marked for export as well
- TEFC standard

NEMA MOTORS

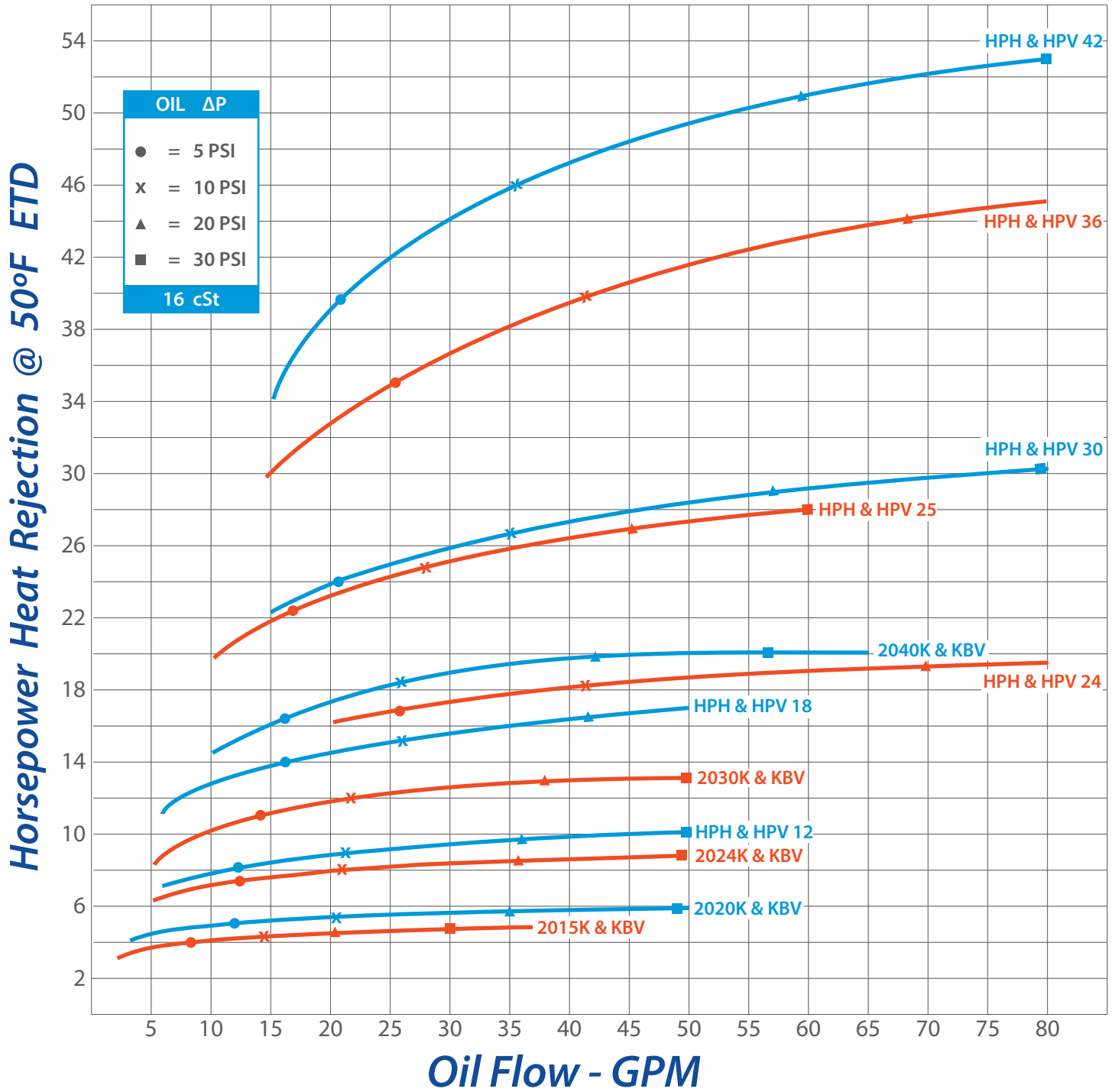
- Typically used on medium / large sizes
- TEFC standard

OTHER MOTORS

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

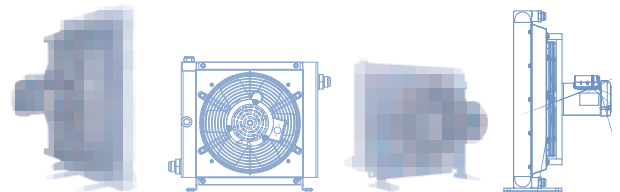


Performance Data - AC 2000K, HPH & HPV Series I

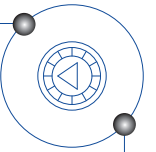


NOTES - Performance is reduced by 1/6 for 50Hz service.

