ARO®

GLOBALGEAR®

ENGINEERING DATA PACK

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ARO®

GLOBALGEAR MODEL NUMBER SYSTEM

	PUMP SERIES		PUMP SIZE			MATERIALS OF CONSTRUCTION	PORT POSITION & ROTATION	RELIEF VALVE	SEALING METHOD	SEALING TYPE	SEAL FLUSH	PORT TYPE	PORT SIZE	SHAFT DIMENSIONS	BUSHING & PIN	TUTRIDING	JACKETS	CLEARANCES
	G	G	2	1	0	I	A	V	M	A	1	A	K	I	A	O	O	O
POSITION #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

POS. 1 & 2 - PUMP SERIES

GG = Complete pump
GD = Drive module

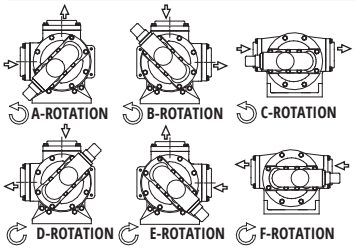
POS. 3, 4, & 5 - PUMP SIZE

015 = Nominal 15 GPM at 1800 RPM
030 = Nominal 30 GPM at 1800 RPM
080 = Nominal 80 GPM at 1500 RPM
120 = Nominal 120 GPM at 1200 RPM
130 = Nominal 130 GPM at 1000 RPM
200 = Nominal 200 GPM at 1000 RPM
210 = Nominal 210 GPM at 800 RPM
250 = Nominal 200 GPM at 640 RPM
500 = Nominal 500 GPM at 520 RPM
550 = Nominal 550 GPM at 500 RPM
1200 = Nominal 1150 GPM at 280 RPM

POS. 6 - MATERIALS OF CONSTRUCTION

I = Iron
S = Stainless steel
C = Cast steel

POS. 7 - PORT POSITION & ROTATION



POS. 8 - RELIEF VALVE

O = None
V = Internal

POS. 9 - SEALING METHOD

P = Packing
M = OB mechanical seal (in sealing chamber)
C = Cartridge mechanical seal

POS. 10 - SEAL TYPE

0 = No gland or packing
A = Standard packing (graphite/PTFE)
B = Ni-Resist Type 2 mechanical seal
C = Food-grade packing (pure PTFE)
E = Viton mechanical seal
F = PTFE mechanical seal
H = Abrasion-resistant mechanical seal (Viton)
K = Triple lip - cartridge seal (Viton)
L = General purpose single cartridge seal (<7,500 SSU)
N = Process single cartridge seal (<75,000 SSU)
P = Hard face cartridge seal (tungsten carbide/ silicon carbide - Viton) with quench and drain gland
Q = Heavy-duty slurry (Viton)
R = Heavy-duty slurry (Chemraz)
W = Abrasion Duty Packing

POS. 11 - SEAL FLUSH

0 = None
1 = Internal vent to suction (Plan 13)

POS. 12 - PORT TYPE

0 = None
A = FNPT
B = BSPT
C = ANSI 125# flanged (CI only)
D = ANSI 150# flanged
E = ANSI 250# flanged (CI only)
F = ANSI 300# flanged
G = ISO PN16 flanged

POS. 13 - PORT SIZE

0 = None
H = 1 1/2″ or 40mm
I = 2″ or 50mm
K = 3″ or 80mm
L = 4″ or 100mm
N = 6″ or 150mm

POS. 14 - SHAFT DIMENSIONS

I = Inch seal & coupling

POS. 15 - BUSHING & PIN

A = Bronze idler & bracket
D = Carbon idler & bracket
E = High-temp carbon idler & bracket
I = TC idler & bracket with TC pin & hardened shaft

POS. 16 - TUTRIDING

0 = None
1 = Tutrided rotor head, idler, cover
2 = Tutrided rotor head, idler, cover, housing

POS. 17 - JACKETS

0 = None
1 = Cover only
2 = Bracket only
3 = Cover & bracket

POS. 18 - CLEARANCES

0 = Standard <7,500 SSU, -100°F to 200°F
A = 7,500 to 75,000 SSU 200°F to 300°F
B = 75,000 to 750,000 SSU
G* = <7,500 SSU 300°F to 450°F
H* = 450°F to 550°F
J = Chocolate clearance mods (include Class B clearance, bronze bushings, root drilled idler, & drilled rotor head)

* Pumps with G or H in this position include high-temp package (paint, bearing, & gaskets)

LEGEND

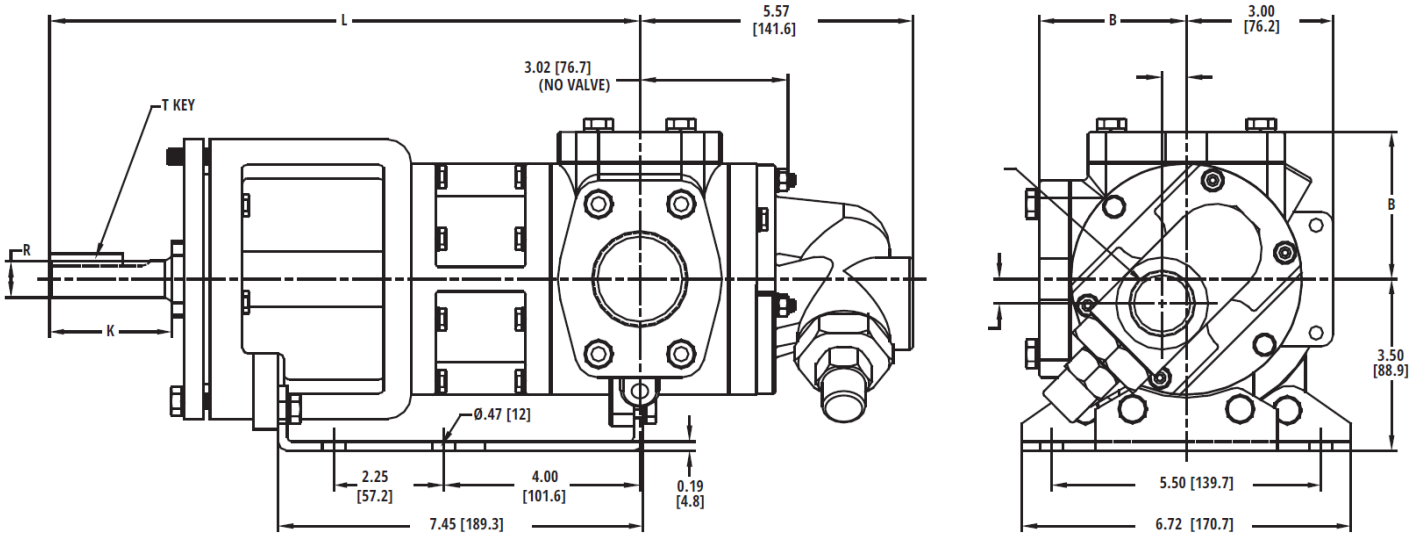
NOT AVAILABLE ON ALL SIZES
CI = Cast Iron
TC = Tungsten Carbide

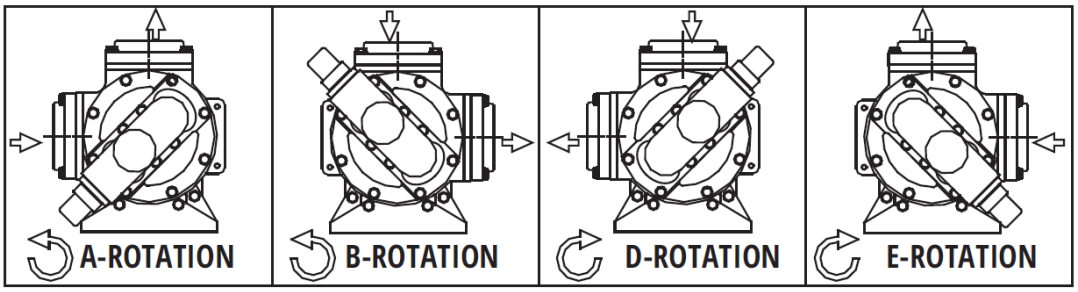
FOR SPECIAL PUMPS WITH A FEATURE NOT DESCRIBED ABOVE

PUMP SERIES	PUMP SIZE	MATERIAL	POST POSITION	RELIEF VALVE	SPECIAL INDICATOR	YEAR OF DESIGN	SEQUENTIAL SPECIAL NUMBER
GG	210	I	A	V	- X	01	56

GG015 - GG030 WITH ANGLE PORTS MOUNTING DIMENSIONS

All measurements are in inches [millimeters].





SHAFT DIMENSIONS				
SHAFT DESIGN	K	R	T	L
DIMENSIONS	2.10″ [53.3mm]	0.75″ [19.1mm]	0.1875″ x 0.1875″ x 1.5″ [4.7mm x 4.7mm x 38.1mm]	12.07″ [306.6mm]

PORT DIMENSIONS	
PORT DESIGN	B
ANSI	4.00″ [101.6mm]
FNPT	3.00″ [76.2mm]

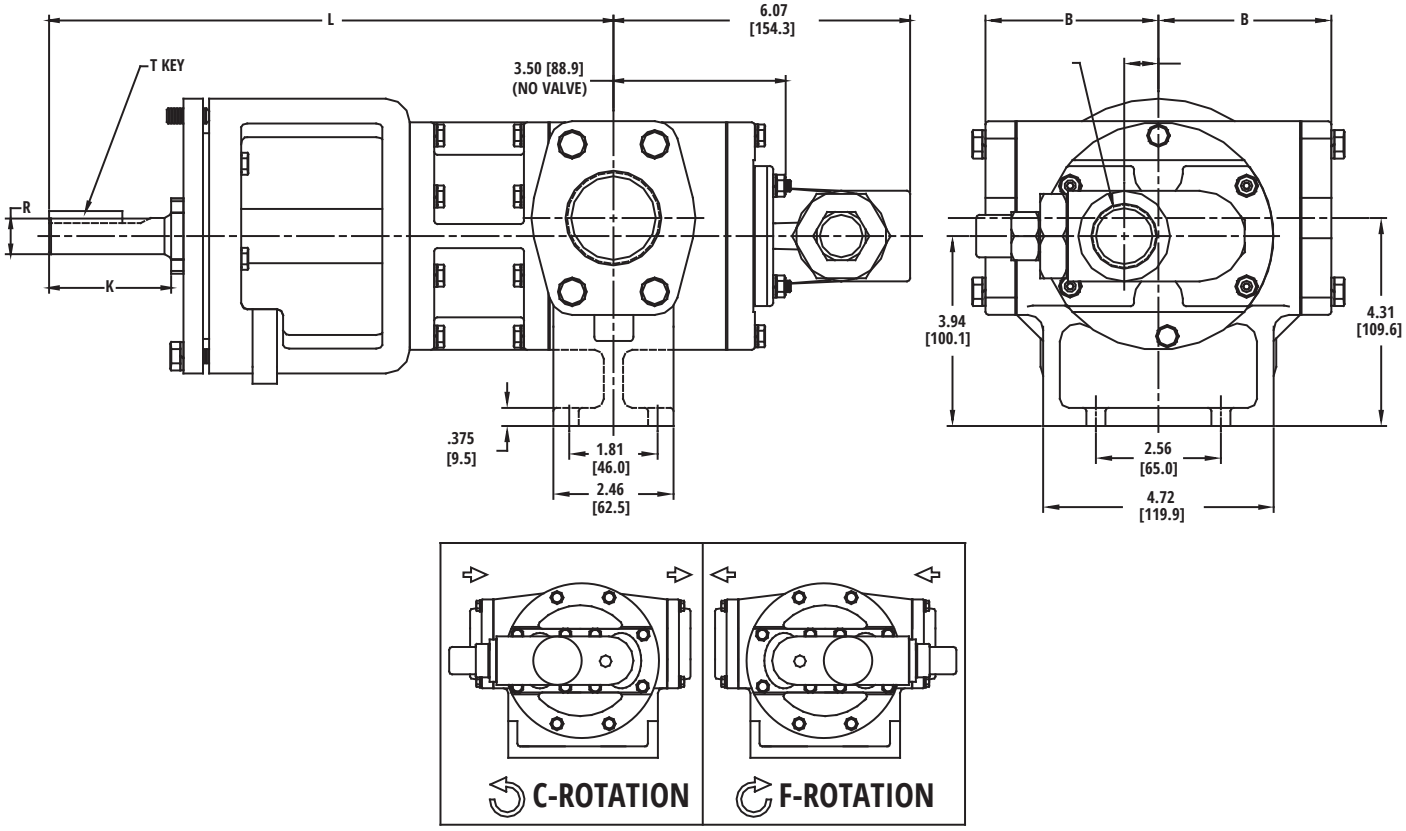
BACK PULL-OUT DIMENSIONS	
SIZE	MIN SPACER
GG015	1.60″ [40.6mm]
GG030	2.22″ [56.4mm]

FLANGE FACE DESIGN		
SIZE	RATING	FACE
1 1/2″	125/150#	Flat Face
1 1/2″	250/300#	Raised Face
2″	125/150#	Flat Face
2″	250/300#	Raised Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG015 - GG030 WITH SIDE PORTS MOUNTING DIMENSIONS

All measurements are in inches [millimeters].



