

BOL/BOLR Series – Industrial Air Cooled Brazen Aluminum Coolers Series

BOL Series provides outstanding heat dissipation for extreme heat loads in a rugged, lightweight and compact design. Available with AC or hydraulic fan motors, all feature proven brazen aluminum bar and plate core technology engineered with an aggressive turbulator that produces ultra-high heat transfer.

TTP's exclusive TBar extruded tube cores are also available for high viscosity oil application to reduce pressure drop.

Available with two bypass options, either pressure bypass or temperature/pressure bypass. The internal bypass option eliminates extra piping reducing costs, and helps the cooler come out of bypass faster in cold start applications.

TTP's XSelector® sizing program can be used to help optimize the sizing of the cooler for better performance and value.



Options
Low noise
Serviceable internal pressure and temperature bypass

How to Order

Model Series

BOL
BOLR - Internal bypass included*
*Not available in BOLR-2500/4000

Model Size Selected

8, 16, 30, 400, 550, 725, 825, 950, 1100, 1200, 1600, 1800, 2000, 2500, 4000
(See Performance Curve Chart on page 2)

Connection Type

1 - NPT
2 - SAE*
3 - BSPP
*1800 thru 4000 are SAE4-bolt flange

Bypass Setting**

Blank - No Bypass
25 - 25 PSI (1.7 Bar) Pressure Bypass
60 - 60 PSI (4.1 Bar) Pressure Bypass
110 - 110F/60 PSI (43C/4.1 Bar) Thermal/pressure relief bypass
* This is a partial flow pressure bypass only. It is not designed to be a full flow system bypass.

Specify Motor Required

2 - Single Phase
3 - Three Phase
6 - 575V Three Phase
9 - Hydraulic
11 - Explosion Proof*
18 - IEC Three Phase
C - Core Only
0 - No Motor***

Core Type

Blank - Standard Brazen Aluminum
TB - Consult factory

Low Noise Option

Blank - Standard Configuration
LN - Low Noise Option
(See LN Performance Curve Chart on page 3)

Features

Bar and plate brazen aluminum core technology

Provides the best heat transfer per given envelope size while minimizing pressure drop

Air-side fin design minimizes fouling and static pressure ensuring long-term, reliable performance

Welded fittings/ports and manifolds ensure structural integrity

Standard SAE ports – NPT & BSPP available

Ratings

Maximum Operating Pressure
250 PSI (17 BAR)

Maximum Operating Temperature
300°F (150°C)

Fluid Compatibility

Petroleum/Mineral Oils
Oil/Water Emulsion

Materials

Mounting Feet Steel
Core Aluminum
Fanguard Steel
Connectors Aluminum

Customized units are available to meet your OE specific performance requirements

Optional internal pressure and temperature/pressure bypass

Low noise versions offer reduced speed motors for lower dBA levels

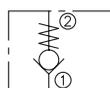
Heat Rejection
5 HP(4kW) to 550 HP (410 kW)

Flow Rates
2 GPM (7.6 lpm) to 360 GPM (1363 lpm)

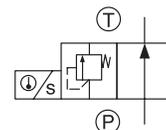
Water/Ethylene Glycol

Fan Aluminum Hub, Plastic Blades
Shroud Steel
Motor TEFC & IEC

Internal Bypass Options



Pressure Bypass



Temperature Controlled Bypass with Integrated Pressure Relief

* To register for XSelector® please go to www.thermaltransfer.com/get-in-touch/ and complete the XSelector® Inquiry form and submit.

Download the XSelector® for both Apple and Android formats by searching for XSelector® in their App Stores. You must first register for XSelector® before using it on mobile devices.

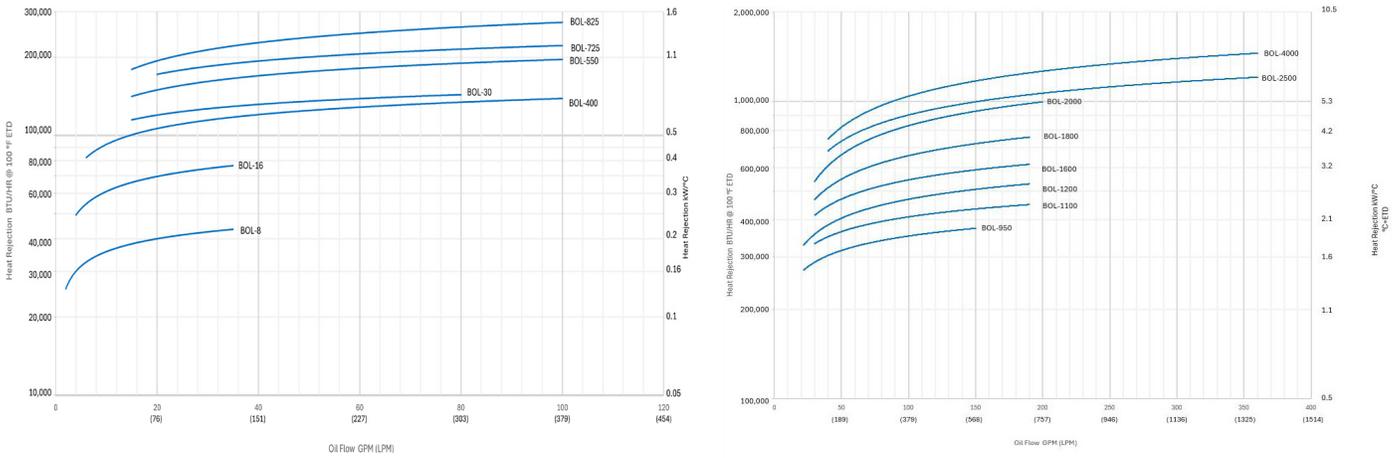
+ For Explosion Proof motor option consult the factory. Specify the Division, Class, and Group requirements for quoting.