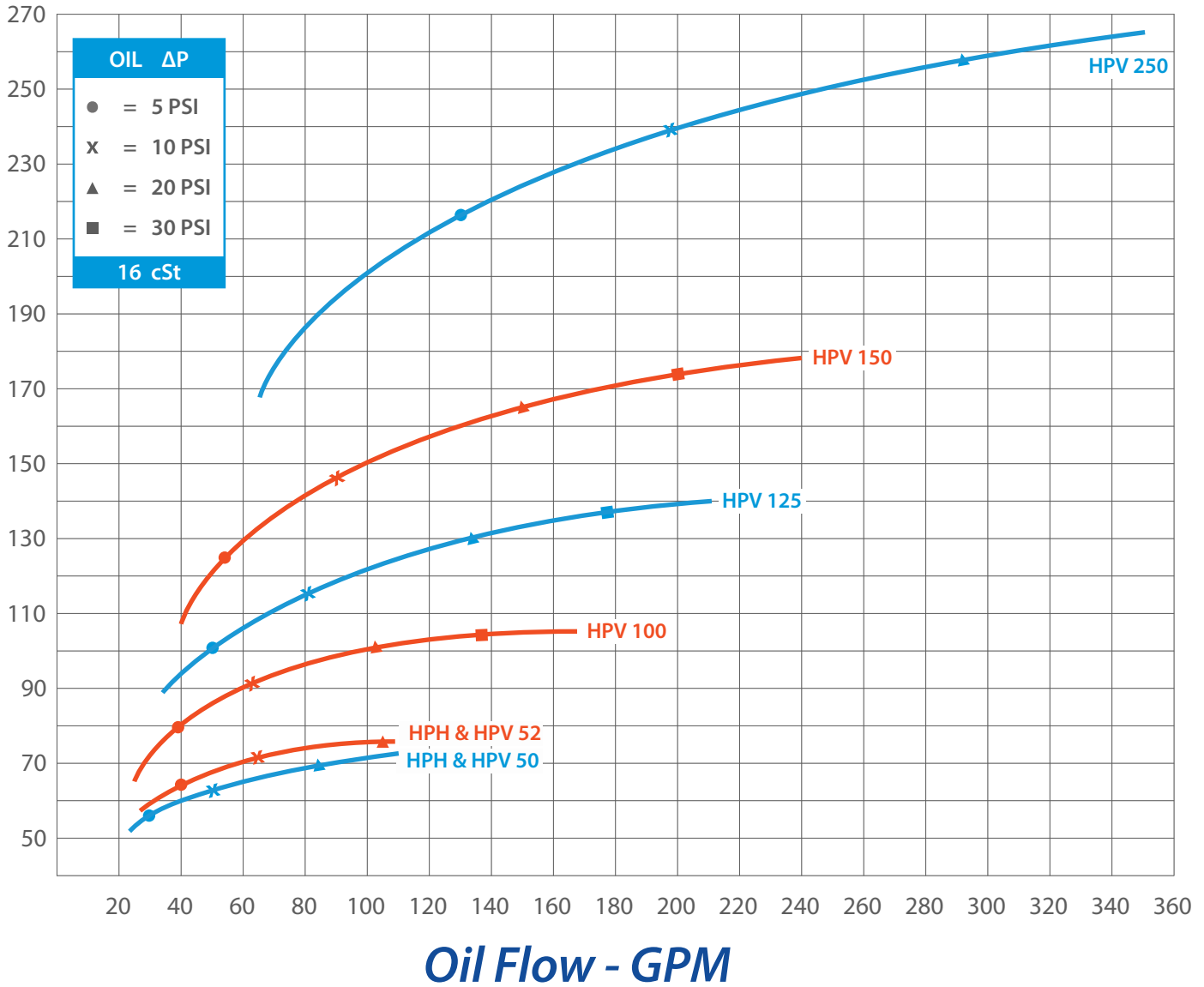
Pressure drop based on ISO VG 46 oil at typical operating temperature.



