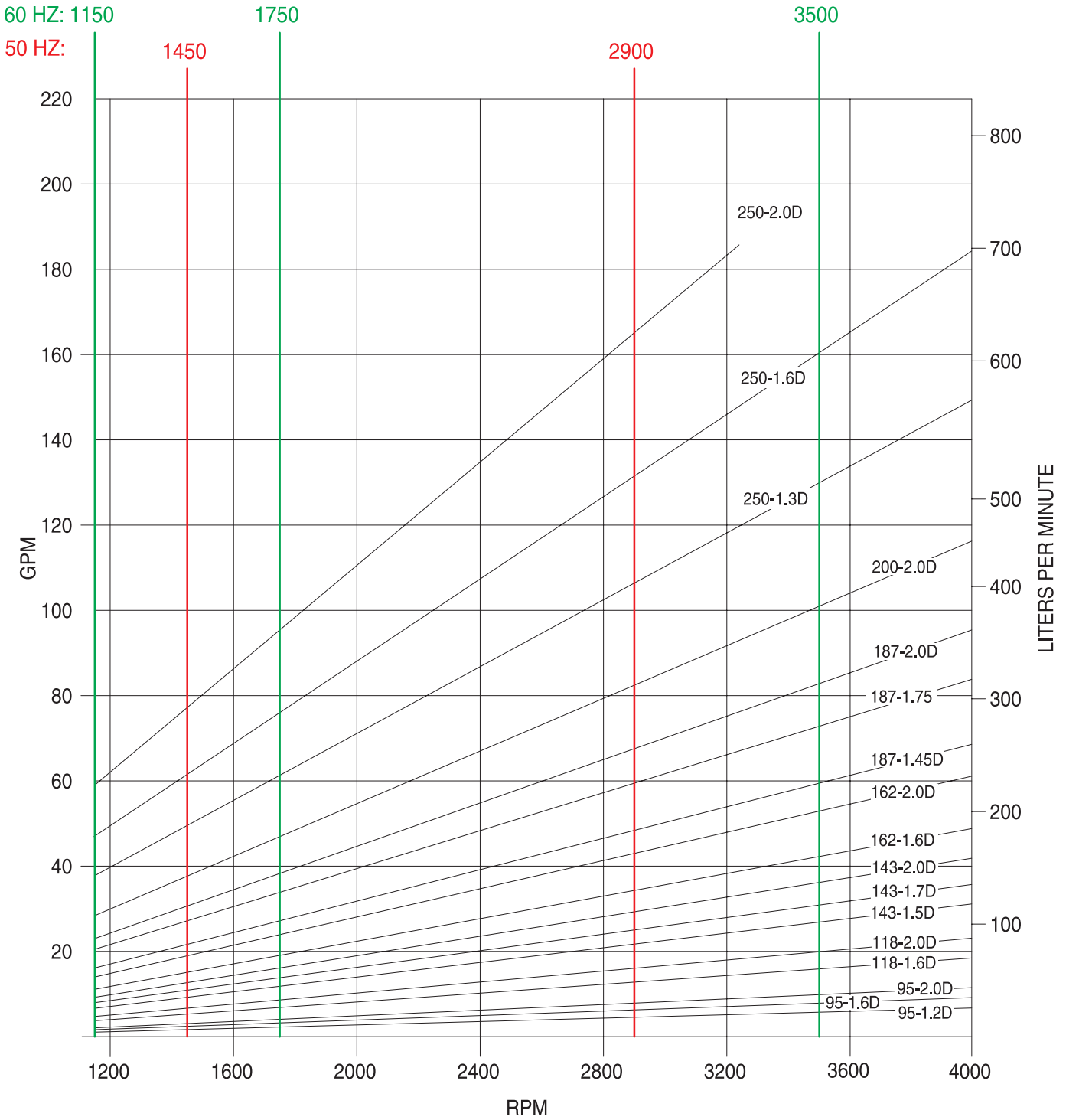


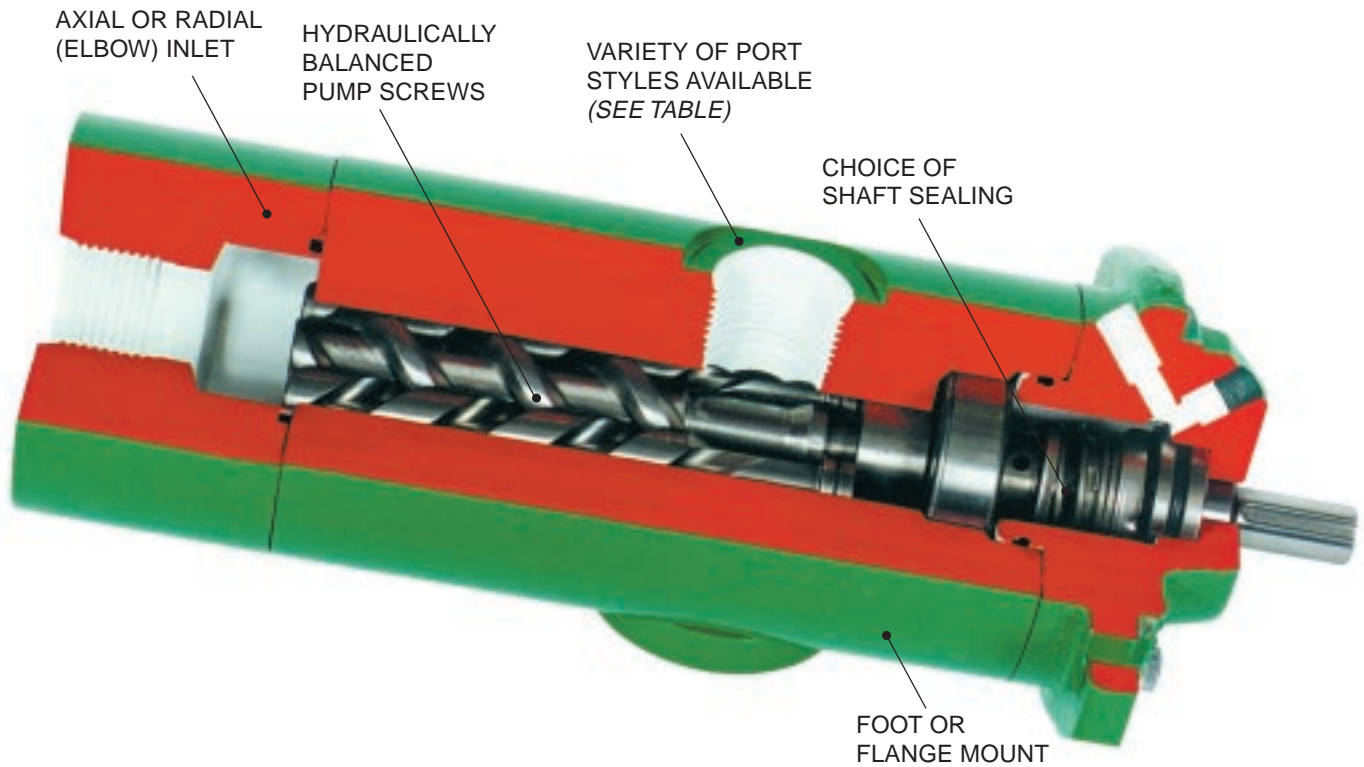


# 3G Series Three Screw Pumps

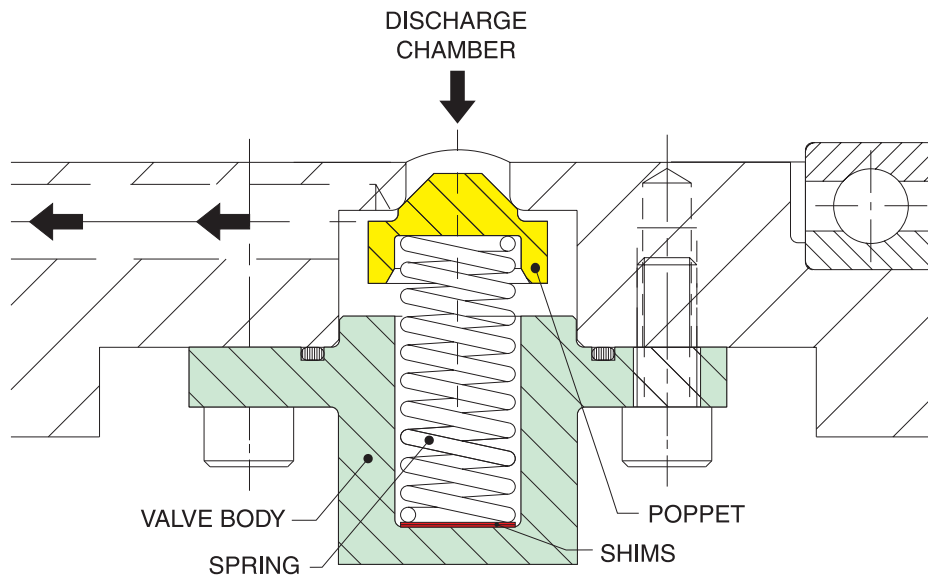
*The reliable pump people*

# Performance Shown at 150 PSID (10 BAR), 200 SSU (43 CST)





Shown Above: 3G-095, Flange Mount Iron Cased Axial Inlet, Built-In Relief Valve



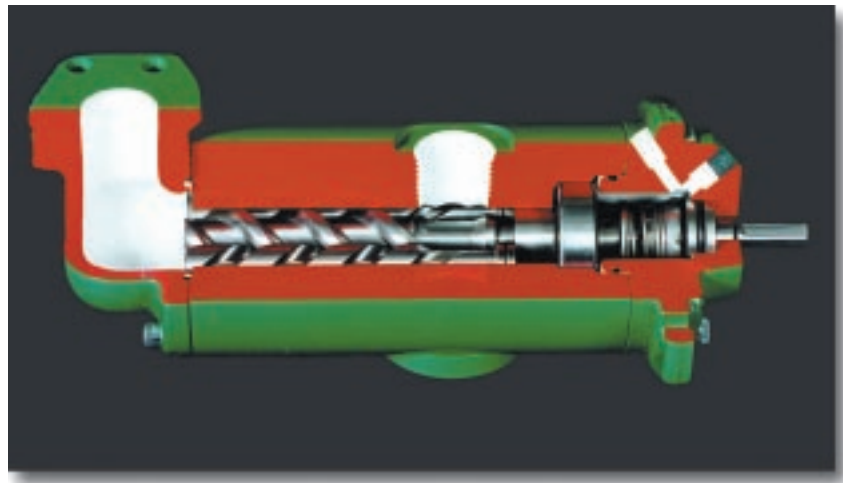
Shown Above: Tamper Resistant Optional Built-In Pressure Relief Valve for sizes 162 and smaller