*** 0 - No Motor option includes NEMA mounting and fan compatible component. For IEC version, please contact factory

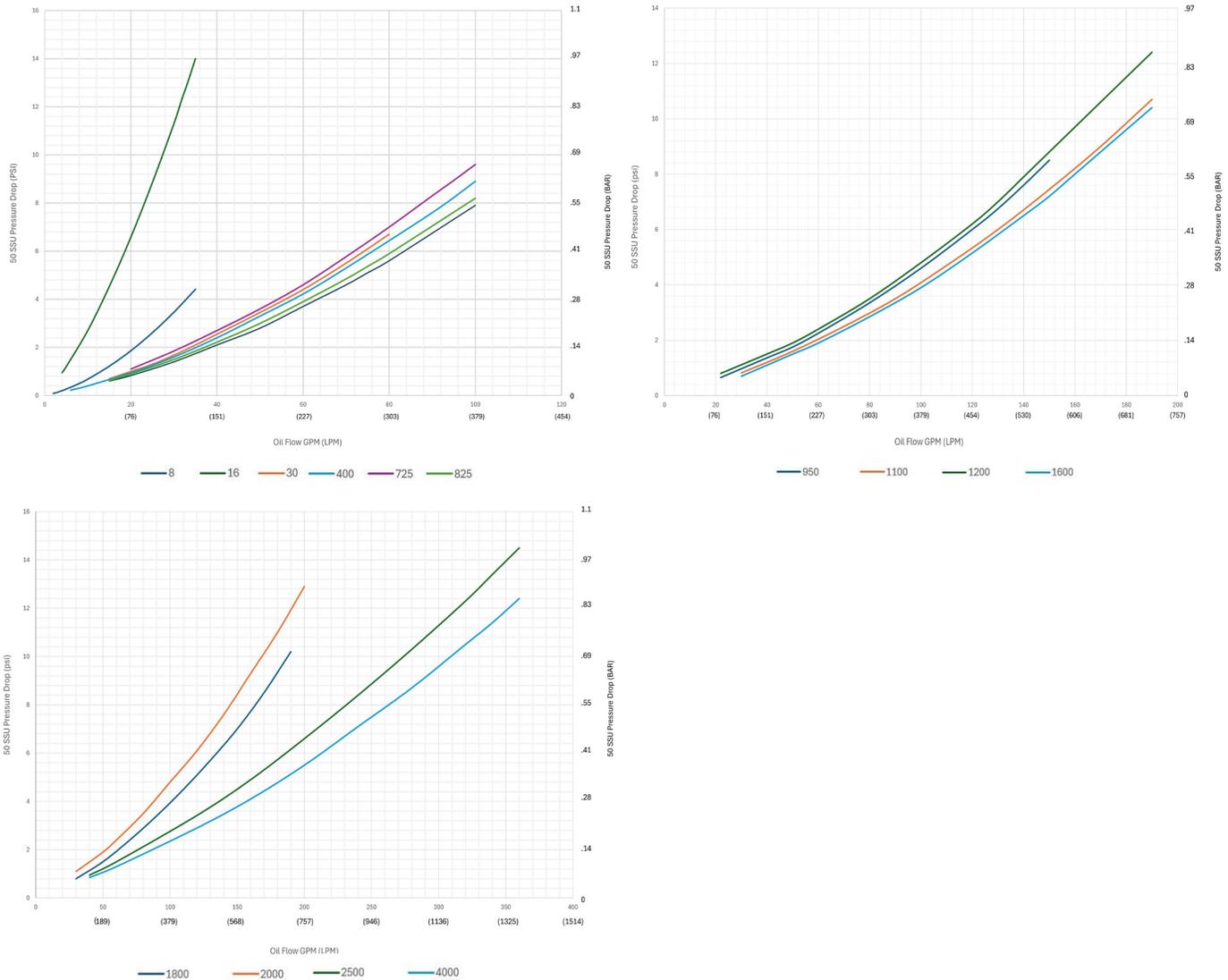
Performance Curves

For additional sizing information consider using TTP's **XSelector®** online sizing Program.*

BOL/BOLR Models with Standard P-BAR Core Performance



BOL/BOLR Models with Standard P-BAR Core Pressure Drop



Note: Derate heat rejection values 15% if using 50 HZ motors.