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



Horsepower Heat Rejection @ 50°F ETD



HEAT-EXCHANGERS

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

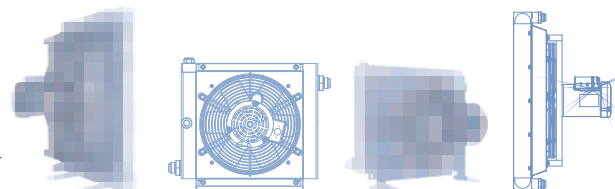
$$\text{Horsepower (FROM CURVE)} \times \frac{\text{Desired ETD } ^\circ\text{F}}{50^\circ\text{F}} = \text{Corrected Horsepower Heat Removal}$$

Entering Temperature Difference

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



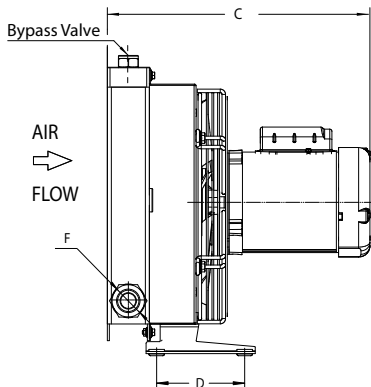
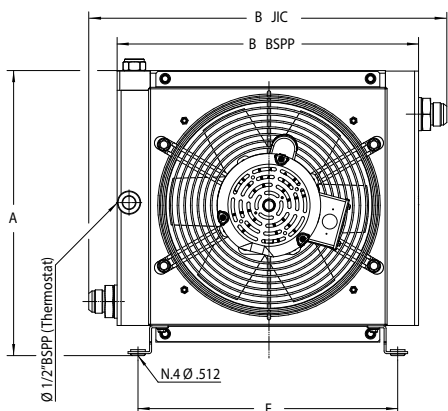
www.emmegiinc.com



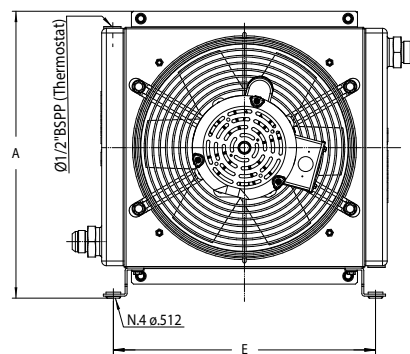
2000K & KBV Series Heat Exchangers



2000 KBV
(WITH BYPASS)



2000 K
(WITHOUT BYPASS)



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.			
			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) (mm)	11.98 304	12.60 320	15.36 390	13.61 346	13.74 349	4.92 125	10.90 277	1" Internal	# 16 External	78	35	25	37	27
2020 K/KBV	(inch) (mm)	11.98 304	12.60 320	15.36 390	14.32 364	14.45 367	4.92 125	10.90 277			78	36	26	38	28
2024 K/KBV	(inch) (mm)	14.40 366	14.96 380	18.51 470	14.32 364	14.45 367	4.92 125	12.87 327			78	42	32	45	35
2030 K/KBV	(inch) (mm)	16.91 430	17.51 445	21.08 535	15.08 383	15.34 390	4.92 125	15.43 392			85	46	45	49	48
2040 K/KBV	(inch) (mm)	21.00 526	21.25 540	24.41 620	16.38 416	15.88 403	4.92 125	19.17 487	1.25" Internal	# 20 External	79	59	61	63	65

Ordering Code

Model **Voltage / Airflow** **Temp. Switch (optional)** **Oil Connection / Thread Type** **Relief Bypass**

2015KBV **3IS** **3** **JE** **22**

Model Size
 2015K - 2040K (No Bypass) 3I 3 Phase IEC Motor
 1N 1 Phase NEMA Motor
 2015KBV - 2040KBV (With Bypass) 3N 3 Phase NEMA Motor
 S Suction
 B Blowing

Leave blank for no temp. switch
 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)