The 3G series pump is intended for use in lubrication, hydraulic and control oil services such as those found on rotating machinery or other equipment needing forced lubrication, circulation, fluid transfer, distillate fuel burner or similar systems. This series is available in seventeen displacements fitted into five casing sizes. Pump casings are produced from cast iron with the option of cast steel.

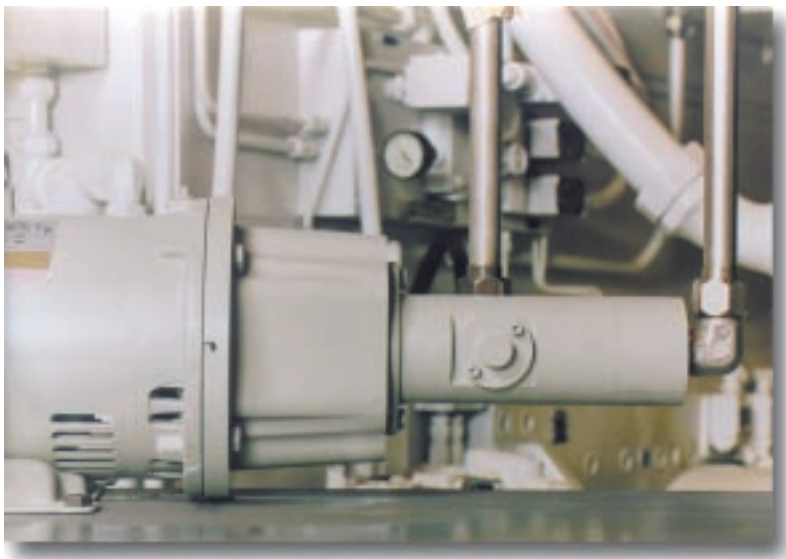
All pumps are fitted with mechanical shaft seals. Inlet porting can be either radial (elbow), rotatable in 90° increments, or axial. An internal tamper resistant relief valve is available as an option. Porting on the 95 through 162 rotor size pumps can be either SAE straight thread or SAE 4-bolt, Code 61, flange pad. Porting on the 187 through 250 pumps is SAE 4-bolt, Code 61, flange pad.