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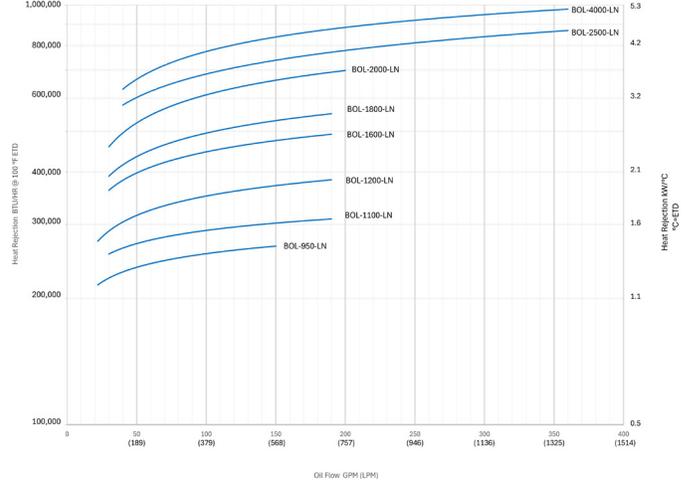
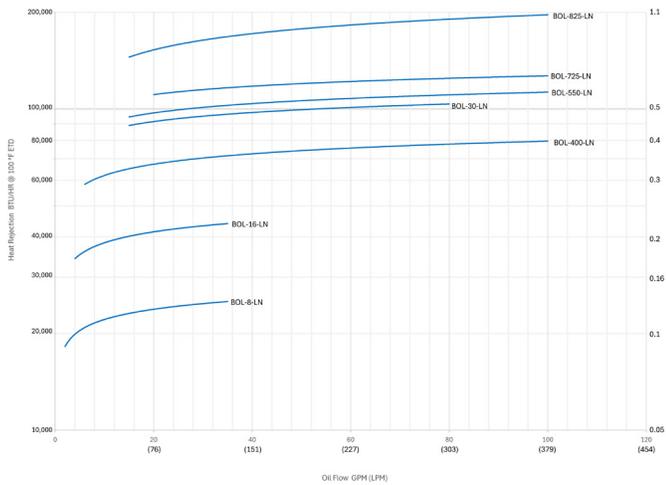
Download the **XSelector®** for both Apple and Android formats by searching for **XSelector®** in their App Stores. You must first register for **XSelector®** before using it on mobile devices.

Performance Curves

For additional sizing information consider using TTP's **XSelector®** online sizing Program.*

BOL Models with Low-Noise Option

The low noise option offers the BOL models with a reduced motor speed. This allows a lower sound level output for noise-sensitive applications.



Available on 60 HZ Nema frame only.

LN (Low Noise) Information (60 HZ Nema Frame)

Note: Derate heat rejection values 15% if using 50 HZ motors.

Model	CMM	CFM	Motor HP	Voltage	Phase	Full Load Amps 230V	RPM	Frame	Sound dB(A) at 3 FT
BOL-8	11	400	1/3	115/230	1	3.0	1725	48C	62
				208-230/460	3	1.4			
BOL-16	20	704	1/2	115/230	1	3.7	1725	48C	69
				208-230/460	3	2.2			
BOL-30	42	1470	1/2	115/230	1	3.7	1160	56C	67
				208-230/460	3	2.0			
BOL-400	31	1100	1	115/230	1	6.0	1725	56C	72
				208-230/460	3	3.2			
BOL-550	45	1582	1	115/230	1	6.3	1725	56C	85
				230/460	3	3.2			
BOL-725	50	1780	1-1/2	115/230	1	8.5	1725	56C	82
				208-230/460	3	4.8			
BOL-825	84	2950	1-1/2	115/230	1	10.0	1140	143TC	78
				230/460	3	4.8			
BOL-950	89	3150	1-1/2	115/230	1	8.6	1160	145TC	76
				208-230/460	3	4.6			
BOL-1100	104	3680	1-1/2	230/460	3	4.8	1160	182TC	75
				115/230	1	8.2		184TC	
BOL-1200	133	4690	1-1/2	115/230	1	8.2	1160	184TC	75
				208-230/460	3	4.8		182TC	
BOL-1600	184	6000	2	208-230/460	3	6.6	1160	184TC	78
BOL-1800	192	6778	3	230/460	3	9.2	1160	213TC	84
BOL-2000	246	8700	5	230/460	3	14.4	1160	213TC	85
BOL-2500	296	10450	5	230/460	3	14.4	1160	213TC	94
BOL-4000	328	11575	5	230/460	3	14.4	1165	213TC	96

Low noise ratings are lab tested in a 1/4 spherical pattern. Additional nearby objects can increase the sound level.