SHAFT DIMENSIONS

SHAFT DESIGN	K	R	T	L
DIMENSIONS	2.36″ [59.9mm]	0.75″ [19.1mm]	0.1875″ x 0.1875″ x 1.5″ [4.7mm x 4.7mm x 38.1mm]	11.56″ [293.6mm]

PORT DIMENSIONS

PORT DESIGN	B
ANSI	4.54″ [115.3mm]
FNPT	3.55″ [90.1mm]

BACK PULL-OUT DIMENSIONS

SIZE	MIN SPACER
GG015	1.60″ [40.6mm]
GG030	2.22″ [56.4mm]

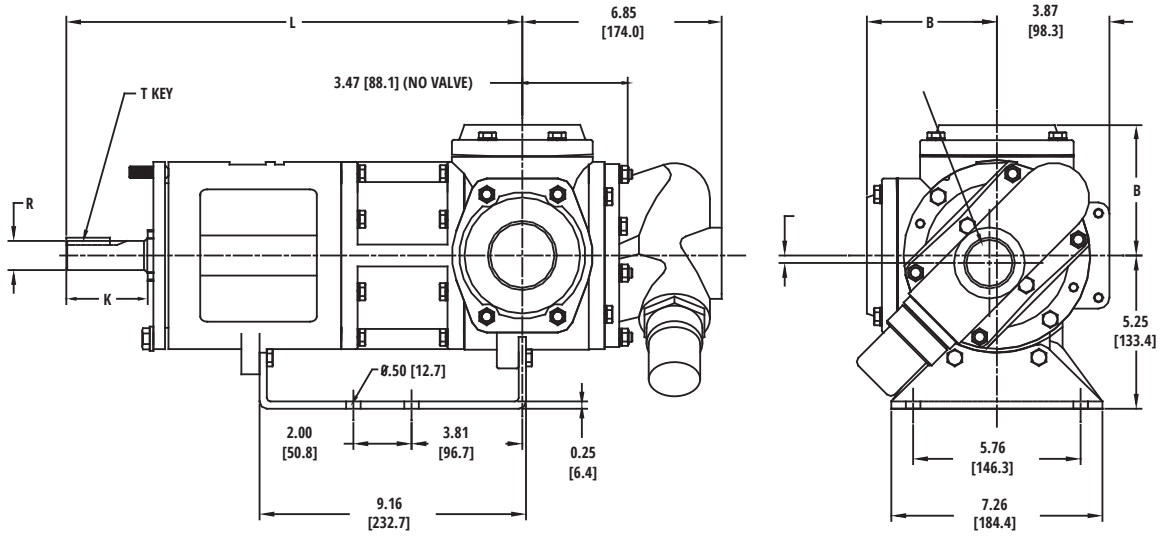
FLANGE FACE DESIGN

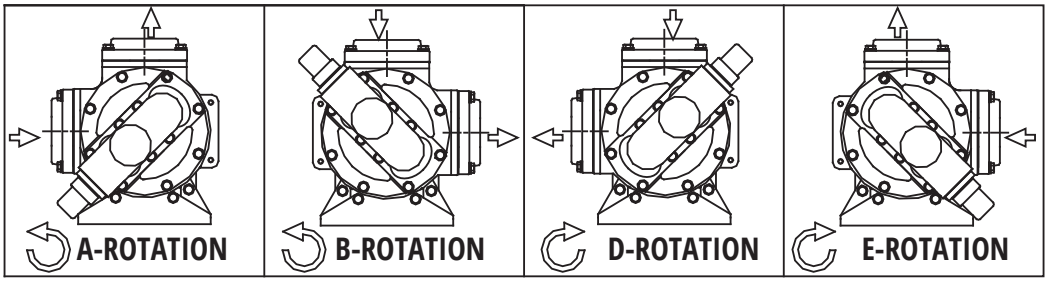
SIZE	RATING	FACE
1 1/2″	125/150#	Flat Face
1 1/2″	250/300#	Raised Face
2″	125/150#	Flat Face
2″	250/300#	Raised Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG080 WITH ANGLE PORTS MOUNTING DIMENSIONS

All measurements are in inches [millimeters].





SHAFT DIMENSIONS

SHAFT DESIGN	K	R	T	L
DIMENSIONS	2.67″ [67.8mm]	1.00″ [25.4mm]	0.25″ x 0.25″ x 1.5″ [6.4mm x 6.4mm x 38.1mm]	15.68″ [398.3mm]

PORT DIMENSIONS

PORT DESIGN	B
2″ FNPT	4.50″ [114.3mm]
ANSI 125#/150#	4.63″ [117.6mm]
2″ ANSI 250#	5.81″ [147.6mm]

BACK PULL-OUT DIMENSIONS

SIZE	MIN SPACER
GG080	2.80″ [71.1mm]

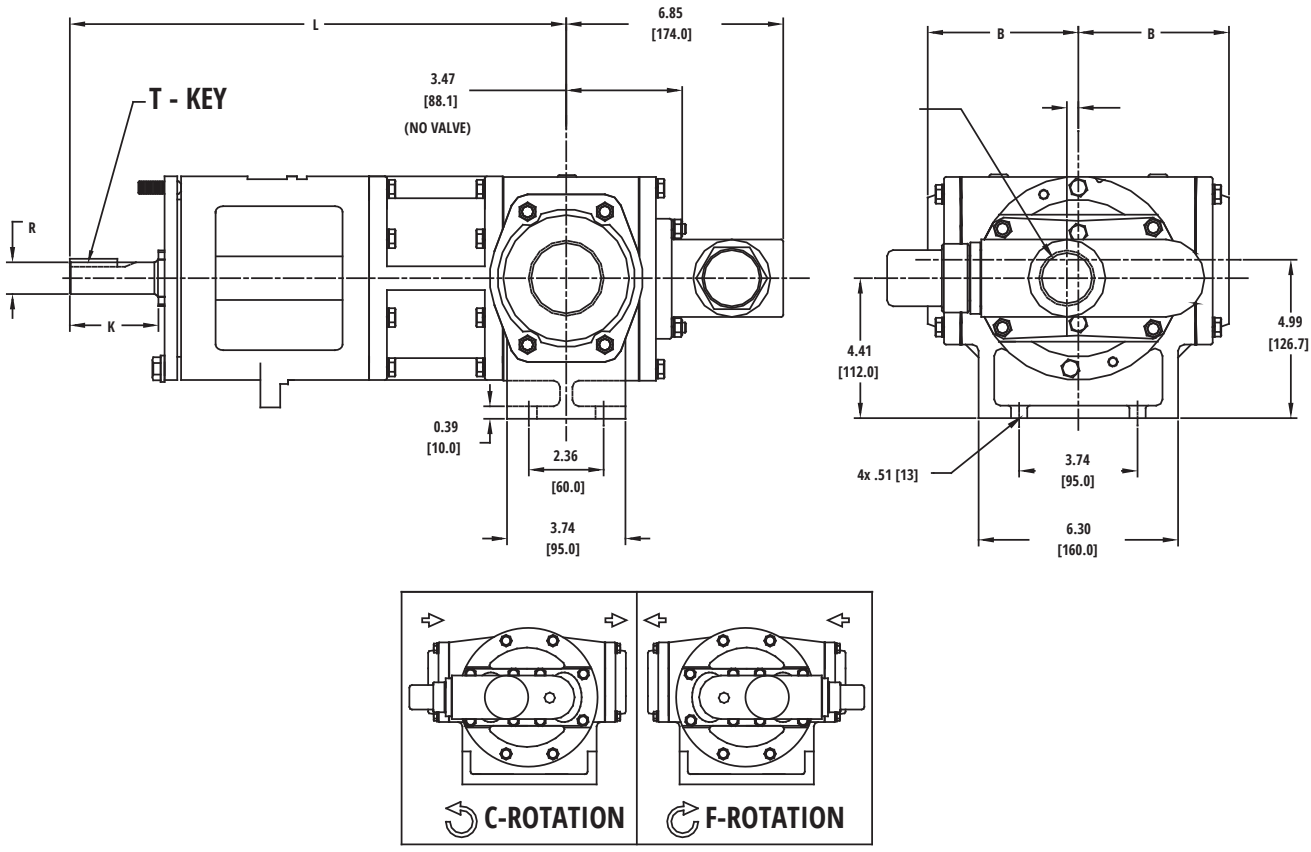
FLANGE FACE DESIGN

SIZE	RATING	FACE
2″	125/150#	Flat Face
2″	250/300#	Flat Face
3″	125/150#	Raised Face
3″	250/300#	Raised Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG080 WITH SIDE PORTS MOUNTING DIMENSIONS

All measurements are in inches [millimeters].



SHAFT DIMENSIONS

SHAFT DESIGN	K	R	T	L
DIMENSIONS	2.67″ [67.8mm]	1.00″ [25.4mm]	0.25″ x 0.25″ x 1.5″ [6.4mm x 6.4mm x 38.1mm]	15.68″ [398.3mm]

PORT DIMENSIONS

PORT DESIGN	B
FNPT (CI)	4.74″ [120.4mm]
ANSI 125#/150#	4.87″ [123.7mm]
2″ ANSI 250#/300#	6.05″ [153.7mm]
3″ ANSI 250#/300#	5.24″ [133.1mm]

FLANGE FACE DESIGN

SIZE	RATING	FACE
2″	125/150#	Flat Face
2″	250/300#	Flat Face
3″	125/150#	Raised Face
3″	250/300#	Raised Face

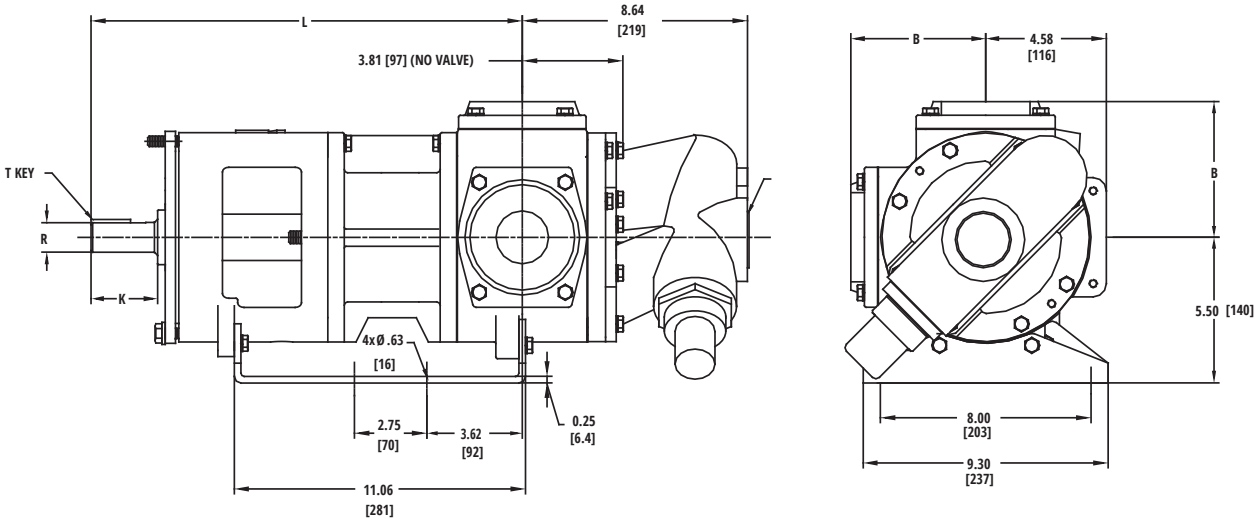
BACK PULL-OUT DIMENSIONS

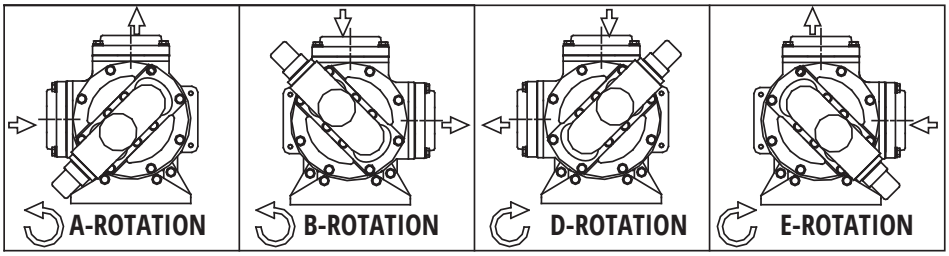
SIZE	MIN SPACER
GG080	2.80″ [71.1mm]

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG120 - GG130 WITH ANGLE PORTS (CI & SS ONLY) MOUNTING DIMENSIONS

All measurements are in inches [millimeters].