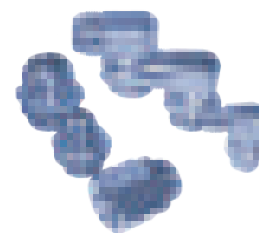
KBV Only
 22 22 psi
 44 44 psi

Indicates Standard Selection

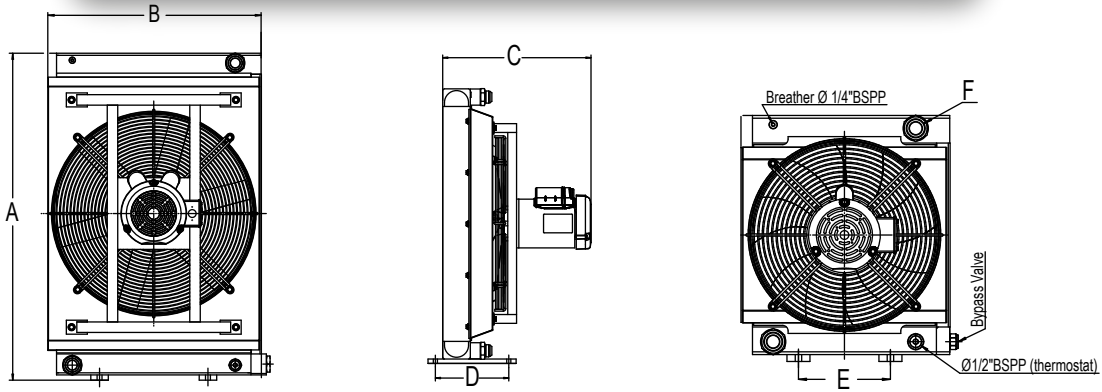
Emmegi stocks most adaptors to increase or reduce the fittings by one size. Additional cost may apply, consult factory. *Examples:*

JE90 = 90° Adaptors

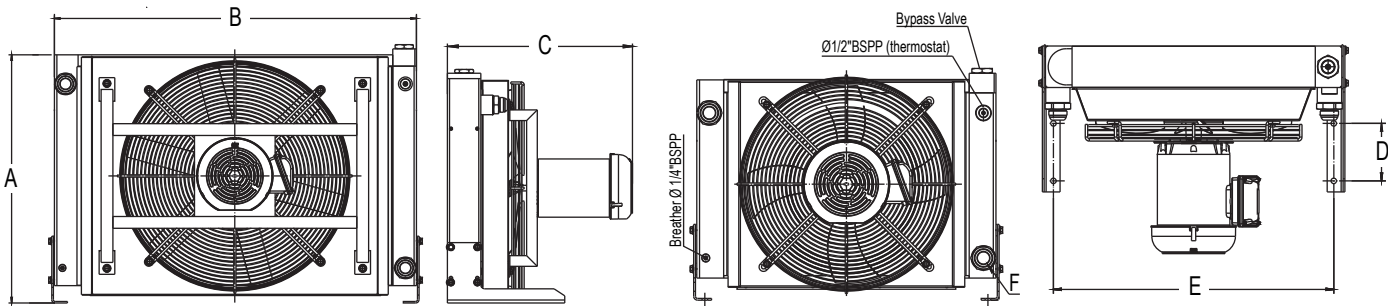
JE12 = JIC #12 Adaptors



HPH & HPV 12 - 52 Series I Heat Exchangers



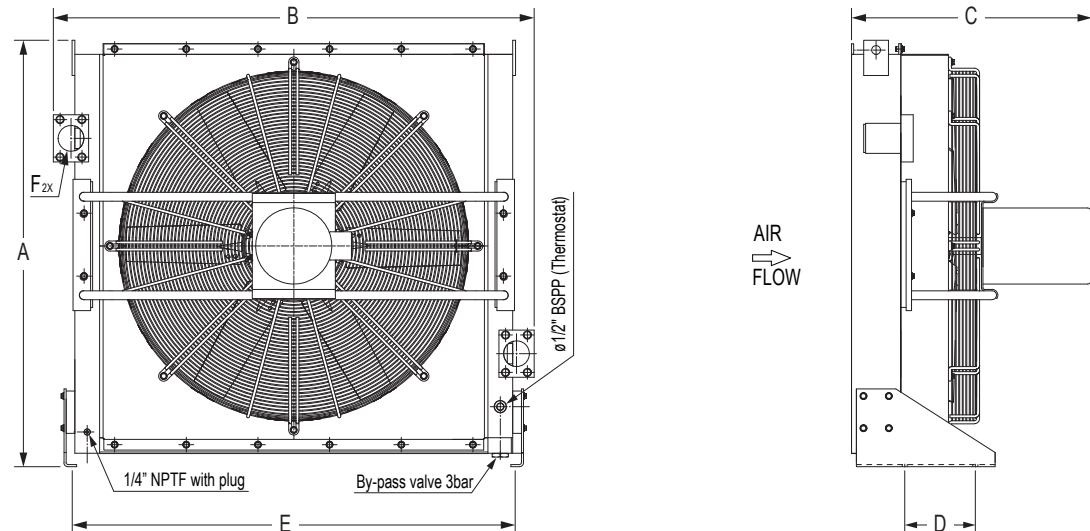
MODEL	UNIT OF MEASURE	Overall Dimensions			Mounting		Oil Connections		dB(A)	Tech. Data						
		A	B	C* Approx.	D	E	F			NET WEIGHT LBS						
							BSPP	JIC		1 Phase	3 Phase					
HPV 12	(inch)	15.74	14.05	15.19	7.87	5.90	1"	# 16	75	41	42					
	(mm)	400	357	386	200	150										
HPV 18	(inch)	20.07	17.91	16.00	7.87	7.87	1"	# 16	78	59	57					
	(mm)	510	455	406	200	200										
HPV 24	(inch)	21.06	17.91	17.29	9.84	7.87	1.25"	# 20	78	74	71					
	(mm)	535	455	439	250	200										
HPV 25	(inch)	25.59	23.82	15.95	7.87	15.74						1.25"	# 20	79	84	80
	(mm)	650	605	405	200	400										
HPV 30	(inch)	26.97	18.46	17.09	9.84	7.87						1.25"	# 20	80	94	89
	(mm)	685	469	434	250	200										
HPV 36	(inch)	30.90	24.17	18.20	9.84	12.20						1.25"	# 20	85	134	129
	(mm)	785	614	462	250	310										
HPV 42	(inch)	36.81	24.02	18.60	9.84	12.20	1.25"	# 20	85	174	166					
	(mm)	935	610	472	250	310										
HPV 50	(inch)	37.59	28.64	21.59	9.84	15.74	1.50"	# 24	85	223	246					
	(mm)	955	727	548	250	400										
HPV 52	(inch)	37.59	28.67	22.44	9.84	15.74	1.50"	# 24	85	245	240					
	(mm)	955	728	570	250	400										