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Specifications

Standard BOL (60 HZ Nema Frame)

Model	CMM	CFM	Motor HP	Voltage	Phase	Full Load Amps 230V	RPM	Frame	Sound dB(A) at 3 FT
BOL-8	22.65	800	1/3	115/230	1	3.0	3450	48C	80
	22.65	800	1/3	208-230/460	3	1.4	3450	48C	80
BOL-16	40.35	1425	1/2	115/230	1	3.7	3450	48C	85
	40.35	1425	1/2	208-230/460	3	2.2	3450	48C	85
BOL-30	62.29	2200	1/2	115/230	1	3.7	1725	56C	85
	62.29	2200	1/2	208-230/460	3	2.0	1725	56C	85
BOL-400	62.29	2200	1	115/230	1	6.0	3450	56C	97
	62.29	2200	1	208-230/460	3	3.2	3450	56C	97
BOL-550	90	3175	1 1/2	208-230/460	3	1.9/3.8	3450	56C	100
				115/230	1	8.0/16.0			
BOL-725	101.94	3600	1-1/2	115/230	1	8.5	3450	56C	100
	101.94	3600	1-1/2	208-230/460	3	4.8	3450	56C	100
BOL-825	130	4600	3	208-230/460	3	4.2/8.4	1760	143TC	87
BOL-950	133.10	4700	1-1/2	115/230	1	8.6	1725	145TC	92
	133.10	4700	1-1/2	208-230/460	3	4.6	1725	145TC	92
BOL-1100	163	5750	3	208-230/460	3	4.2/8.4	1760	182TC	86
BOL-1200	198.22	7000	5	230	1	23	1740	184TC	92
	198.22	7000	3	208-230/460	3	8.8	1725	182TC	94
BOL-1600	223.75	7900	5	208-230/460	3	13.4	1725	184TC	96
BOL-1800	289	10225	7.5	208-230/460	3	9.5/19	1760	213TC	93
BOL-2000	396.44	14000	7.5	230/460	3	24.8	1725	213TC	98
BOL-2500	453	16000	10	208-230/460	3	12.5/25	1760	213TC	103
BOL-4000	538	19000	10	208-230/460	3	12.5/25	1760	213TC	105

For 575 Volt motor data please consult the factory

Electric Motor Information (50 HZ IEC Frame)

Model	CMM	CFM	KW	Voltage	Phase	Full Load Amps 230 V	RPM	Frame	Sound dBA at 3 FT
BOL-8	18.9	667	.25	230/400/415	3	50 HZ	3000	63	71
BOL-16	33.7	1188	.37	230/400/415	3	50 HZ	3000	71	77
BOL-30	52.4	1850	.37	230/400/415	3	50 HZ	1500	71	73
BOL-400	52.4	1850	.75	230/400/415	3	50 HZ	3000	80	81
BOL-550	CF	CF	CF	230/400/415	3	CF	3000	CF	CF
BOL-725	85.0	3000	1.10	230/400/415	3	50 HZ	3000	80	80
BOL-825	CF	CF	CF	230/400/415	3	CF	1500	CF	CF
BOL-950	108.2	3821	1.50	230/400/415	3	50 HZ	1500	90	78
BOL-1100	CF	CF	CF	230/400/415	3	CF	1500	CF	CF
BOL-1200	165.1	5834	2.20	230/400/415	3	50 HZ	1500	100	83
BOL-1600	186.4	6584	3.00	230/400/415	3	50 HZ	1500	100	85
BOL-1800	CF	CF	CF	230/400/415	3	CF	1500	CF	CF
BOL-2000	331.3	11700	4.00	230/400/415	3	50 HZ	1500	112	88
BOL-2500	CF	CF	CF	230/400/415	3	CF	1500	CF	CF
BOL-4000	CF	CF	CF	230/400/415	3	CF	1500	CF	CF