SHAFT DIMENSIONS

SHAFT DESIGN	K	R	T	L
DIMENSIONS	2.41″ [61.2mm]	1.125″ [28.6mm]	0.25″ x 0.25″ x 2″ [6.4mm x 6.4mm x 50.8mm]	16.38″ [416.1mm]

PORT DIMENSIONS

PORT DESIGN	B
2″ FNPT	5.12″ [130mm]
2″ ANSI 150#	5.19″ [131.8mm]
3″ ANSI 125#/150#	5.25″ [133.4mm]
3″ ANSI 250#/300#	5.62″ [142.7mm]

FLANGE FACE DESIGN

SIZE	RATING	FACE
2″	125/150#	Flat Face
2″	250/300#	Flat Face
3″	125/150#	Raised Face
3″	250/300#	Raised Face

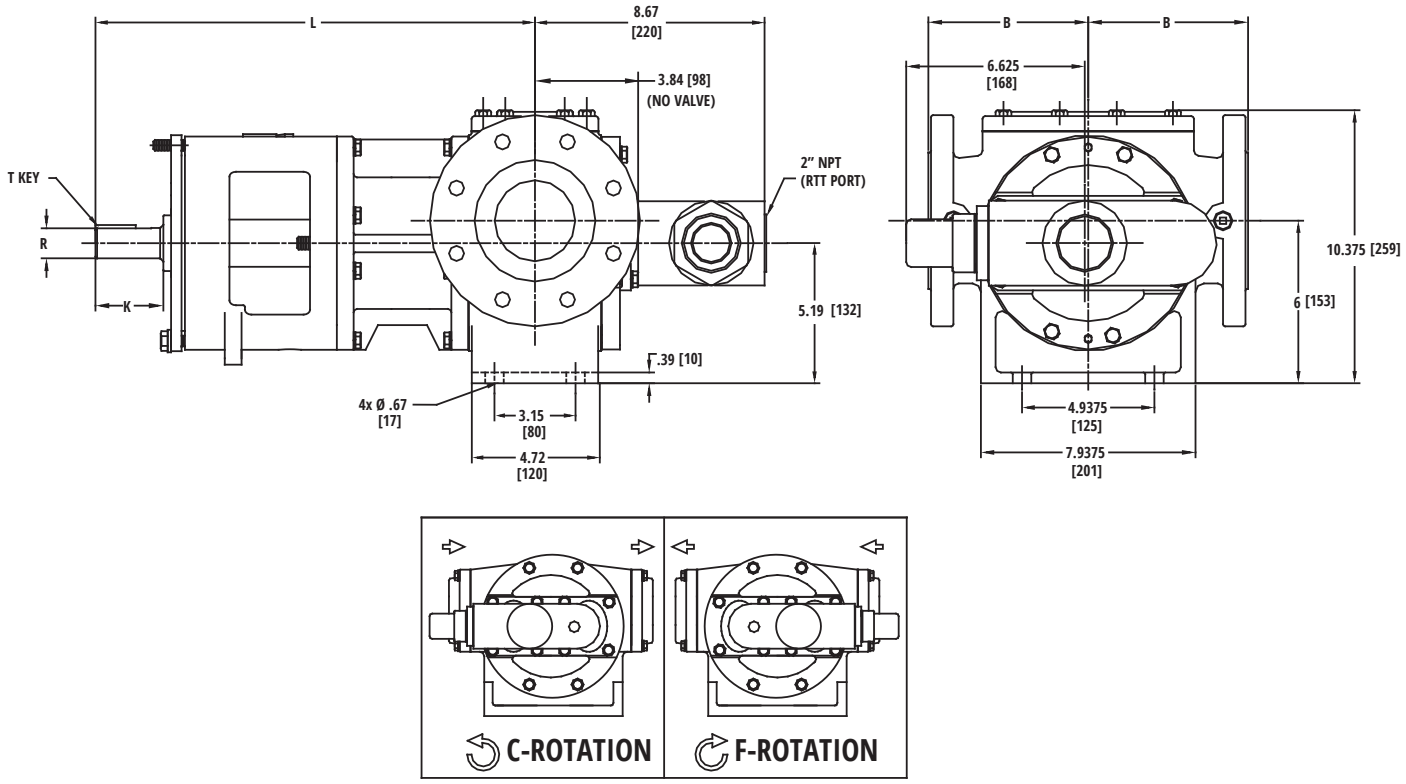
BACK PULL-OUT DIMENSIONS

SIZE	MIN SPACER
GG120	3.31″ [84.1mm]
GG130	3.73″ [94.7mm]

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG120 - GG130 WITH SIDE PORTS (CI, SS, & CS) MOUNTING DIMENSIONS

All measurements are in inches [millimeters].



SHAFT DIMENSIONS

SHAFT DESIGN	K	R	T	L
DIMENSIONS	2.41″ [61.2mm]	1.125″ [28.6mm]	0.25″ x 0.25″ x 2″ [6.4mm x 6.4mm x 50.8mm]	16.36″ [415.5mm]

PORT DIMENSIONS

PORT DESIGN	B
3″ ANSI 125# (CI)	5.95″ [151.1mm]
3″ ANSI 150# (CS)	5.87″ [149.1mm]
3″ ANSI 300# (SS)	6.22″ [158mm]

FLANGE FACE DESIGN

SIZE	RATING	FACE
3″	125/150#	Raised Face
3″	250/300#	Raised Face

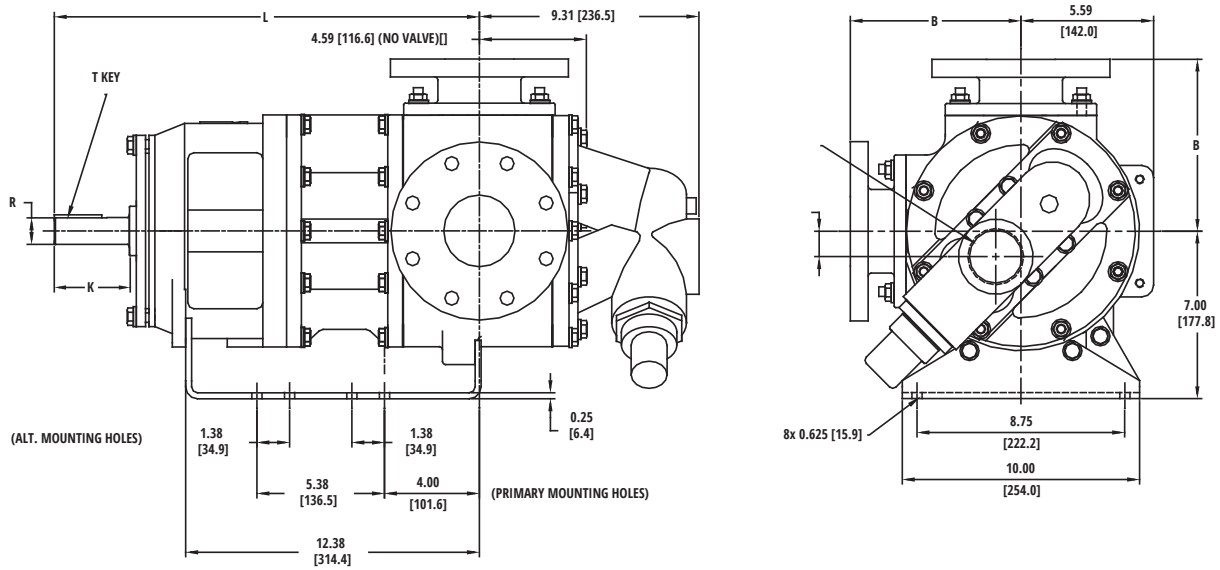
BACK PULL-OUT DIMENSIONS

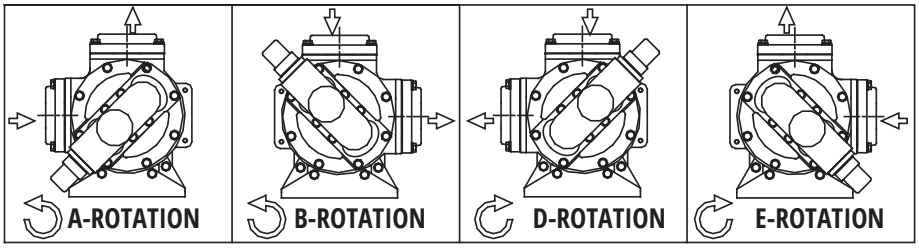
SIZE	MIN SPACER
GG120	3.31″ [84.1mm]
GG130	3.73″ [94.7mm]

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG200 - GG210 WITH ANGLE PORTS MOUNTING DIMENSIONS

All measurements are in inches [millimeters].





SHAFT DIMENSIONS

SHAFT DESIGN	K	R	T	L
DIMENSIONS	3.04″ [77.2mm]	1.125″ [28.6mm]	0.25″ x 0.25″ x 2″ [6.4mm x 6.4mm x 50.8mm]	17.85″ [453.4mm]

PORT DIMENSIONS

PORT DESIGN	B
2″ FNPT (200 Size Only)	6.56″ [166.6mm]
ANSI Flange	7.19″ [182.6mm]

BACK PULL-OUT DIMENSIONS

SIZE	MIN SPACER
GG200	4.01″ [101.9mm]
GG210	4.61″ [117.1mm]

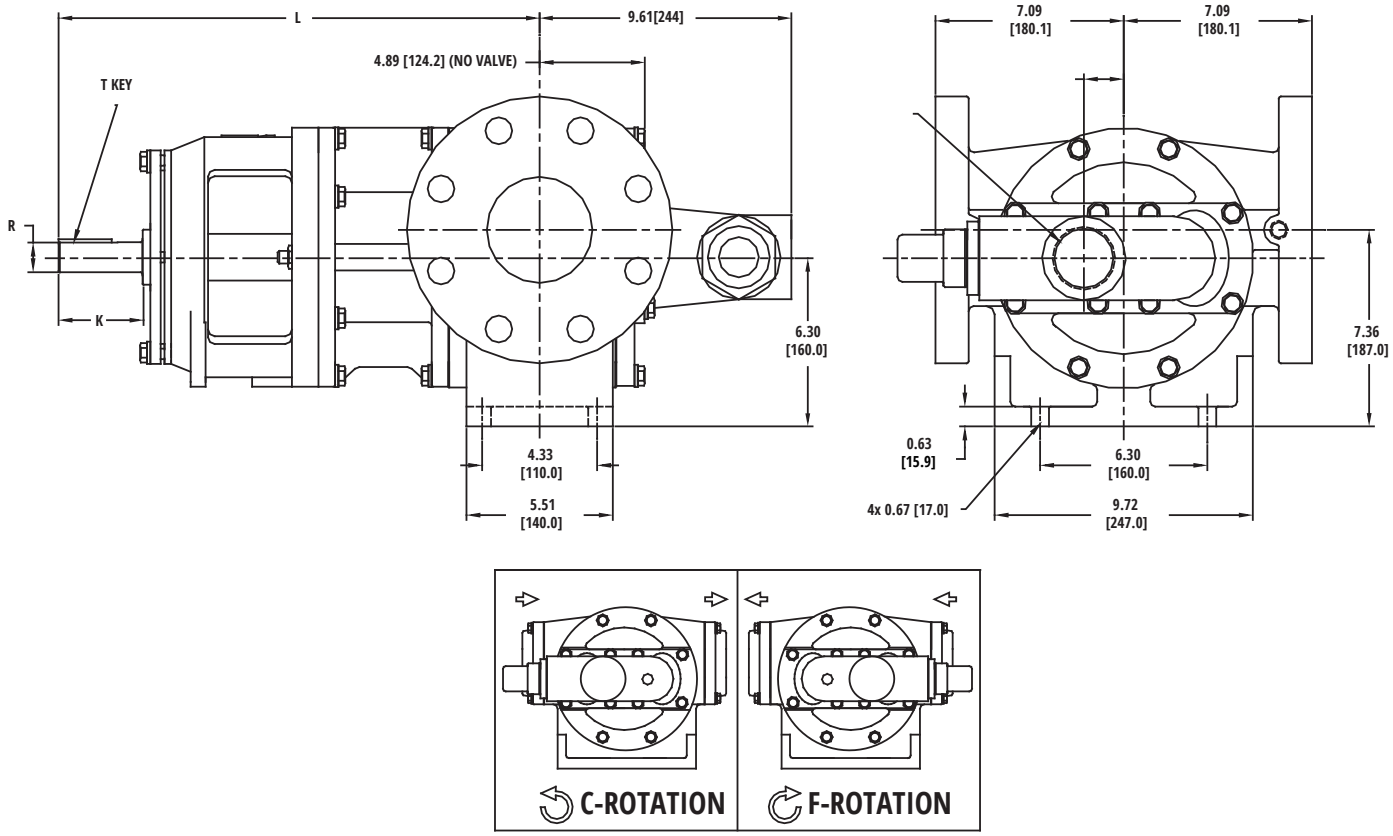
FLANGE FACE DESIGN

SIZE	RATING	FACE
2-1/2″	125#	Flat Face (GG200 Only)
3″	125/150#	Flat Face
3″	250/300#	Flat Face
4″	125/150#	Raised Face
4″	250/300#	Raised Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG200 - GG210 WITH SIDE PORTS MOUNTING DIMENSIONS

All measurements are in inches [millimeters].