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

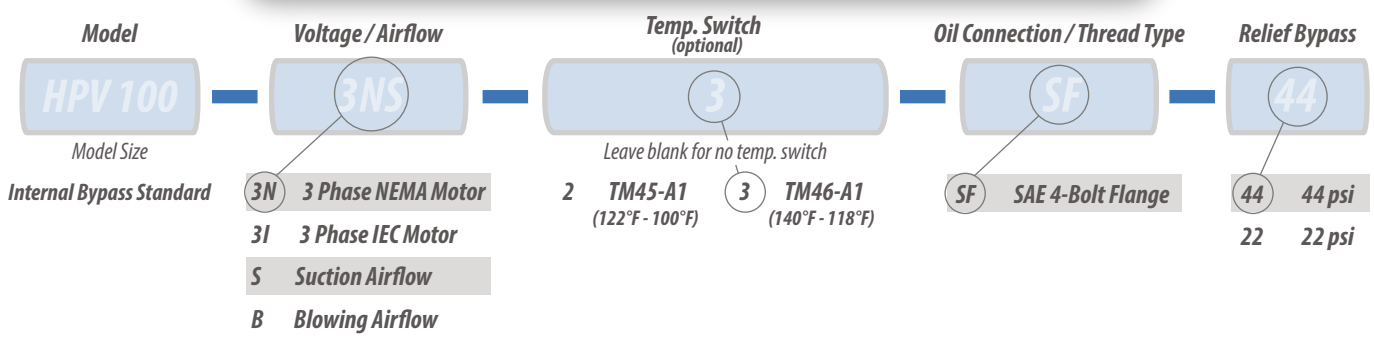
* C dimension varies with motor type and displacement.

HPV 100 - 250 Series II 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. 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	3" 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



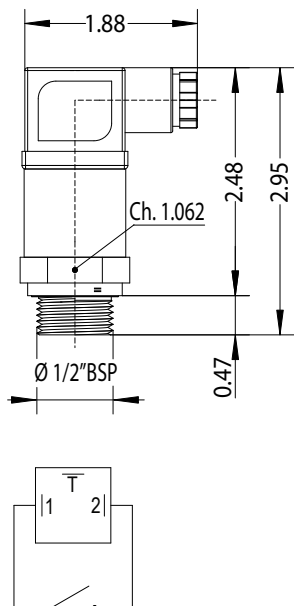
EMMEGI Model	Catalog Motor Code	HP KW @ 50Hz	RPM	Motor Frame	Operating Voltage - Frequency	Phase	Thermal Protection	Full Load Amps
2015K & KBV 2020K & KBV	1NS	0.33	3450	NEMA 56SC	115-208-230V 60Hz	1	No	5.2 / 2.87-2.60
	1IS	0.33	3400	IEC 63	115-208/230V 60Hz		No	3.1 / 1.40-1.55
	3IS	0.25	3430	IEC D63C	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	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			
HPH & HPV 42	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 : ½ BSP (seal included)
Max pressure : 2900 PSI
Mounting : in any position
Weight : 2.5 oz.

