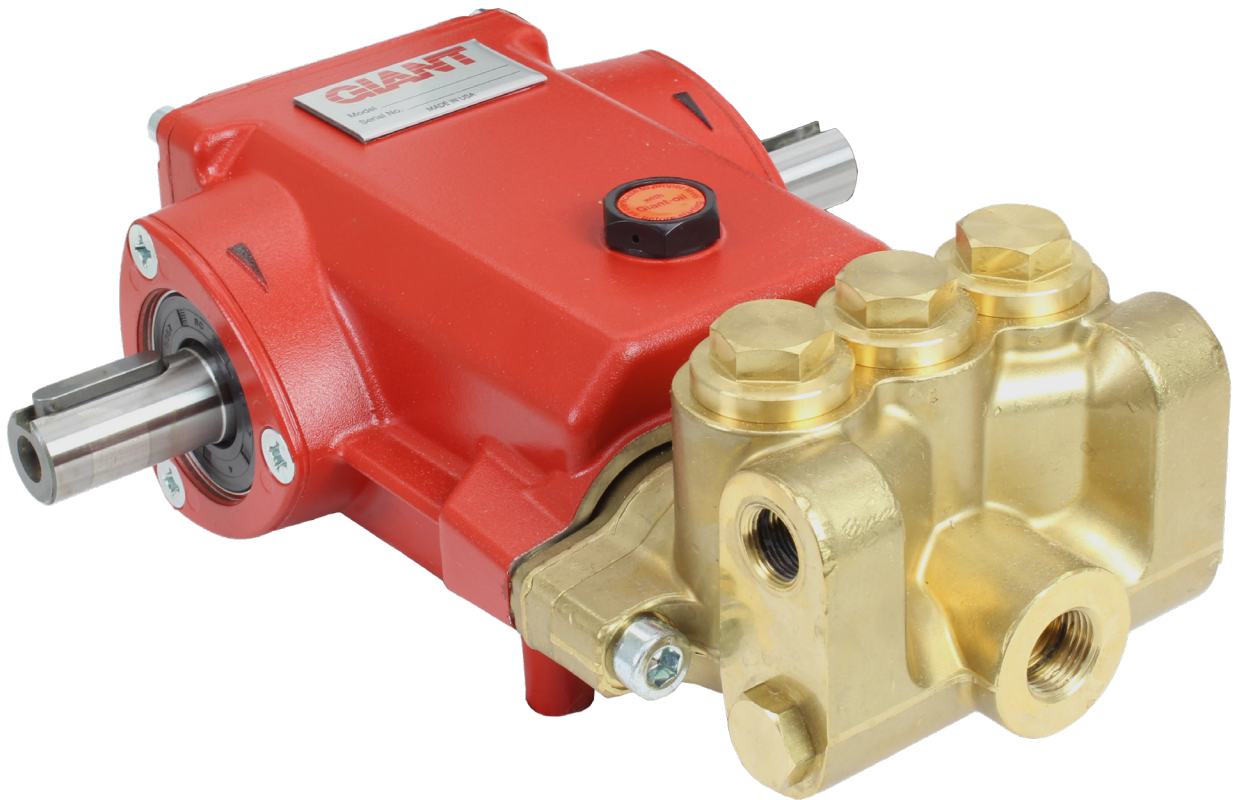


Pumps

P54W, P58W & P59W

Triplex Ceramic
Plunger Pump
Operating Instructions/
Repair and Service
Manual



GIANT
Performance Under Pressure

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Updated 04/25

P54W, P58W & P59W PUMP SPECIFICATIONS

Performance

	Power Required	Pressure	Max. Speed	Max. Flow	Max. Temp.	Plunger ø	Plunger Stroke	Weight	NPSHR
Model	BHP (kW)	PSI (bar)	RPM	GPM (l/min)	°F (°C)	in (mm)	in (mm)	lbs. (kg)	ft. of head (mWs)
P54W	11.5 (8.6)	4000 (280)	1450	4.0 (15.1)	140 (60)	0.63 (16)	0.71 (18)	19.4 (8.8)	23 (7.0)
P54W	10.8 (8.1)	3250 (224)	1750	4.8 (18.2)					
P58W	12.1 (9.0)	3500 (240)	1450	5.0 (19.0)	140 (60)	0.71 (18)	0.71 (18)	19.4 (8.8)	21.3 (6.5)
P58W	11.1 (8.3)	2700 (186)	1750	6.0 (22.7)					
P59W	10.1 (7.5)	1900 (130)	1450	7.5 (28.3)	140 (60)	0.87 (22)	0.71 (18)	19.4 (8.8)	22.3 (6.8)
P59W	9.4 (7.0)	1510 (104)	1750	9.0 (32.8)					

Performance data for intermittent operation, data for continuous operation on request.

For information on intermittent operation and calculating of the performance data, see the Giant Industries assembly instructions.

NPSHR / Inlet pressure

Required NPSHR refers to water at 68 °F (20 °C) at max. permissible pump speed.

Maximum inlet pressure: 29 PSI (2 bar)

Level of noise emission

Emission sound pressure level: ≤ 70 dB(A)

Fields of application

The fields of application of these pump types correspond to the specifications in the assembly instructions Giant Industries.

Ambient conditions

Ambient temperature: 41 °F < T_{Amb.} < 86 °F

Ambient temperature: 5 °C < T_{Amb.} < 30 °C

Oil filling

- Filling quantity: **12.5 fl. oz. (0.37 l)**
- Quality: Industrial gear oil **ISO VG 220** or automotive gear oil **SAE 90 GL4 (Giant's p/n 01154)**