SHAFT DIMENSIONS				
SHAFT DESIGN	K	R	T	L
DIMENSIONS	3.04″ [77.2mm]	1.125″ [28.6mm]	0.25″ x 0.25″ x 2″ [6.4mm x 6.4mm x 50.8mm]	17.56″ [446mm]

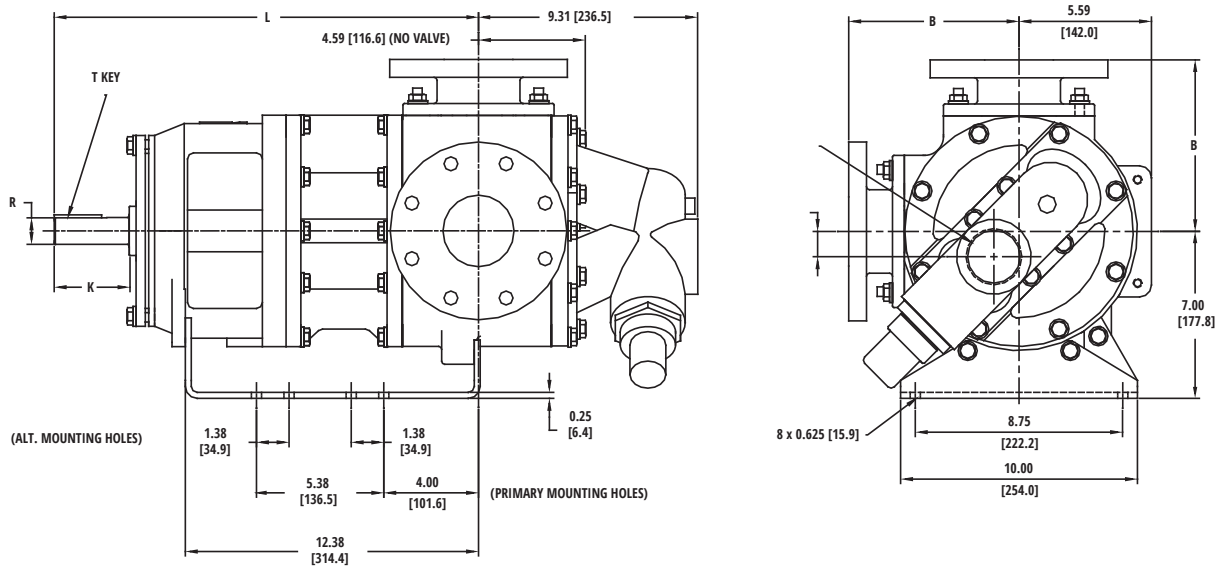
BACK PULL-OUT DIMENSIONS	
SIZE	MIN SPACER
GG200	4.01″ [101.9mm]
GG210	4.61″ [117.1mm]

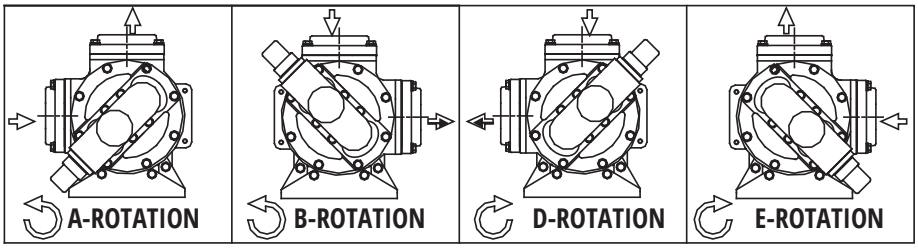
FLANGE FACE DESIGN		
SIZE	RATING	FACE
4″	125/150#	Flat Face
4″	250/300#	Flat Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG250 WITH ANGLE PORTS MOUNTING DIMENSIONS

All measurements are in inches [millimeters].





SHAFT DIMENSIONS

SHAFT DESIGN	K	R	T	L
DIMENSIONS	4.30″ [109.2mm]	1.438″ [36.5mm]	0.375″ x 0.375″ x 2.5″ [9.6mm x 9.6mm x 63.5mm]	19.25″ [489mm]

PORT DIMENSIONS

PORT DESIGN	B
ANSI Flange	7.19″ [182.6mm]

BACK PULL-OUT DIMENSIONS

SIZE	MIN SPACER
GG250	4.73″ [120.1mm]

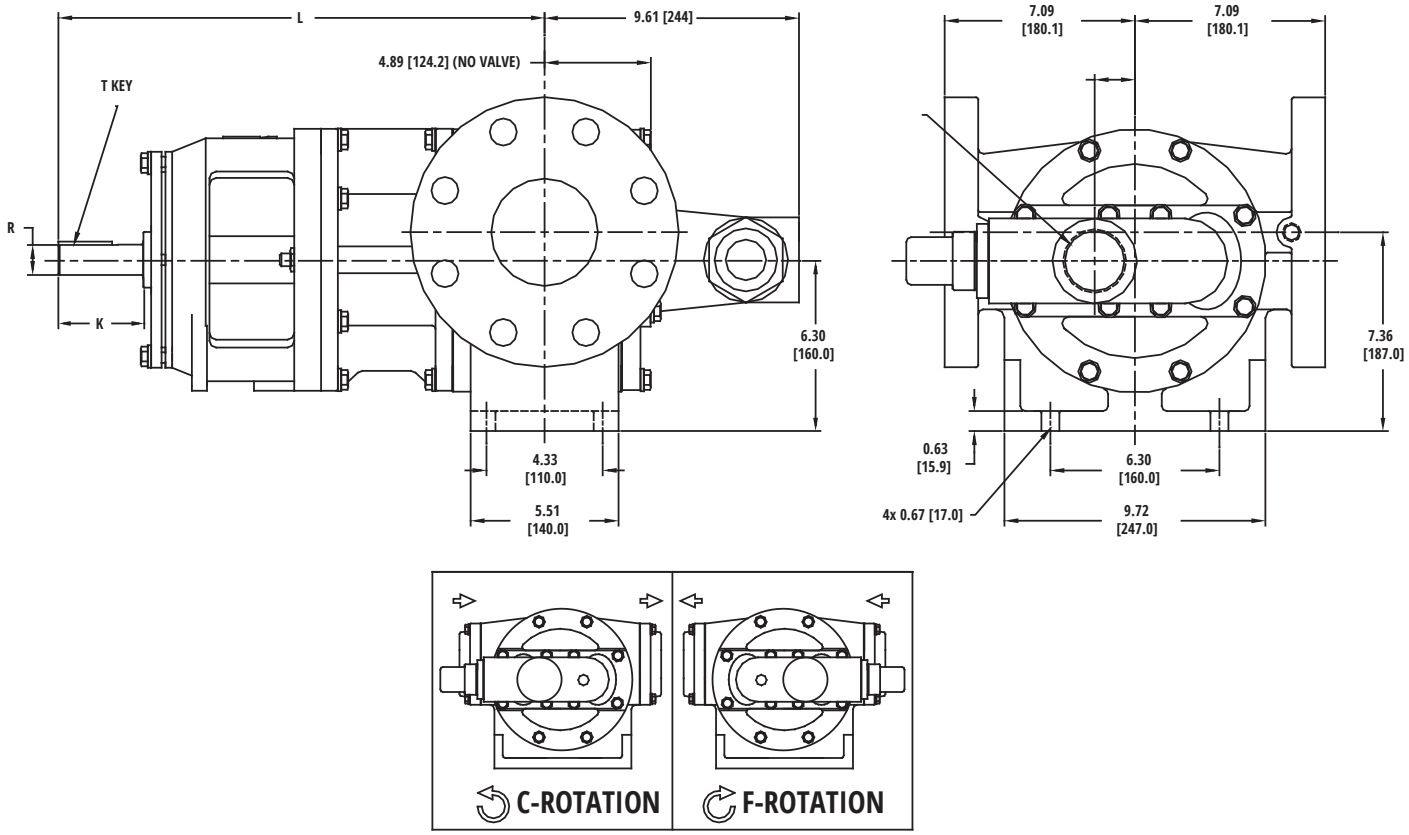
FLANGE FACE DESIGN

SIZE	RATING	FACE
2 1/2″	125#	Flat Face (GG200 Only)
3″	125/150#	Flat Face
3″	250/300#	Flat Face
4″	125/150#	Raised Face
4″	250/300#	Raised Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG250 WITH SIDE PORTS MOUNTING DIMENSIONS

All measurements are in inches [millimeters].



SHAFT DIMENSIONS

SHAFT DESIGN	K	R	T	L
DIMENSIONS	4.30″ [109.2mm]	1.438″ [36.5mm]	0.375″ x 0.375″ x 2.5″ [9.6mm x 9.6mm x 63.5mm]	18.96″ [481.6mm]

BACK PULL-OUT DIMENSIONS

SIZE	MIN SPACER
GG250	4.73″ [120.1mm]

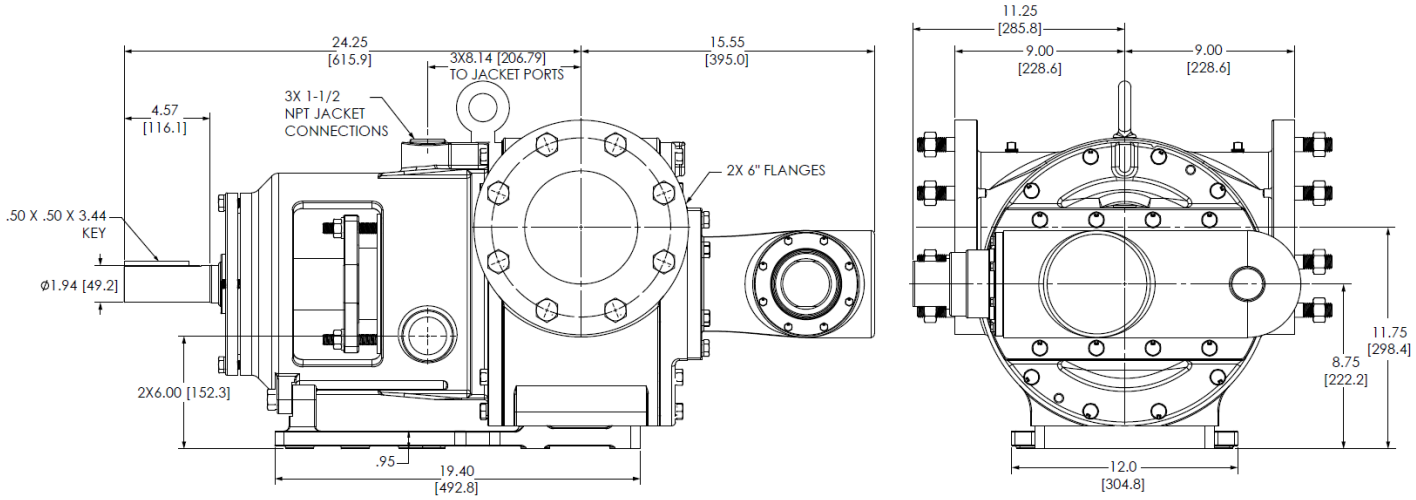
FLANGE FACE DESIGN

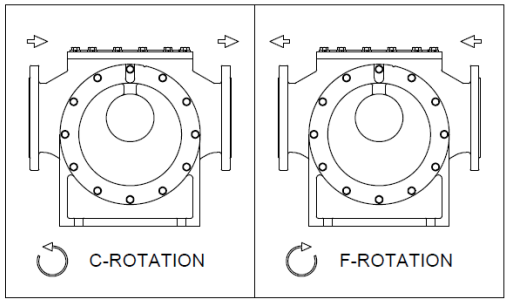
SIZE	RATING	FACE
4″	125/150#	Flat Face
4″	250/300#	Flat Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG500 WITH 6″ SIDE PORTS (CI) MOUNTING DIMENSIONS

All measurements are in inches [millimeters].





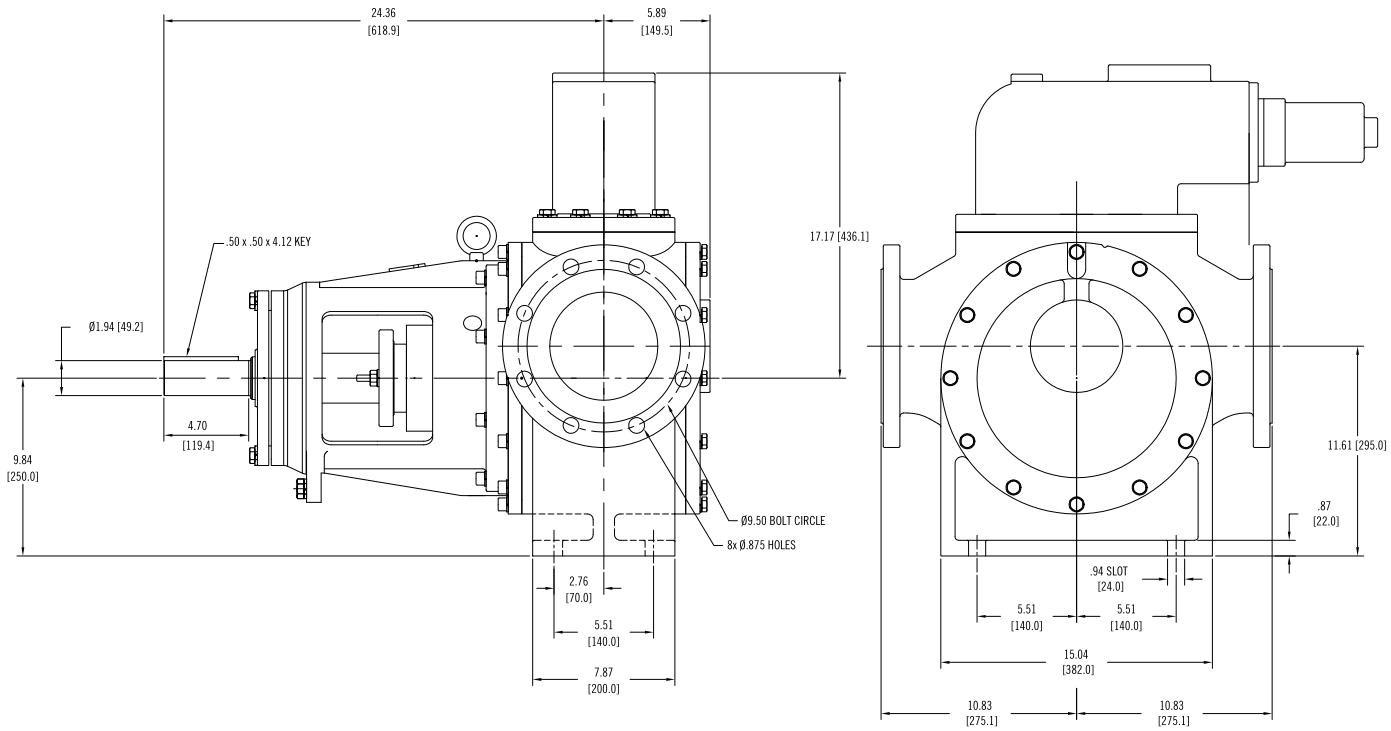
BACK PULL-OUT DIMENSIONS	
SIZE	MIN SPACER
GG500	6.625″ [168.275mm]

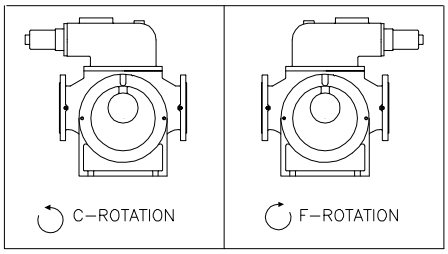
FLANGE FACE DESIGN		
SIZE	RATING	FACE
6″	125/150#	Flat Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG550 WITH 6″ SIDE PORTS (CI, SS, & CS) MOUNTING DIMENSIONS

All measurements are in inches [millimeters].