Steel case pumps are equipped with SAE 4-bolt flange pads. An optional in-line relief valve is also available. All SAE flange pads accept 4-bolt, O-ring sealed, Code 61 mating flanges of either socket weld or FNPT style.

Both iron and steel pumps are designed for flange mounting and can be provided with mating foot brackets or pump to motor (C-face) brackets. Flange or foot mounting on rotor sizes 95 through 162 and flange mounting on rotor sizes 187 through 250 allows the pump outlet port to be directed radially in 90° increments. Port options allow almost any global standard connection type. Units can also be supplied for vertical tank mounting.

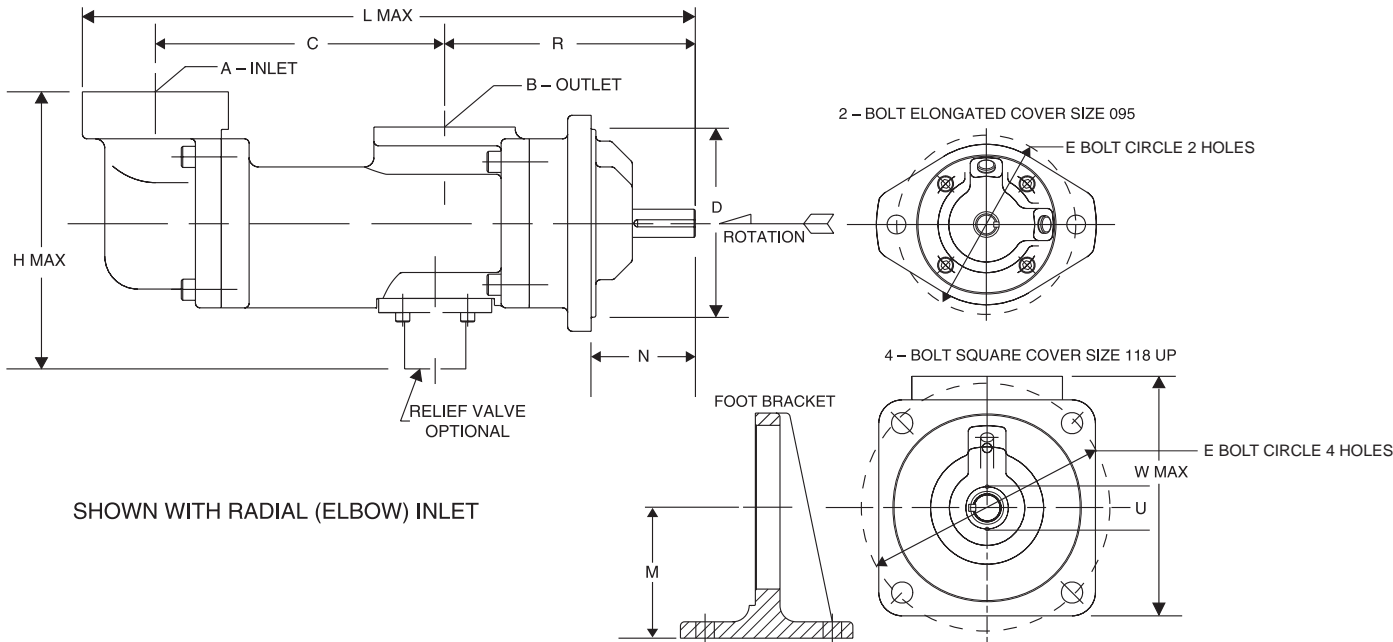


*3G095 with radial SAE pad inlet port*



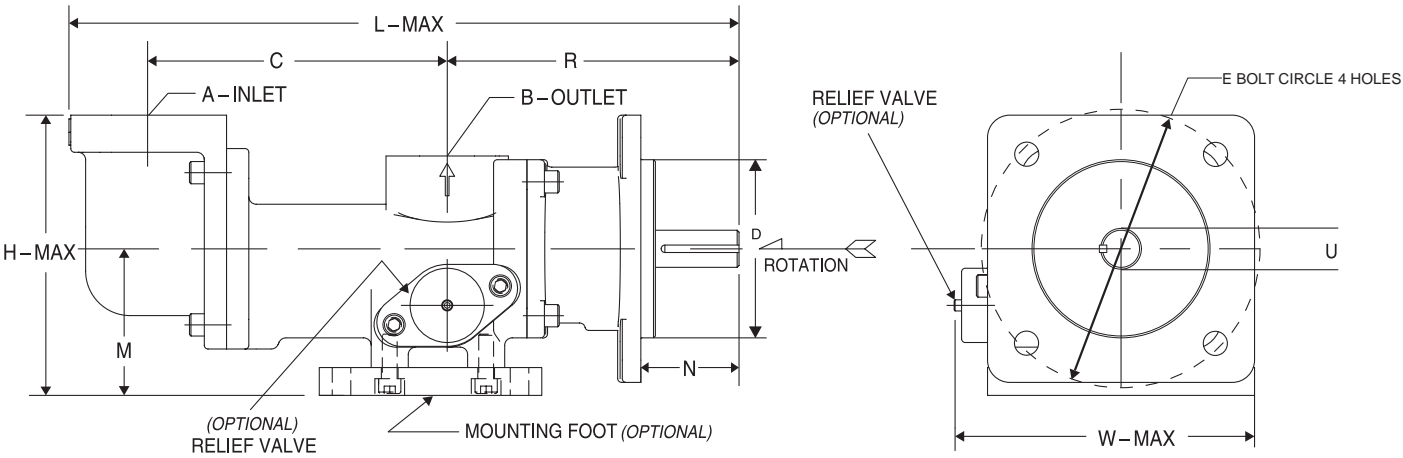
*3G095 mounted to a "C" face electric motor on lube oil service*

# 2-210 GPM (7-795 L/M) Pressure to 250 PSIG (17 Bar)



SHOWN WITH RADIAL (ELBOW) INLET

PUMP SIZE	A		B		C		D		E		H		L		M		N		R		U		W		WEIGHT*	