Hydraulic Motor Information

Model	RPM	GPM	LPM	Min PSI	Min BAR	Motor Displacement (in ³ /rev)	Motor Displacement (cm ³ /rev)	Sound dB(A) @ 3 Ft
BOL-8	3450	3.8	14.38	171	11.76	0.24	3.88	80
BOL-16	3450	3.8	14.38	171	11.76	0.24	3.88	85
BOL-30	1725	4	15.14	240	16.55	0.51	8.40	85
BOL-400	3450	3.8	14.38	512	35.29	0.24	3.88	97
BOL-550	3450	3.8	14.38	767	52.93	0.24	3.88	100
BOL-725	3450	3.8	14.38	767	52.93	0.24	3.88	100
BOL-825	1760	12	45.42	505	34.83	1.39	22.80	87
BOL-950	1725	12	45.42	260	17.93	1.39	22.80	92
BOL-1100	1760	12	45.42	505	34.83	1.39	22.80	86
BOL-1200	1725	12	45.42	855	58.97	1.39	22.80	94
BOL-1600	1725	12	45.42	855	58.97	1.39	22.80	96
BOL-1800	1760	12	45.42	1285	88.62	1.39	22.80	93
BOL-2000	1760	12	45.42	1285	88.62	1.39	22.80	98
BOL-2500	1760	12	45.42	1680	115.86	1.39	22.80	103
BOL-4000	1760	12	45.42	1680	115.86	1.39	22.80	105

Notes: Maximum Pressure is 2000 PSI. Stated Minimum Operating Pressure is at Inlet Port of Motor. 1000 PSI Allowable Back Pressure.

Selection Procedure

STEP 1 Determine Heat Load. Typical application, size cooler for 1/3 of the input horsepower. Heat load may be expressed as either Horsepower or BTU/HR or KW/°C.

$$HP = \text{BTU/HR} \div 2545$$

$$KW = HP \times .745$$

$$\text{BTU/HR} = HP \times 2545$$

STEP 2 Determine Entering Temperature Difference.
(Actual ETD)

$$\text{ETD} = \text{Entering oil temperature} - \text{Entering Ambient air temperature}$$

The entering oil temperature is generally the maximum desired system oil temperature.

Entering air temperature is the highest Ambient Air temperature the application will see.

STEP 3 Determine the Corrected Heat Dissipation to use the Curves

ENGLISH Version

$$\text{Corrected Heat Rejection} = \frac{\text{Heat Load (BTU/HR)}}{\text{Desired ETD}} \times \frac{100^\circ\text{F}}{100^\circ\text{F}}$$

(BTU/HR) to use with selection chart

STEP 4 Select Model From Curves Enter the Performance Curves at the bottom with the GPM oil flow and proceed upward to the adjusted Heat Rejection from Step 3. Any Model or Curve on or above this point will meet these conditions.

STEP 5 Calculate Oil Pressure Drop Find the oil pressure drop correction factor and multiply it by the Oil Pressure Drop found on performance curve.

Listed Performance Curves are based on:

- 50 SSU (11 cSt) oil
- 100°F (55.56°C) Entering Temperature Difference (ETD)

If your application conditions are different, then continue with the selection procedure.

Oil Temperature

Typical operating temperature ranges are:

Hydraulic Motor Oil	120°F - 180°F (49°C - 82.2°C)
Hydrostatic Drive Oil	160°F - 180°F (71°C - 82.2°C)
Engine Lube Oil	180°F - 200°F (82.2°C - 93.3°C)
Automatic Transmission Fluid	200°F - 300°F (93.3°C - 149°C)

Desired Reservoir Temperature

Oil Temperature: Oil coolers can be selected using entering or leaving oil temperatures.

Off-Line Recirculation Cooling Loop: Desired reservoir temperature is the oil temperature entering the cooler.

Return Line Cooling: Desired reservoir temperature is the oil temperature leaving the cooler. In this case, the oil temperature change must be determined so that the actual oil entering temperature can be found. Calculate the oil temperature change (oil ΔT) with this formula:

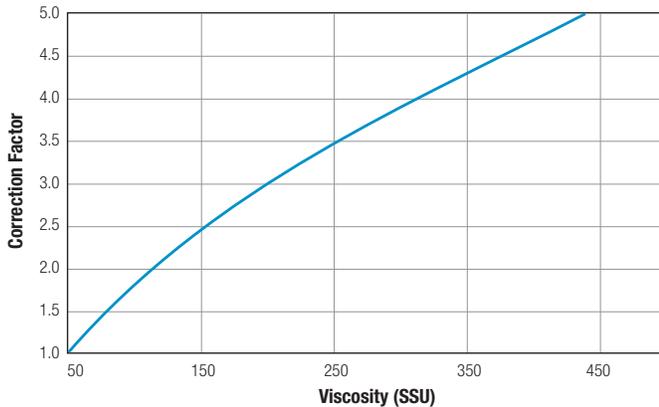
$$\text{Oil } \Delta T = (\text{BTU's/HR}) / (\text{GPM Oil Flow} \times 210).$$

To calculate the oil entering temperature to the cooler, use this formula:

$$\text{Oil Entering Temp.} = \text{Oil Leaving Temp.} + \text{Oil } \Delta T.$$

Oil Pressure Drop: Most systems can tolerate a pressure drop through the heat exchanger of 20 to 30 PSI. Excessive pressure drop should be avoided. Care should be taken to limit pressure drop to 5 PSI or less for case drain applications where high back pressure may damage the pump shaft seals.