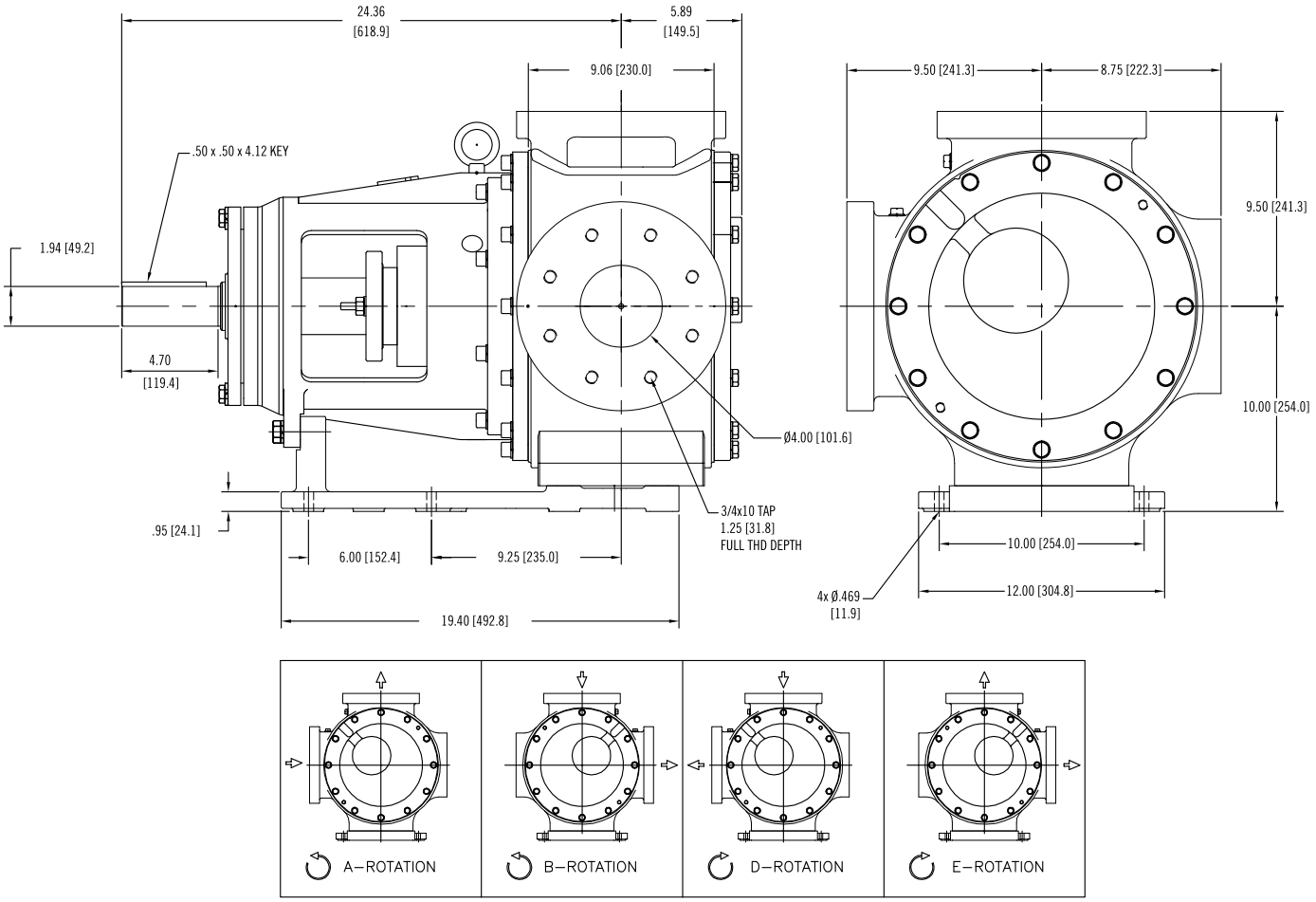
BACK PULL-OUT DIMENSIONS	
SIZE	MIN SPACER
GG550	7.18″ [182.4mm]

FLANGE FACE DESIGN		
SIZE	RATING	FACE
6″	125/150#	Raised Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG550 WITH 4″ ANGLE PORTS (CI ONLY) MOUNTING DIMENSIONS

All measurements are in inches [millimeters].



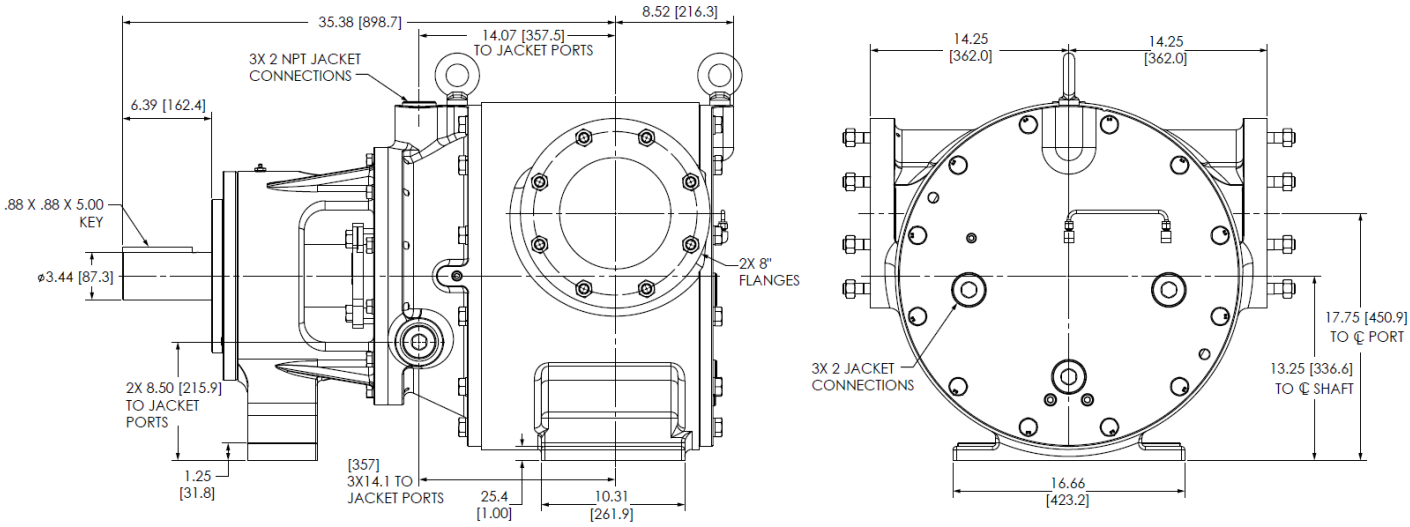
BACK PULL-OUT DIMENSIONS	
SIZE	MIN SPACER
GG550	7.18″ [182.4mm]

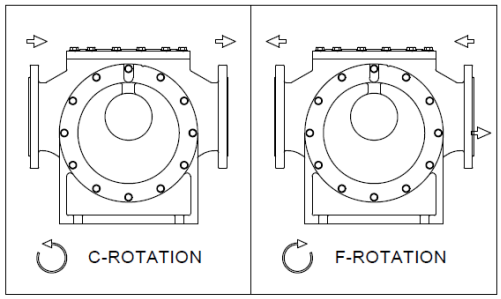
FLANGE FACE DESIGN		
SIZE	RATING	FACE
4″	125/150#	Flat Face

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

GG1200 WITH 8″ SIDE PORTS (CI ONLY) MOUNTING DIMENSIONS

All measurements are in inches [millimeters].





BACK PULL-OUT DIMENSIONS	
SIZE	MIN SPACER
GG1200	12.25″ [311mm]

FLANGE FACE DESIGN		
SIZE	RATING	FACE
8″	125/150#	Flat Face

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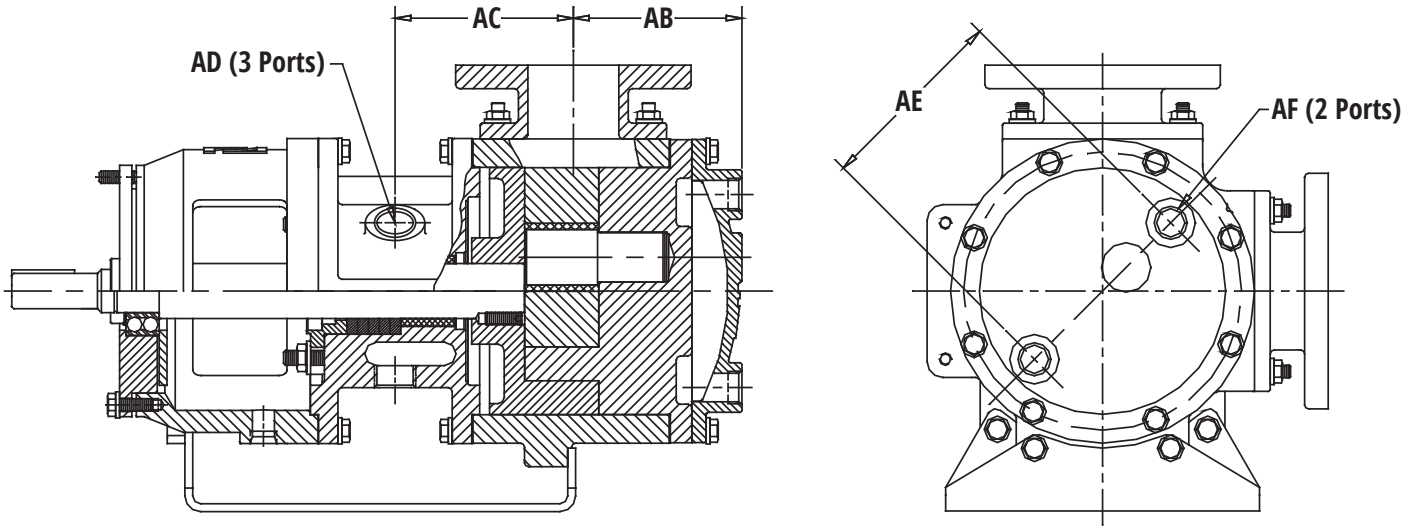
JACKETS DATA & DIMENSIONS

All measurements are in inches [millimeters].



DIMENSIONS - 90° PORTS								
PUMP SIZE	JACKETED COVER				JACKETED BRACKET			
	AB		AE		AF	AC		AD
	Inch	mm	Inch	mm		Inch	mm	
GG15/30	3.67″	93mm	2.04″	52mm	1/2″ NPT	2.93″	74mm	1/4″-18NPT (2 Ports)
GG120/130	4.37″	111mm	4.72″	120mm	3/4″ NPT	4.93″	125mm	1″ NPT
GG200/210	5.31″	135mm	6.14″	156mm	3/4″ NPT	5.62″	143mm	1″ NPT
GG250	5.31″	135mm	6.14″	156mm	3/4″ NPT	5.62″	143mm	1″ NPT
GG550	7.80″	198mm	10.04″	255mm	3/4″ NPT	N/A	N/A	N/A

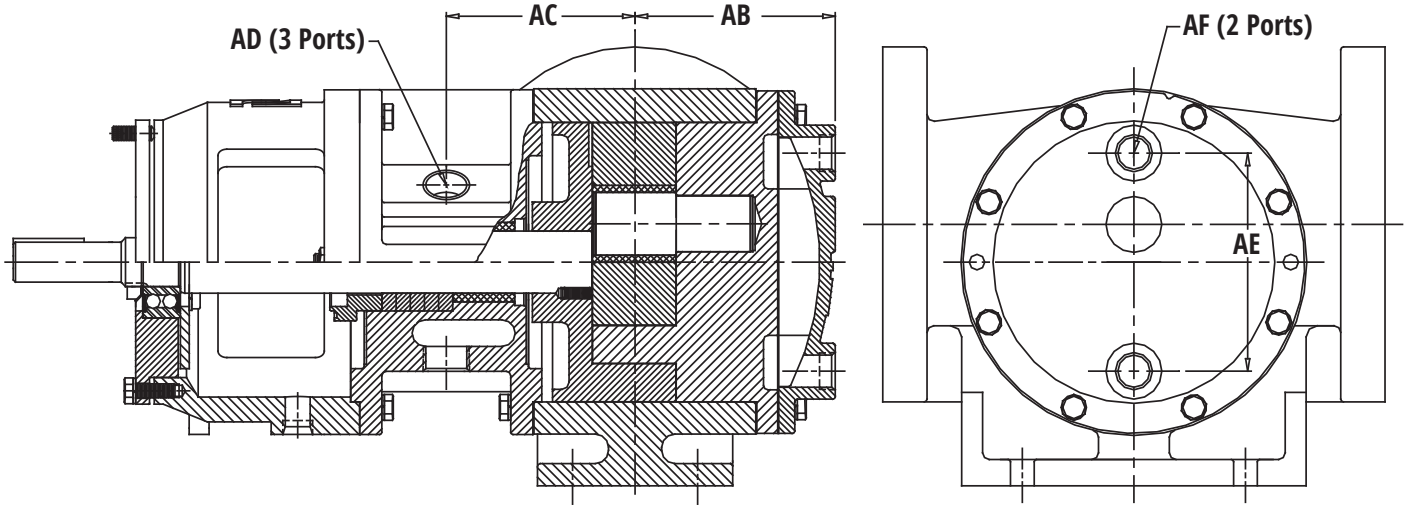
JACKET RATINGS		STEAM	HEAT TRANSFER FLUID
MAX TEMPERATURE	˚F	365	600
	˚C	185	316
MAX PRESSURE	PSIG	150	150
	BAR G	10.3	10.3

NOTE: Jacketed covers are not available with pumps with relief valves. Brackets also contain additional ports that access the seal chamber. Do not connect them to steam or HTF

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

JACKETS DATA & DIMENSIONS CONTINUED

All measurements are in inches [millimeters].