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	LBS.	KG
95	1	25.4	3/4	19	4.66	118.4	3.249	82.52	4.19	106.4	4.57	116.1	10.83	275.1	2.25	57.2	1.88	47.8	5.02	127.5	.5	12.7	5.25	133.4	18	8.0
118	1-1/2	38.1	1	25.4	6	152.4	5	127	6.38	162	5.76	146.3	13.91	353.3	4	101.6	2.80	71.1	6.19	157.2	.625	15.875	9	228.6	34	15.4
143/162	2	50.8	1-1/2	38.1	7.67	194.8	5	127	6.38	162	7.57	192.3	16.26	413.1	4	101.6	2.76	70.1	6.65	168.9	.75	19.05	7.75	196.9	44	20.0



PUMP SIZE	A		B		C		D		E		H		L		M		N		R		U		W		WEIGHT*	
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	LBS.	KG
187/200	3	76.2	2	50.8	10.06	255.5	6	152.37	9	228.6	9.44	239.8	22.52	572	4.94	125.5	3.31	84.1	9.84	249.9	1.250	31.75	5.62	142.7	117	53
250	4	101.6	2-1/2	63.5	12.61	320.3	6	152.37	9	228.6	10.19	258.8	25.84	656.3	4.94	125.5	3.31	84.1	10.21	259.3	1.250	31.75	5.62	142.7	131	59.4

\* Inlet and Outlet are SAE 4-bolt 3000 PSI flange pads.  
 \* Flange mounted version. Weights exclude port adapters and mounting foot bracket/plate.