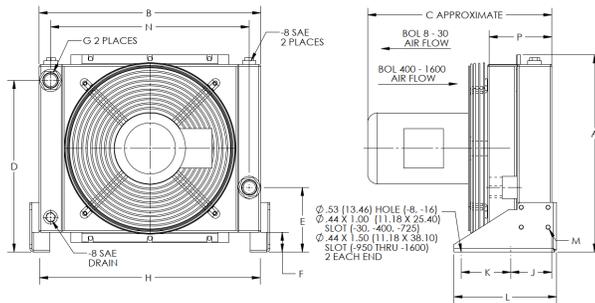
Pressure Drop



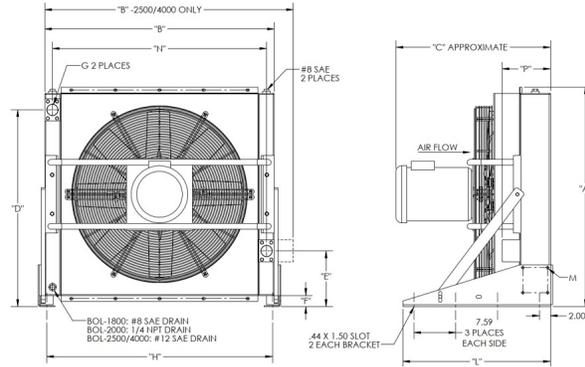
Dimensions

For 3D models and spec sheets visit the BOL product page on our website.
<https://www.thermaltransfer.com/product/bol-series>

BOL-8 through BOL-1600



BOL-1800 through 4000



BOL Dimensions

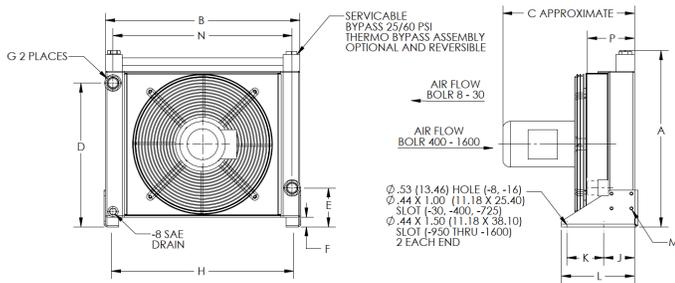
MODEL	A	B	C APPROX.	D	E	F	G	H	J	K	L	M	N	P	APPROX SHIP WEIGHT
BOL-8	13.13 (334)	15.81 (402)	15.94 (405)	11.34 (288)	4.51 (115)	0.57 (14)	1 1/16-12	14.44 (361)	3.36 (85)	3.74 (95)	7.87 (200)	M8 BOLT (4PL)	13.99 (355)	3.63 (92)	45.00 (20.4)
BOL-16	16.91 (429)	19.69 (500)	16.43 (417)	15.06 (383)	4.51 (115)	0.57 (14)	1 1/16-12	18.31 (465)	3.35 (85)	3.74 (95)	7.87 (200)	M8 BOLT (4PL)	17.95 (456)	3.63 (92)	55.00 (24.94)
BOL-30	21.46 (545)	26.38 (670)	17.88 (454)	19.49 (495)	5.26 (134)	1.32 (340)	1 5/8-12	24.74 (628)	4.63 (117)	5.00 (127)	10.38 (264)	M8 BOLT (8PL)	24.34 (618)	5.00 (127)	125.00 (56.70)
BOL-400	19.91 (506)	22.38 (568)	18.60 (472)	17.31 (440)	6.50 (165)	2.00 (51)	1 5/8-12	22.23 (564)	4.63 (117)	5.00 (127)	10.38 (264)	M10 BOLT (8PL)	20.07 (510)	5.00 (127)	148.00 (67.13)
BOL-550	25.13 (638.3)	24.88 (632.0)	18.89 (479.8)	22.43 (569.7)	6.50 (165.1)	2.00 (50.8)	1 5/8-12	24.74 (628.4)	4.63 (117.6)	5.00 (127)	10.38 (263.7)	M10 BOLT (8PL)	22.58 (573.5)	5.00 (127)	160.00 (72.6)
BOL-725	24.32 (618)	30.25 (768)	17.56 (446)	21.62 (549)	6.50 (165)	2.00 (51)	1 5/8-12	30.11 (765)	4.63 (117)	5.00 (127)	10.38 (264)	M10 BOLT (8PL)	27.95 (710)	5.00 (127)	170.00 (77.11)
BOL-825	26.99 (685.5)	28.81 (731.8)	23.55 (598.2)	24.29 (617.0)	6.50 (165.1)	2.00 (50.8)	1 5/8-12	28.67 (728.2)	6.42 (163.1)	9.20 (233.7)	16.37 (415.8)	M10 BOLT (8PL)	26.51 (673.4)	5.00 (127)	215.00 (97.5)