DIMENSIONS - 180° PORTS								
PUMP SIZE	JACKETED COVER				JACKETED BRACKET			
	AB		AE		AF	AC		AD
	Inch	mm	Inch	mm		Inch	mm	
GG15/30	3.33″	85mm	2.04″	52mm	1/2″ NPT	2.92″	74mm	1/4″ NPT
GG120/130	4.37″	111mm	4.72″	120mm	3/4″ NPT	4.93″	125mm	1″ NPT
GG200/210	5.65″	144mm	6.14″	156mm	3/4″ NPT	5.33″	135mm	1″ NPT
GG250	5.65″	144mm	6.14″	156mm	3/4″ NPT	5.33″	135mm	1″ NPT
GG500	5.80″	147.2mm	N/A	N/A	1-1/4″ NPT	8.14″	206.7mm	1-1/2″ NPT
GG550	8.49″	216mm	10.04″	255mm	3/4″ NPT	N/A	N/A	N/A
GG1200	8.52″	216mm			2 NPT	14.07″	357mm	2 NPT

JACKET RATINGS		STEAM	HEAT TRANSFER FLUID
MAX TEMPERATURE	°F	365	600
	°C	185	316
MAX PRESSURE	PSIG	150	150
	BAR G	10.3	10.3

NOTE: Jacketed covers are not available with pumps with relief valves. Brackets also contain additional ports that access the seal chamber. Do not connect them to steam or HTF

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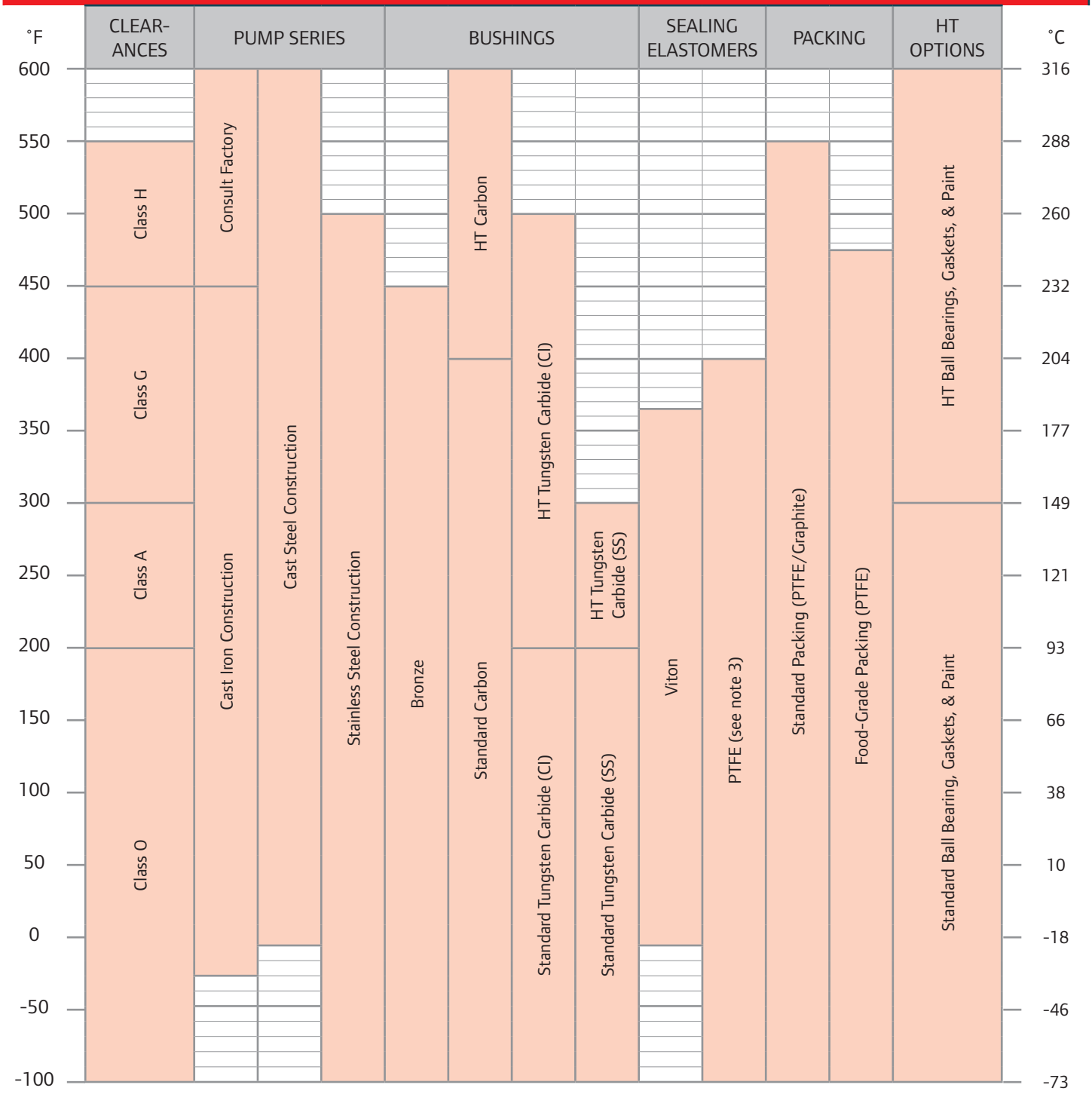
GLOBALGEAR TEMPERATURE LIMITS



NOTE:

1. A pump's performance is dependent on more than just the temperature ranges of the component materials
2. Pumps with extra clearances may have reduced flow rates when operated at lower temperatures
3. Pumps with PTFE seals also have PTFE-encapsulated Viton O-rings which are limited to 400°F (204°C)

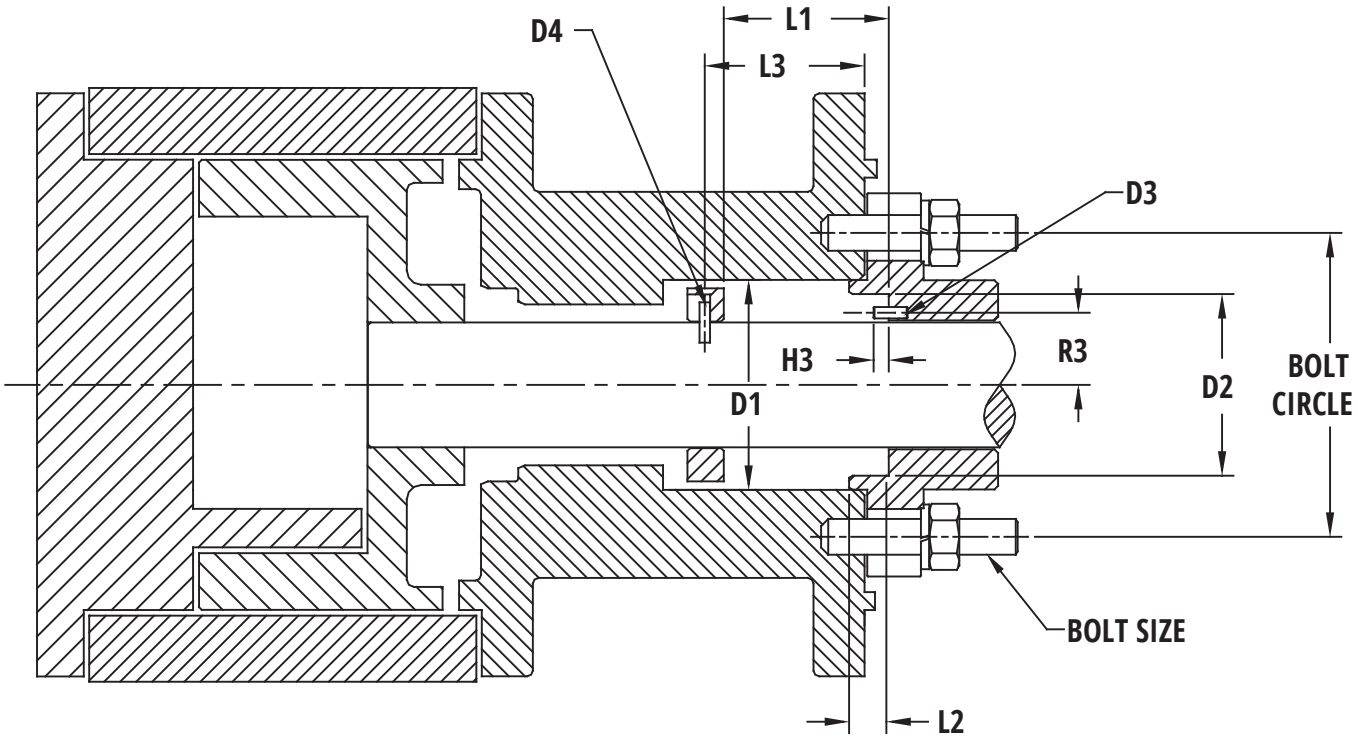
GLOBALGEAR MATERIALS OF CONSTRUCTION

PART NAME	MATERIAL	STANDARD	COMMENTS	AVAILABILITY			COMPRES-SOR DUTY
				GGI	GGS*	GGC*	
HOUSING COVER	Cast Iron (CI)	ASTM A48		S			S
	Tutrided CI	ASTM A48	Surface Hardened	O			
	Stainless Steel (SS)	ASTM A743, Grade CF8M	Cast Version of 316 SS		S		
	Cast Steel (CS)	ASTM A216, Grade WCB				S	O
BRACKET, VALVE BODY	Cast Iron (CI)	ASTM A48		S			S
	Stainless Steel (SS)	ASTM A743, Grade CF8M	Cast Version of 316 SS		S		
	Cast Steel (CS)	ASTM A216, Grade WCB				S	
VALVE BLOCK-OFF PLATE	Steel	AISI 1018	No Contact with Pumpage	S*	S	S	
ROTOR HEAD, IDLER GEAR	Ductile Iron (DI)	ASTM A536, Grade 80-55-06		S		S	S
	Tutrided DI	ASTM A536, Grade 80-55-06	Surface Hardened	O		O	
	Stainless Steel (SS)	ASTM A743, Grade CF10SMnN	"Nitronic 60"		S		
ROTOR SHAFT	Carbon Steel (CS)	AISI 4140		S		S	
	Hardened Steel	AISI 4140	Induction Hardened	O		O	S
	Stainless Steel (SS)	ASTM A564, Grade 630	"Armco 17-4PH"		S		
	Hard-Coated SS	ASTM A564, Grade 630	Chrome Oxide Coated		O		
IDLER PIN	Hardened Steel	AISI 1117	Case Hardened	S		S	
	Stainless Steel (SS)	ASTM A564, Grade 630	"Armco 17-4PH"	O	S		
	Tungsten Carbide	Grade C2		O	0	0	
BUSHINGS	Bronze	SAE CA932		S			
	Standard Carbon	Carbon Graphite Resin		O	S	S	S
	High-Temp Carbon	Carbon Graphite		O	O	O	
	Tungsten Carbide	Grade C2		O	O	O	
GASKETS	Standard	Fiber with Nitril Binde	"Garlock" Style 3000	S			
	High Temp	Graphite/316 SS	"Garlock" Style 3125TC/SS	O	S	S	
BEARING CARRIER	Cast Iron (CI)	ASTM A48	No Contact with Pumpage	S	S	S	
COVER JACKET	Ductile Iron (DI)	ASTM A536, Grade 80-55-06	No Contact with Pumpage	O	O		
JACKETED BRACKET	Cast Iron (CI)	ASTM A48		O*			
	Stainless Steel (SS)	ASTM A276, Grade 316			O		

AVAILABILITY CODES	PUMP MODELS
S = Standard material for this pump series	GGI = GlobalGear, Iron
O = Optional material for this pump series	GGS = GlobalGear, Stainless Steel
* Not available with GG550 pumps	GGC = GlobalGear, Cast Steel
Relief valves not available with GG550 angle ported pumps	Compressor Duty: Standard Viton O-ring