- Intervals: first oil change after **50 operating hours** then every **1000 operating hours**, but at the latest after **12 months**

Installation/ Putting into Operation

Shaft protector

When the pump is in operation, the open shaft end must be covered up by shaft protector (17), the driven shaft side and coupling by a contact-protector.

Direction of pump rotation

Set the direction of rotation of the drive unit according to the direction of rotation arrow on the crankcase.

Suction line filter

Recommended mesh size 150 µm.

7. Operation

For informations, see assembly instructions Giant Industries

P58W HORSEPOWER REQUIREMENTS

RPM	GPM	2000 PSI	2500 PSI	2700 PSI	3500 PSI
910	3.1	4.2	5.3	5.7	7.4
1025	3.5	4.8	6.0	6.5	8.4
1190	4.1	5.6	7.0	7.6	9.8
1305	4.5	6.2	7.7	8.3	10.8
1450	5.0	6.8	8.6	9.2	12.0
1750	6.0	8.2	10.3	11.1	

P54W HORSEPOWER REQUIREMENTS

RPM	GPM	2000 PSI	3000 PSI	3250 PSI	4000 PSI
910	2.5	3.4	5.1	5.6	6.8
1025	2.8	3.8	5.8	6.2	7.7
1190	3.3	4.5	6.8	7.3	9.0
1305	3.6	4.9	7.4	8.0	9.9
1450	4.0	5.5	8.2	8.9	11.0
1750	4.8	6.6	9.9	10.7	

P59W HORSEPOWER REQUIREMENTS

RPM	GPM	500 PSI	1000 PSI	1510 PSI	1900 PSI
910	4.7	1.6	3.2	4.9	6.1
1025	5.3	1.8	3.6	5.5	6.9
1190	6.1	2.1	4.2	6.3	7.9
1305	7.0	2.4	4.8	7.2	9.1
1450	7.5	2.6	5.1	7.8	9.8
1750	9.0	3.1	6.2	9.4	

P54W, P58W & P59W REPAIR KITS

Seal Kits

P54W		# 09167	
<u>Item</u>	<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
31 & 50	07767	Automatic Seal Ring	6
32	07768	Support Ring	3
40	07489	O-Ring	6
49	01009	O-Ring	1
P58W		# 09238	
<u>Item</u>	<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
31 & 50	08477	Grooved Seal	6
32	07929	Support Ring	3
40	07489	O-Ring	3
40A	12126	O-Ring	3
49	01009	O-Ring	1
P59W		# 09317	
<u>Item</u>	<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
31	06250	Automatic Seal Ring	3
32	06253	Support Ring	3
40	07234	O-Ring	6
49	01009	O-Ring	1
50	13390	Grooved Seal	3