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

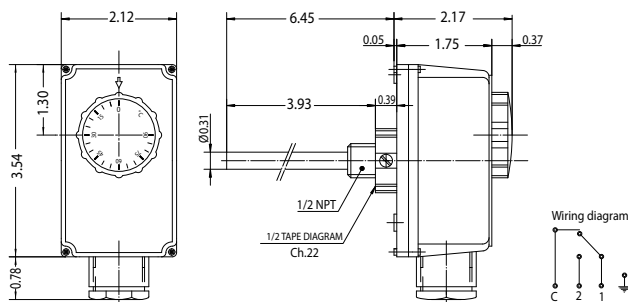
Normally closed switches are available: Consult factory.

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

Optional Temperature Controls

Adjustable Thermostat TC2



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

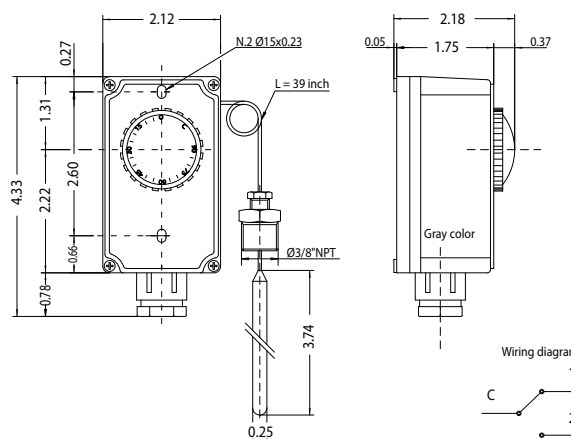
Unipolar, liquid filled, encased, switch contacts, immersion thermostat, bulbwell included.

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



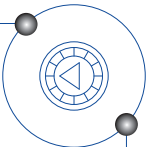
Part Number	Temperature range	Model Code Feature Adder
TC2 L39	0 - 194°F	- 9

Technical Data

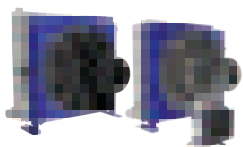
Temperature range: 0 - 194°F
Differential: ΔT 5.4°F;
Contacts rating: 10(2.5)A/230V
Fairlead: M20x1.5 mm;
Max. head temperature: 176°F
Max. sensing bulb temperature: 302°F
Temperature rate of change: 1 K/min
Degree of protection: IP 40
 Silver contacts



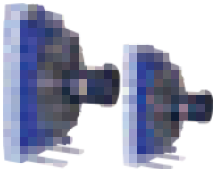
Product Lines



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.

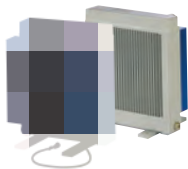


HPV Series II AC Motors
Heat Removals to 265 HP.
Internal Bypass Valve Standard.
Totally Enclosed Motors.
Oil Flows to 350 GPM.

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.

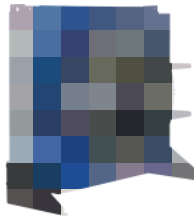
Hydraulic Fan Driven



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.

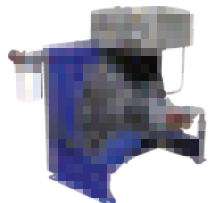


HPV Series II Hydraulic Motors
Heat Removals to 300 HP.
Optional Internal Bypass Valve.
Oil Flows to 350 GPM.

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.

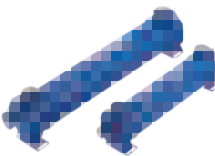


HPA TK
Combination reservoir, oil cooler, & suction filter.
Ideal for closed loop hydrostatic cooling.

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.



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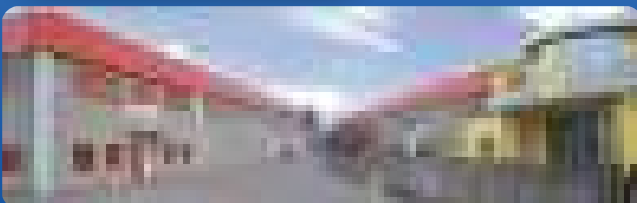


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