For a more detailed view of the above referenced outline drawings, please refer to our website at <http://www.imo-pump.com>



- Casing** Cast iron or cast steel.
- Rotors** Power rotor is ductile (nodular) iron. Idler rotors are gray iron.
- Shaft Seal**
  - Type V: Fluoroelastomer bellows mechanical seal with carbon on ni-resist faces, fluoroelastomer O-rings, recommended for viscosities below 3000 SSU (650 CST) and distillate fuel oils.
  - Type H: Metal bellows balanced, positive drive mechanical seal with carbon on silicon carbide faces, fluoroelastomer O-rings, recommended for viscosities above 3000 SSU (650 CST) or for closer compliance with API.
  - Type J: Balanced, positive drive mechanical seal with neoprene O-rings for high inlet pressure / low differential pressure applications.
  - Type N: No shaft seal (must use mounting option I).

- Bearing** Internal, ball type.
- Relief Valve** Optional internal, tamper resistant, built-in pressure relief valve for viscosities not exceeding 1500 SSU (324 CST). Specify differential set pressure in 15 PSI (1.03 BAR) increments, i.e. 60, 75...210. **(This relief valve is intended for momentary protection for the pump against overpressure. It is not intended to be a system pressure control device).** Minimum set pressure is 60 PSID (4.1 BAR). Maximum set pressure is 210 PSID (14.5 BAR). An optional in-line relief valve with external return-to-tank connection is also available.

- Viscosity Range** 32 to 3000 SSU (2 to 650 CST) type "V" seal.  
32 to 15,000 SSU (2 to 3200 CST) type "H" seal.

- Inlet Pressure** 50 PSIG (3.4 BAR) normal maximum.  
300 PSIG (20.7 BAR) optional maximum (Contact factory).

- Outlet Pressure** 250 PSIG (17 BAR) maximum [(to 300 PSIG (20.7 BAR) with inlet at 50 PSIG (3.4 BAR)]. Operation at differential pressures below 40 PSI (2.8 BAR) may require pump modification- consult Imo Pump with full operating range data.

- Temperature** 0 to 225°F (-18 to 107°C)

- Drive/Rotation** Direct only. Clockwise facing pump shaft standard. Counterclockwise optional.

- Speed** Size 95: 5000 rpm maximum. Sizes 118-200: 4000 rpm maximum. Size 250 1.3D & 1.6D leads: 4000 rpm maximum. Size 250 2D lead: 3250 rpm maximum.

- Mounting** May be foot or flange mounted in any orientation. Vertical tank mounts available.

<b>Connections</b>											
<b>Inlet Port Type</b>	<b>Port Type Availability</b>										
Axial SAE Straight Thread	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Iron Case</th> <th style="width: 50%;">Steel Case</th> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">Yes</td> </tr> </table>	Iron Case	Steel Case	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Iron Case	Steel Case										
Yes	No										
Yes	Yes										
Yes	No										
Yes	Yes										
Axial SAE 4-Bolt Pad, Code 61	Yes										
Radial SAE Straight Thread	No										
Radial SAE 4-Bolt Pad, Code 61	Yes										
<b>Outlet Port Type</b>	<b>Iron Case</b> <b>Steel Case</b>										
Radial SAE Straight Thread	Yes              No										
Radial SAE 4-Bolt Pad, Code 61	Yes              Yes										

*Straight thread for use with O-ring fittings. SAE pad is for use with mating SAE 4-bolt 3000 PSI flanges.*

- Filtration** Inlet strainers are required to keep contaminants and abrasives out of the pump and must be selected in consultation with the strainer vendor to prevent pump starvation. Normally, 60 mesh (0.01 inch- 238 micron) for light and 1/8-3/16 inch (3-5mm) openings for heavy oils are recommended. Return line filters for closed loop systems also recommended.

- Accessories** Completely mounted pump/driver assemblies with baseplates or NEMA 'C' face motor adapters are available.