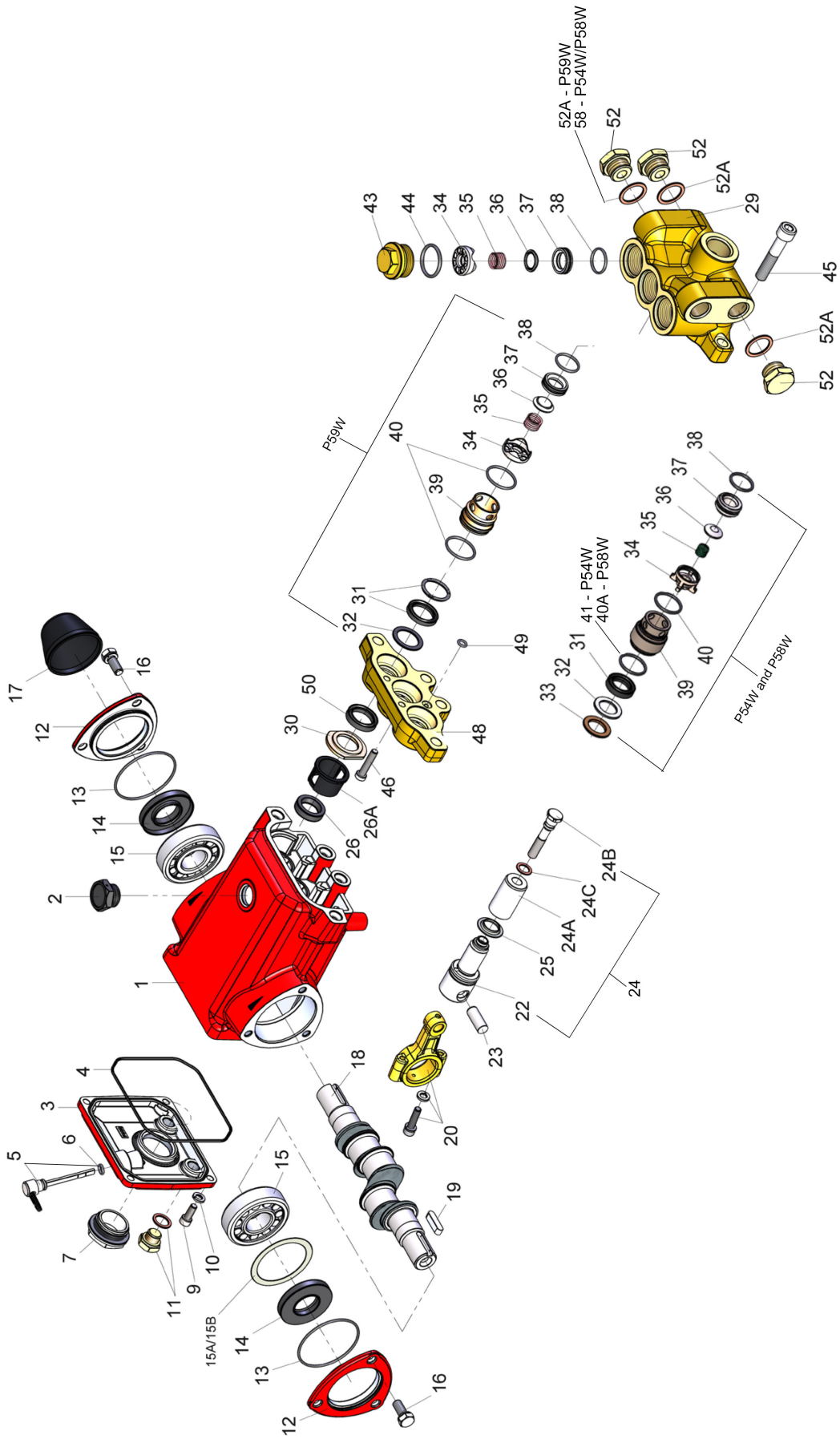
Valve Assembly Kits

P54W & P58		# 09168	
<u>Item</u>	<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
34	07492	Tension Cap	6
35	07906	Valve Spring	6
36	05542	Valve Plate	6
37	05541	Valve Seat	6
38	07770	O-Ring	6
P59		# 09318	
<u>Item</u>	<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
34	07326-0100	Tension Cap	6
35	07312-0100	Valve Spring	6
36	07327	Valve Plate	6
37	06014	Valve Seat	6
38	06015	O-Ring	6
Oil Seal Kit		#09202	
<u>Item</u>	<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
26	07206	Radial Shaft Seal	3

P54W, P58W & P59W TORQUE SPECIFICATIONS

Position	Thread	Lubrication Info.	Torque Amount
7	1" BSP	Loctite 5910	106 in.-lbs. (12 Nm)
9	M6		88 in.-lbs. (10 Nm)
11	1/4" BSP		22 ft. lbs. (30 Nm)
16	M8		132 in.-lbs (15 Nm)
20	M6		106 in.-lbs. (12 Nm)
24B	M8	Loctite 243	200 in.lbs. (22.5 Nm)
24C		Loctite 243	
43 (P54W/P58W)	3/4" BSP	Loctite 243	51 ft.-lbs. (70 Nm)
43 (P59W)	M30 x 1.5		51 ft.-lbs. (70 Nm)
45	M10		36 ft.-lbs. (49 Nm)
46	M8		221 in.-lbs. (25 Nm)

Exploded View - P54W, P58W & P59W



P54W, P58W & P59W PUMP PARTS LIST

A= P54W B= P58W C= P59W

<u>ITEM</u>	<u>PART</u>	<u>DESCRIPTION</u>	<u>QTY.</u>	<u>ITEM</u>	<u>PART</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	07180	Crankcase	1	32	07768	Support Ring (A)	3