BOL-950	28.65 (728)	37.01 (940)	22.68 (576)	24.55 (624)	9.50 (241)	2.00 (51)	2" SAE 4 BOLT FLANGE	35.87 (911)	6.42 (163)	9.20 (234)	16.37 (416)	M10 BOLT (8PL)	34.26 9870)	7.00 (178)	300.00 (136.08)
BOL-1100	31.29 (794.8)	35.05 (890.3)	27.09 (688.1)	27.19 (690.6)	6.10 (154.94)	2.00 (50.8)		33.91 (861.3)	6.42 (163.1)	9.20 (233.7)	16.37 (415.8)	M10 BOLT (8PL)	32.25 (819.2)	8.75 (222.3)	340.00 (154.2)
BOL-1200	28.97 (736)	40.98 (1041)	24.05 (611)	24.55 (624)	5.50 (140)	2.00 (51)		40.29 (1023)	6.42 (163)	9.20 (234)	16.37 (416)	M10 BOLT (8PL)	38.18 (970)	8.75 (222)	430.00 (195.04)
BOL-1600	37.08 (942)	40.98 (1041)	25.43 (646)	32.80 (833)	9.50 (241)	2.00 (51)		40.31 (1024)	6.42 (163)	9.20 (234)	16.37 (416)	M10 BOLT (8PL)	38.18 (970)	8.75 (222)	515.00 (233.60)
BOL-1800	39.50 (1003.3)	41.66 (1058.2)	28.00 (711.2)	35.4 (899.2)	10.00 (254)	2.00 (50.8)		40.98 (1040.9)	2.00 (50.8)	7.59 (192.8)	26.76 (679.7)	M10 BOLT (8PL)	38.86 (987.0)	8.75 (222.3)	555.00 (251.7)
BOL-2000	39.61 (1006)	50.80 (1289.0)	26.80 (680.0)	35.30 (897.0)	10.00 (254)	2.00 (50.8)		50.20 (1274.0)	2.00 (50.8)	7.60 (193)	26.80 (680.0)	M10 BOLT (8PL)	48.10 (1220.0)	8.80 (222.5)	582.00 (264.0)
BOL-2500	48.06 (1220.7)	47.53 (1207.3)	30.08 (764.0)	42.96 (1091.2)	11.50 (292.1)	2.00 (50.8)	3" SAE 4 BOLT FLANGE	46.85 (1190.0)	2.00 (50.8)	7.59 (192.8)	26.76 (679.7)	M10 BOLT (8PL)	51.73 (1313.9)	9.77 (248.2)	670.00 (303.9)
BOL-4000	60.93 (1547.6)	51.72 (1313.7)	30.08 (764.0)	55.76 (1416.3)	11.57 (293.9)	2.07 (52.6)	3" SAE 4 BOLT FLANGE	51.33 (1303.8)	2.00 (50.8)	7.59 (192.8)	26.76 (679.7)	M10 BOLT (8PL)	55.92 (1420.4)	9.77 (248.2)	830.00 (376.4)