GLOBALGEAR SEAL CHAMBER DIMENSIONS MECH SEAL (OUTBOARD LOCATION, INCH SHAFT)

			GG15/30	GG80	GG120/130	GG200 /210/250	GG550	GG1200
DIMENSION	SHAFT DIAMETER	-	1.125″	1.375″	1.75″	1.75″	2.75″	4.50″
	BOLT SIZE	-	4 x M10	2 x M10	2 x M12	2 x M12	2 x M12	4 x 3/4″
	BOLT CIRCLE	-	3.13″	3.35″	4.25″	4.25″	5.90″	7.50″
	CHAMBER DIAMETER	D1	2.00″	2.313″	2.75″	2.75″	4.50″	5.50″
	SEAL WORKING LENGTH (STD. GLAND)	L1	1.49″	1.562″	1.86″	1.86″	2.63″	N/A
	SEAL WORKING LENGTH (OPT. GLAND)	L1	1.44″	1.812″	N/A	N/A	N/A	N/A
	SEAT BORE DIAMETER	D2	1.75″	2.00″	2.50″	2.50″	3.50″	5.50″
	SEAT BORE LENGTH (MIN)	L2	0.616″	0.437″	0.50″	0.50″	0.55″	N/A
	OPTIONAL GLAND PIN	D3	0.125″	0.125″	0.125″	0.125″	0.125″	N/A
		R3	0.75″	0.86″	1.13″	1.13″	1.54″	N/A
		H3	0.08″	0.08″	0.12″	0.12″	0.094″	N/A
	CHAMBER DEPTH TO PIN HOLE	L3	1.26″	1.77″	1.89″	1.89″	N/A	N/A
	PIN HOLE DIAMETER	D4	0.13″	0.13″	0.13″	0.13″	N/A	N/A



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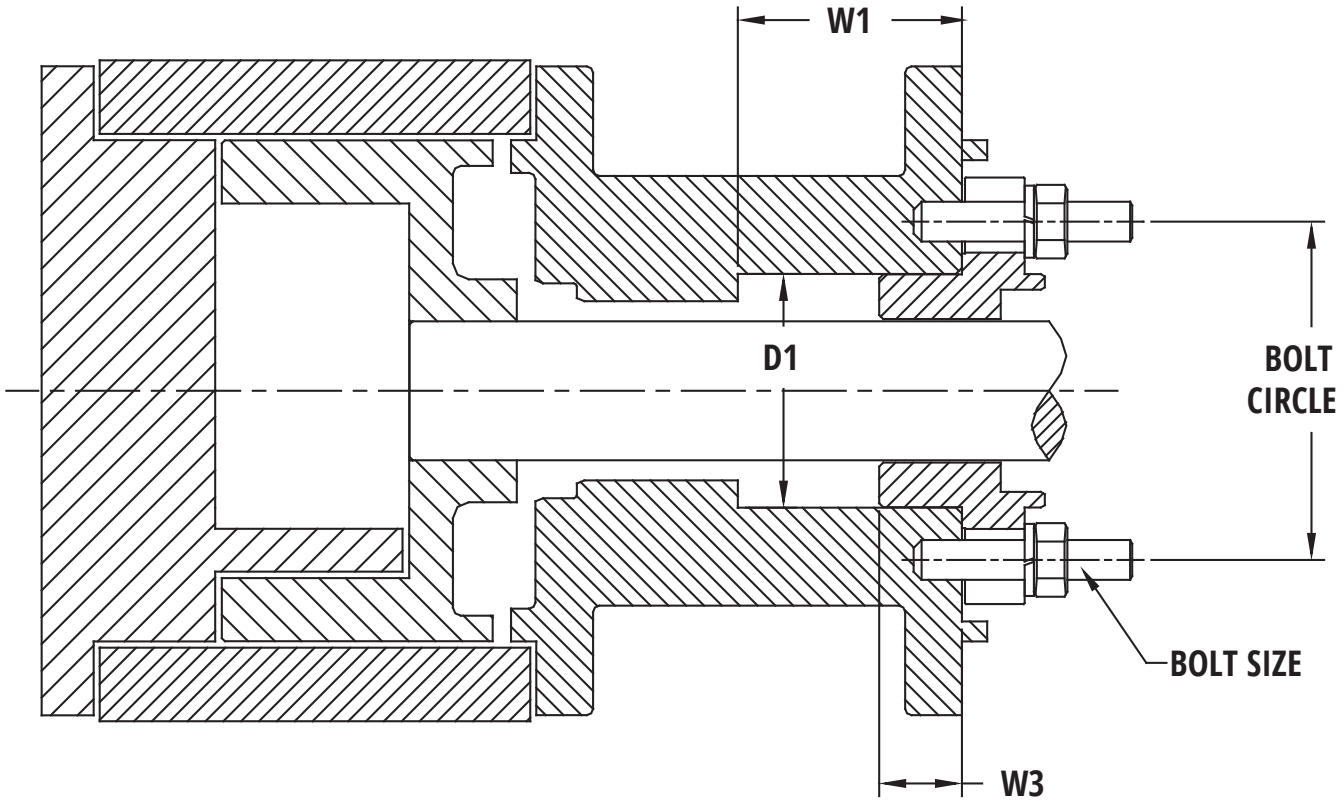
GLOBALGEAR SEAL CHAMBER DIMENSIONS PACKING

			GG15/30	GG80	GG120/130	GG200/ 210/250	GG500	GG550	GG1200
DIMENSION (INCH SHAFT)	SHAFT DIAMETER	-	1.125″	1.375″	1.75″	1.75″	2.75″	2.75″	4.50″
	BOLT SIZE	-	4 x M10	2 x M10	2 x M12	2 x M12	2 x M14	2 x M12	4 x 3/4″
	BOLT CIRCLE	-	3.13″	3.35″	4.25″	4.25″	5.90″	5.90″	7.50″
	CHAMBER DIAMETER	D1	2.00″	2.313″	2.75″	2.75″	3.78″	3.78″	5.50″
	CHAMBER LENGTH	W1	1.69″	2.22″	2.43″	2.43″	3.20″	2.95″	3.72″
	GLAND LENGTH	W3	0.64″	0.82″	0.68″	0.68″	1.14″	1.14″	0.72″



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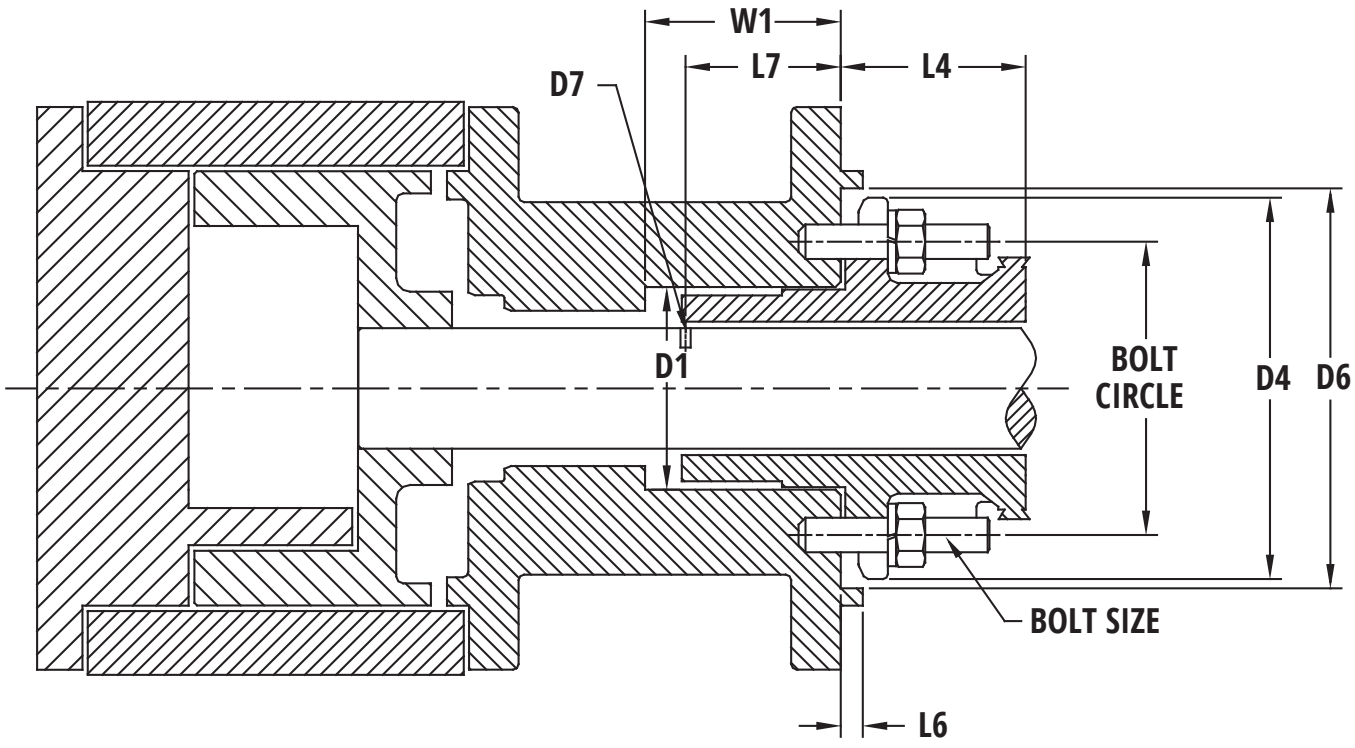
GLOBALGEAR SEAL CHAMBER DIMENSIONS CARTRIDGE SEAL

			GG15/30	GG80	GG120/130	GG200 /210/250	GG500	GG550	GG1200
DIMENSION (INCH SHAFT)	SHAFT DIAMETER	-	1.125″	1.375″	1.75″	1.75″	2.75″	2.75″	4.50″
	BOLT SIZE	-	4 x M10	2 x M10	2 x M12	2 x M12	2 x M14	2 x M14	4 x 3/4″
	BOLT CIRCLE	-	3.13″	3.35″	4.25″	4.25″	5.5″	5.906″	7.50″
	CHAMBER DIAMETER	D1	2.00″	2.313″	2.75″	2.75″	3.78″	3.78″	5.50″
	CHAMBER LENGTH	W1	1.69″	2.22″	2.43″	2.43″	3.20″	2.95″	3.72″
	MAX SEAL DIAMETER	D4	3.75″	4.88″	5.60″	5.75″	7.50″	N/A	N/A
	MAX SEAL LENGTH	L4	2.95″	2.62″	4.40″	4.40″	4.66″	4.66″	N/A
	GLAND OBSTRUCTION DIAMETER	D6	2.87″	4.56″	5.65″	5.75″	N/A	N/A	11.5″
	GLAND OBSTRUCTION LENGTH	L6	0.25″	0.25″	0.44″	0.44″	1.14″	N/A	N/A
	CHAMBER DEPTH TO PIN HOLE	L7	1.26″	1.77″	1.89″	1.89″	N/A	N/A	N/A
	PIN HOLE DIAMETER	D7	0.13″	0.13″	0.13″	0.13″	N/A	N/A	N/A



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GLOBALGEAR NPSH DATA

NPSHr FOR UP TO 750 SSU (FEET OF WATER)

SIZE	RPM															
	100	125	150	155	190	230	250	280	350	450	550	750	950	1150	1450	1750
GG015			1.4				1.6		1.8	2.1	2.4	3.0	4.5	6.2	8.6	11.3
GG030			1.4				1.6		1.8	2.1	2.4	3.0	4.5	6.2	8.6	11.3
GG080			1.5				1.8		2.2	2.7	3.4	5.2	7.7	11.2	15.0	
GG120			1.6				1.9		2.7	3.5	4.7	7.7	11.7	16.4		
GG130			1.6				1.9		2.7	3.5	4.7	7.7	11.7			
GG200			1.8				2.4		3.6	4.8	6.9	11.9	17.4			
GG210			1.8				2.4		3.6	4.8	6.9	11.9				
GG250			1.8				2.4		3.6	4.8	6.9	11.9				
GG500			3.4				6.2		10.5	15.8	24.0					
GG550			3.4				6.2		10.5	15.8	24.0					
GG1200	6.1	7.1		8.3	10.1	12.1		15.2								

NPSHr FOR UP TO 165 CST (METERS OF WATER)

SIZE	RPM															
	100	125	150	155	190	230	250	280	350	450	550	750	950	1150	1450	1750
GG015			0.4				0.5		0.5	0.6	0.7	0.9	1.4	1.9	2.6	3.4
GG030			0.4				0.5		0.5	0.6	0.7	0.9	1.4	1.9	2.6	3.4
GG080			0.5				0.5		0.7	0.8	1.0	1.6	2.3	3.4	4.6	
GG120			0.5				0.6		0.8	1.1	1.4	2.3	3.6	5.0		
GG130			0.5				0.6		0.8	1.1	1.4	2.3	3.6			
GG200			0.5				0.7		1.1	1.5	2.1	3.6	5.3			
GG210			0.5				0.7		1.1	1.5	2.1	3.6				
GG250			0.5				0.7		1.1	1.5	2.1	3.6				
GG500			1.0				1.9		3.2	4.8	7.3					
GG550			1.0				1.9		3.2	4.8	7.3					
GG1200	1.8	2.1		2.5	3	3.6		4.6								