# Model Code Nomenclature

Model No. Code Example A A 3 G / N V I J F B 1 1 8 S P 0 0 0

Design Sequence

Pump Series

Separator

Fixed Designator

Seals

V = Fluorocarbon Bellows mechanical seal, carbon on Ni-resist, Fluorocarbon O-rings

H = Metal bellows balanced mechanical seal, carbon on silicon carbide, Fluorocarbon O-rings

N = No shaft seal (must use mounting "I"), Fluorocarbon O-rings

J = Metal Bellows balanced mechanical seal, carbon on silicon carbide, Neoprene O-rings

Case Material and Outlet Port

I = Iron case, SAE straight thread port\*\*

P = Iron case, SAE 4-bolt port pad

S = Steel case, SAE 4-bolt port pad

X = Special

\*\*Not available on Rotor Sizes 187 thru 250

Inlet Port

J = Axial inlet, SAE straight thread port\*\*

K = Axial inlet, SAE 4-bolt port pad

L = Radial inlet, SAE straight thread port\*\*

M = Radial inlet, SAE 4-bolt pad

STANDARD  
No Weep Hole

N = Axial inlet, SAE straight thread port\*\*

P = Axial inlet 4-bolt port pad

R = Radial inlet, straight thread port\*\*

S = Radial inlet 4-bolt port pad

\*\*Not Available on Rotor Sizes 187 thru 250

WEEP HOLE  
Front Cover

Designator for Special Modifications

Size/Lead/Rotation

095AE = 1.2D, CW

095AF = 1.2D, CCW

095SP = 1.6D, CW

095SR = 1.6D, CCW

095SC = 2.0D, CW

095SD = 2.0D, CCW

118SP = 1.6D, CW

118SR = 1.6D, CCW

118SC = 2.0D, CW

118SD = 2.0D, CCW

143SJ = 1.5D, CW

143SK = 1.5D, CCW

143SE = 1.7D, CW

143SF = 1.7D, CCW

143SC = 2.0D, CW

143SD = 2.0D, CCW

162SP = 1.6D, CW

162SR = 1.6D, CCW

162SC = 2.0D, CW

162SD = 2.0D, CCW

187SY = 1.45D, CW

187SZ = 1.45D, CCW

187SM = 1.75D, CW

187SN = 1.75D, CCW

187SC = 2.0D, CW

187SD = 2.0D, CCW

200SC = 2.0D, CW

200SD = 2.0D, CCW

250AL = 1.3D, CW

250AM = 1.3D, CCW

250SP = 1.6D, CW

250SR = 1.6D, CCW

250SC = 2.0D, CW

250SD = 2.0D, CCW

Relief Valve Set Range (Limit 1500 ssu)

A = No relief valve

B = 60/75 psi differential

C = 90/105/120 psi differential

D = 135/150/165 psi differential

E = 180/195/210 psi differential

Iron Pump only

In-line relief valve option available

Mounting

C = SAE flange mount

F = Foot mount

I = Integral flange mount

(note: must specify "N" for "Seals")

Imo Pump is proud to be a member of the Colfax Pump Group associated with Allweiler Pump of Radolfzell, Germany, Houttuin Pump of Utrecht, The Netherlands, Warren Pump of Warren, Massachusetts, USA, providing World-Class fluid handling equipment and services to a global market.

Imo Pump means in a word, Performance. Imo Pump's "Performance Over Time" provides the best overall value by providing low maintenance or lengthy service intervals and efficient product operation or low energy costs, which results in the lowest "Total Cost of Ownership".

All of Imo Pump's products are designed to be of "Heavy Duty - Industrial Grade" construction and certain models are designed specifically for "Severe Duty" services such as Marine, Power Generation or Process Applications.

Imo Pump is fully qualified to respond on all of the imposed quality and design standards provided, such as Military Standards, ABS, ANSI, ASME, SAE, ISO-9000, CE, UL, CSA, NEMA and ISO, among others.

Imo Pump maintains a fully qualified staff of experienced Application Engineers, Technical Sales Engineers, Product Engineers, Service Engineers and Draftsmen capable of handling the most demanding applications.

We are responding to our customer needs with efficient, reliable products capable of handling a wide range of fluids over a long service life.

***Our QuickServe Department processes internet and credit card orders. Most repair kits can be shipped same or next business day delivery saving valuable down time. Visit out our E-Commerce site on the web or call our customer service department to place your order today!***

***www.imo-pump.com***



**Quality Management System**

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HOUTTUIN



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WARREN



Bulletin 3G-00

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