Note: We reserve the right to make reasonable design changes without notice. All dimensions are in inches (millimeters) unless otherwise noted.

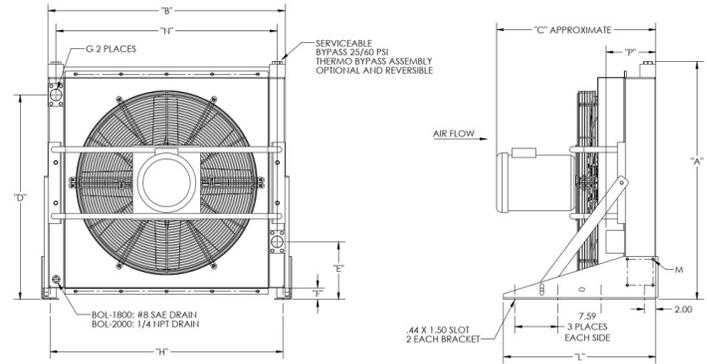
Dimensions with Internal Pressure Bypass

For 3D models and spec sheets visit the BOL product page on our website.
<https://www.thermaltransfer.com/product/bol-series>

BOLR-8 – BOLR-1600



BOLR-1800/2000



BOLR Dimensions

	Overall height	Overall width of core and tanks assy	Overall depth	Bottom of foot bracket to top port center	Bottom of foot bracket to bottom port center	Bottom of foot bracket to bottom of core	Sae conn size & style	Ctc of foot brackets' slots	Front of foot bracket to first slot center	Spacing b/w slots of foot brackets	Foot bracket depth	Hw callout foot brackets	Ctc ports across core horizontal	Front of core to face of ports (sae only)	APPROX SHIP WEIGHT
MODEL	A	B	C APPROX.	D	E	F	G	H	J	K	L	M	N	P	APPROX SHIP WEIGHT
BOLR-8	15.58 (396)	15.81 (402)	15.94 (405)	11.34 (288)	4.51 (115)	0.57 (14)	-12 1 1/16 -12	14.44 (361)	3.36 (85)	3.74 (95)	7.87 (200)	M8 Bolt (4PL)	13.99 (355)	3.63 (92)	60.00 (27.22)
BOLR-16	19.35 (492)	19.69 (500)	16.43 (417)	15.06 (383)	4.51 (115)	0.57 (14)	-12 1 1/16 -12	18.31 (465)	3.35 (85)	3.74 (95)	7.87 (200)	M8 Bolt (4PL)	17.95 (456)	3.63 (92)	70.00 (31.75)
BOLR-30	23.90 (607)	26.38 (670)	17.88 (454)	19.49 (495)	5.26 (134)	1.32 (34)	-20 1 5/8 -12	24.74 (628)	4.63 (117)	5.00 (127)	10.38 (264)	M8 Bolt (8PL)	24.34 (618)	5.00 (127)	140.00 (63.50)
BOLR-400	21.73 (552)	22.38 (568)	18.60 (472)	17.31 (440)	6.50 (165)	2.00 (51)	-20 1 5/8 -12	22.23 (564)	4.63 (117)	5.00 (127)	10.38 (264)	M10 Bolt (8PL)	20.07 (510)	5.00 (127)	162.00 (73.48)
BOLR-550	26.81 (681.0)	24.88 (632.0)	18.89 (479.8)	22.43 (569.7)	6.50 (165.1)	2.00 (50.8)	-20 1 5/8 -12	24.74 (628.4)	4.63 (117.6)	5.00 (127)	10.38 (263.7)	M10 BOLT (8PL)	22.58 (573.5)	5.00 (127)	160.00 (72.6)
BOLR-725	26.06 (662)	30.25 (768)	17.56 (446)	21.62 (549)	6.50 (165)	2.00 (51)	-20 1 5/8 -12	30.11 (765)	4.63 (117)	5.00 (127)	10.38 (264)	M10 Bolt (8PL)	27.95 (710)	5.00 (127)	185.00 (83.92)
BOLR-825	28.67 (728.2)	28.81 (731.8)	23.55 (598.2)	24.29 (617.0)	6.50 (165.1)	2.00 (50.8)	-20 1 5/8 -12	28.67 (728.2)	6.42 (163.1)	9.20 (233.7)	16.37 (415.8)	M10 BOLT (8PL)	26.51 (673.4)	5.00 (127)	215.00 (97.5)
BOLR-950	30.39 (772)	37.01 (940)	22.68 (576)	24.55 (624)	9.50 (241)	2.00 (51)	2" SAE 4 BOLT FLANGE	35.87 (911)	6.42 (163)	9.20 (234)	16.37 (416)	M10 Bolt (8PL)	34.26 (870)	7.00 (178)	315.00 (142.88)
BOLR-1100	32.97 (837.4)	35.05 (890.3)	27.09 (688.1)	27.19 (690.6)	6.10 (154.94)	2.00 (50.8)		33.91 (861.3)	6.42 (163.1)	9.20 (233.7)	16.37 (415.8)	M10 BOLT (8PL)	32.25 (819.2)	8.75 (222.3)	340.00 (154.2)
BOLR-1200	30.39 (772)	40.98 (1041)	24.05 (611)	24.55 (624)	5.50 (140)	2.00 (51)		40.29 (1023)	6.42 (163)	9.20 (234)	16.37 (416)	M10 Bolt (8PL)	38.18 (970)	8.75 (222)	445.00 (201.85)
BOLR-1600	38.50 (978)	40.98 (1041)	25.43 (646)	32.80 (833)	9.50 (241)	2.00 (51)		40.31 (1024)	6.42 (163)	9.20 (234)	16.37 (416)	M10 Bolt (8PL)	38.18 (970)	8.75 (222)	530.00 (240.40)
BOLR-1800	41.18 (1045.972)	41.66 (1058.2)	28.00 (711.2)	35.40 (899.2)	10.00 (254)	2.00 (50.8)		40.98 (1040.9)	2.00 (50.8)	7.59 (192.8)	26.76 (679.7)	M10 BOLT (8PL)	38.86 (987.0)	8.75 (222.3)	555.00 (251.7)
BOLR-2000	39.61 (1006)	50.80 (1289.0)	26.80 (680.0)	35.30 (897.0)	10.00 (254)	2.00 (50.8)		50.20 (1274.0)	2.00 (50.8)	7.60 (193)	26.80 (680.0)	M10 BOLT (8PL)	48.10 (1220.0)	8.80 (222.5)	582.00 (264.0)

Note: We reserve the right to make reasonable design changes without notice. All dimensions are in inches (millimeters) unless otherwise noted.