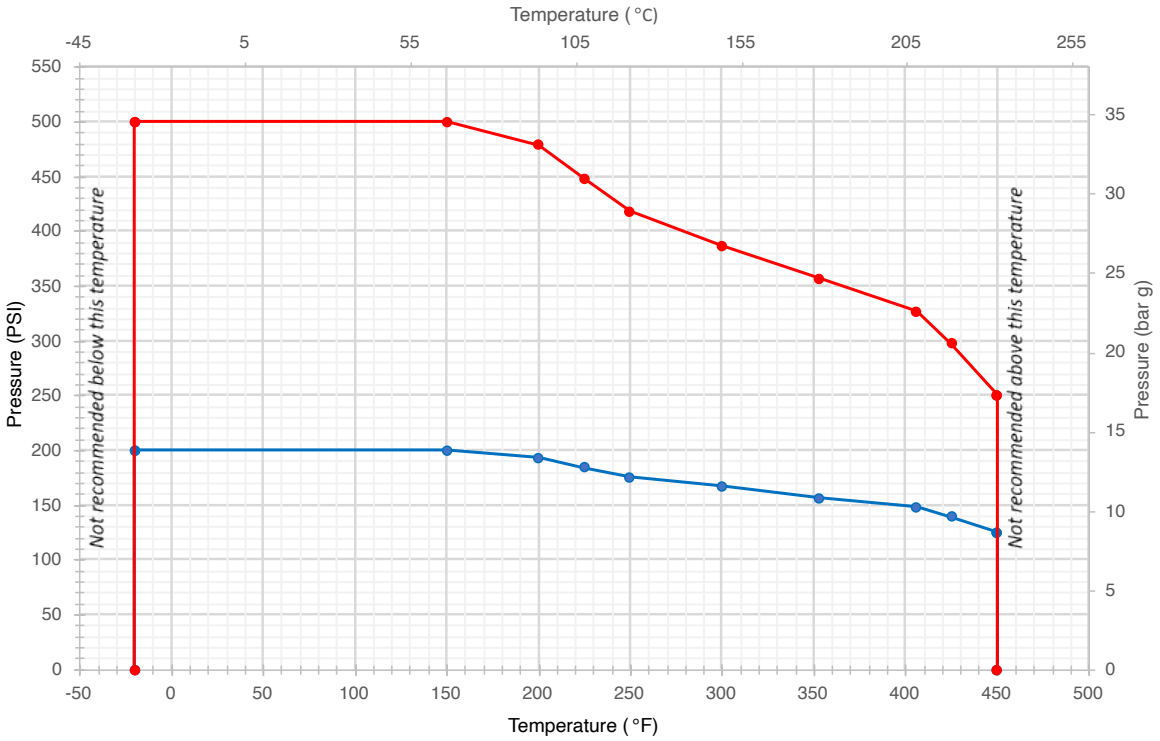
HIGH VISCOSITY CORRECTION FACTORS

VISCOSITY	CF	VISCOSITY	CF	VISCOSITY	CF
2500 SSU / 550 cSt	1.3	25,000 SSU / 5500 cSt	2.7	250,000 SSU / 55,000 cSt	5.3
5000 SSU / 1100 cSt	1.7	50,000 SSU / 11,000 cSt	3.1	500,000 SSU / 110,000 cSt	6.7
10,000 SSU / 2200 cSt	2.0	100,000 SSU / 22,000 cSt	4.0	1,000,000 SSU / 220,000 cSt	10.7

NOTE: For viscosity above 750 SSU (165 cSt), multiply the charted NPSHr value by the appropriate correction factor.
NPSHa (available) must be greater than NPSHr (required) for proper pump operation. Data shown here is for pumps with standard ports. Optional ports of different sizes may affect NPSH

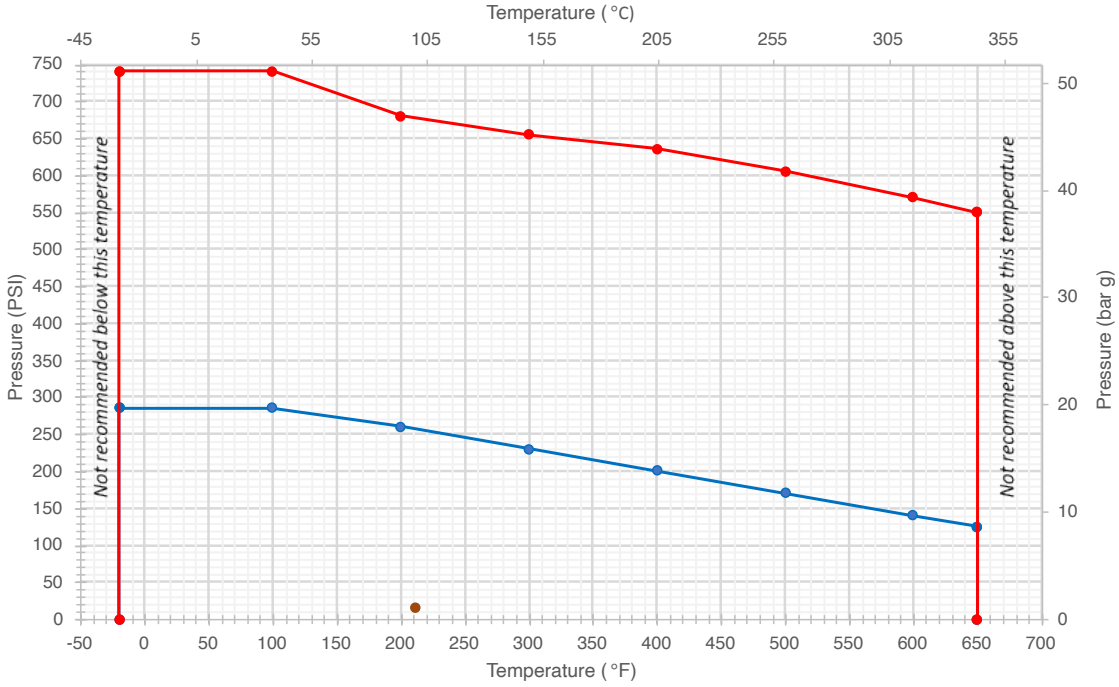
GLOBALGEAR FLANGE RATINGS (CAST IRON)

GlobalGear Flange Pressure - Temperature Ratings (Cast Iron)



GLOBALGEAR FLANGE RATINGS (CAST STEEL)

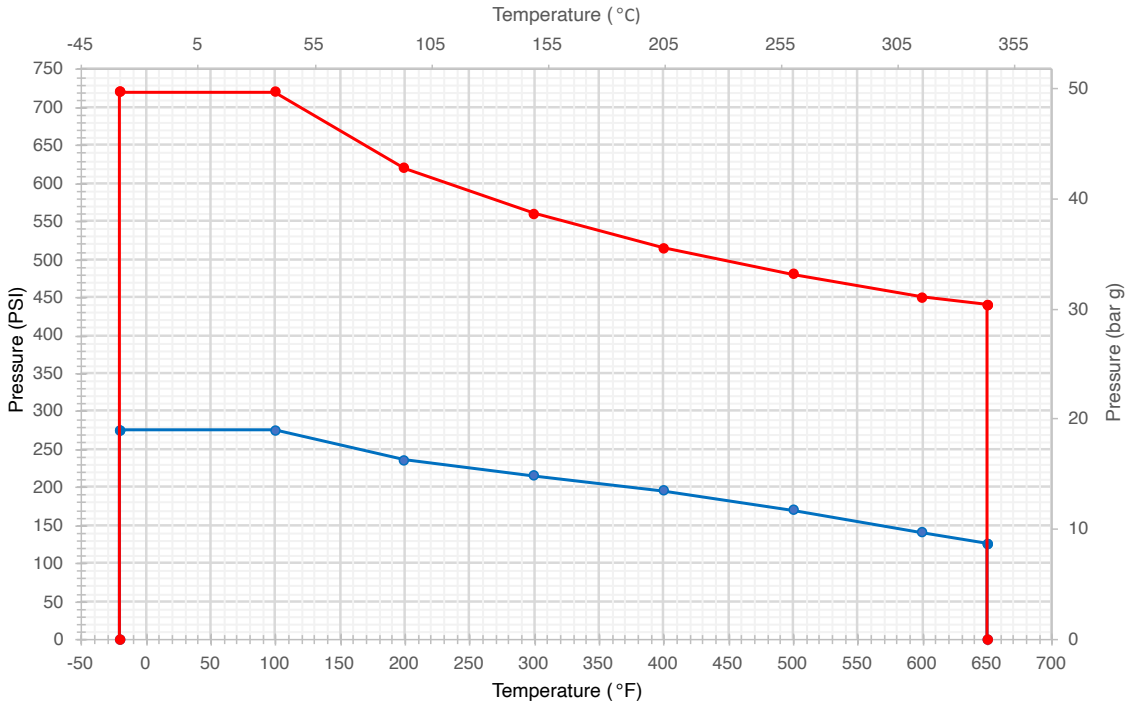
GlobalGear Flange Pressure -Temperature Ratings (Steel ASTM A216 WCB)



NOTE: GlobalGear ports are machined to be compatible with ANSI/ASME flanges. Data is referenced from ASME B16.1-2020 (class B). These charts show ratings for the flanges only. The maximum pump operating conditions must be considered. Consult the appropriate Tuthill catalog for the maximum allowable pressure and temperatures. These ratings are non-shock pressure.

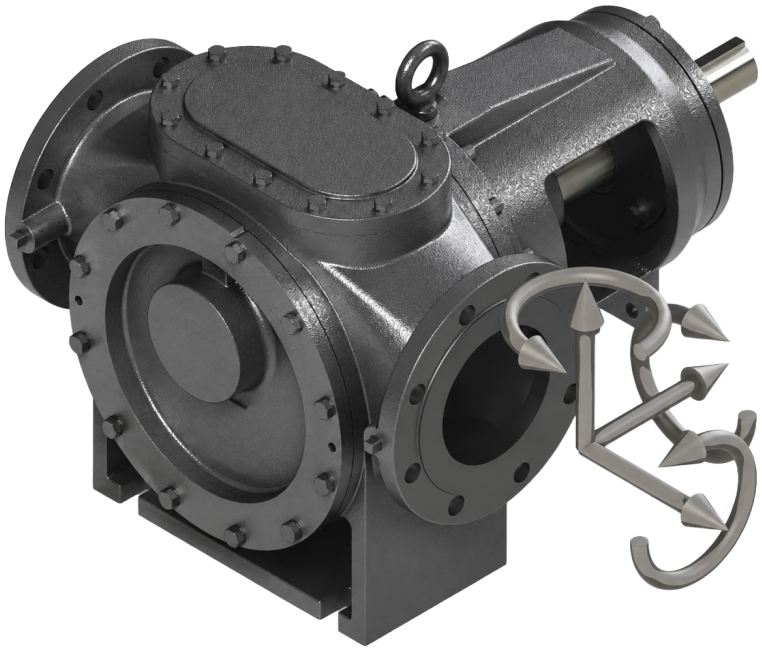
GLOBALGEAR FLANGE RATINGS (STAINLESS STEEL)

GlobalGear Flange Pressure - Temperature Ratings (Stainless Steel CF - 8M)



NOTE: GlobalGear ports are machined to be compatible with ANSI/ASME flanges. **Data is referenced from ASME B16.1-2020 (class B)**. These charts show ratings for the flanges only. The maximum pump operating conditions must be considered. Consult the appropriate Tuthill catalog for the maximum allowable pressure and temperatures. These ratings are non-shock pressure.

GG SERIES PUMPS NOZZLE LOADING DATA



GG SERIES PUMPS NOZZLE LOADING DATA						
PUMP SIZE	NOMINAL PORT SIZE		MAX. FX, FY, & FZ		MAX. MX, MY, & MZ	
	Inch	mm	Lbs	N	Lbs-ft	N-m
GG015-030	1.5"	40mm	113	500	188	255
	2"	50mm	150	667	250	339
GG080	2"	50mm	150	667	250	339
GG120-130	2"	50mm	150	667	250	339
	2.5"	65mm	150	667	312	424
	3"	80mm	225	1001	375	508
	4"	100mm	300	1334	500	678
GG200-210-250	2"	50mm	150	667	250	339
	2.5"	65mm	150	667	312	424
	3"	80mm	225	1001	375	508
	4"	100mm	300	1334	500	678
GG500	6″	150mm	450	2002	750	1017
GG550	6"	150mm	450	2002	750	1017
GG1200	8″	203mm	Contact Factory	Contact Factory	Contact Factory	Contact Factory

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REGULATORY COMPLIANCE INFORMATION

ATEX

The GlobalGear Series pumps' technical file is lodged in accordance with Article 13(1)(b)(ii)of ATEX Directive 2014/34/EU of 26 February 2014

THE FOLLOWING STANDARDS WERE USED TO VERIFY CONFORMANCE:

2006/42/EC – The Machinery Directive

EN 1127-1:2011 – Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology

EN ISO 80079-36:2016 – Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements

EN ISO 80079-37:2016 – Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Nonelectrical type of protection constructional safety ''c'', control of ignition sources ''b'', liquid immersion ''k''

CE

The GlobalGear Series pumps comply with the European Directive 2006/42/EC

THE FOLLOWING STANDARDS WERE USED TO VERIFY CONFORMANCE:

EN ISO 12100:2010 – Safety of machinery - General principles for design

EN 809:1998+A1:2009 – Pumps and pump units for liquids - Common safety requirements

2011/65/EU – The Restriction of Hazardous Substances Directive

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