2	07181	Vent/Filler Plug with Seal	1	32	07929	Pressure Ring (B)	3
3	07183	Crankcase Cover	1	32	06253	Support Ring (C)	3
4	07184	O-Ring	1	33	07769	Support Ring (A)	3
5	07185	Oil Dipstick Assembly	1	33	12124	Support Ring (B)	3
6	01009	O-Ring	1	34	07492	Valve Retainer (A,B)	6
7	07186	Oil Sight Glass Assembly	1	34	07326-0100	Valve Retainer (C)	6
9	07188	Cylinder Screw with Slot	4	35	07906	Valve Spring (A,B)	6
10	07223-0100	Spring Washer	4	35	07312-0100	Valve Spring (C)	6
11	07190	Oil Drain Plug	2	36	05542	Valve Plate (A,B)	6
12	07192	Bearing Cover	2	36	07327	Valve Plate (C)	6
13	07193	O-Ring	2	37	05541	Valve Seat (A,B)	6
14	01166	Radial Shaft Seal	2	37	06014	Valve Seat (C)	6
15	07760	Cylinder Roller Bearing	2	38	07770	O-Ring (A,B)	6
15A	06245	Shim 0.2mm	1	38	06015	O-Ring (C)	6
15B	06330	Shim 0.1mm	1	39	07771	Seal Case (A)	3
16	07196A	Countersunk Screw	6	39	12125	Seal Case (B)	3
17	05375	Shaft Protector	1	39	13386	Seal Case (C)	3
18	13330	Crankshaft	1	40	07489	O-Ring (A)	6
19	13331	Fitting Key	1	40	07489	O-Ring (B)	3
20	07199	Connecting Rod Assembly	3	40	07234	O-Ring (C)	6
22	07777A	Crosshead Assembly	3	40A	12126	O-Ring (B Only)	3
23	01031	Crosshead Pin	3	43	07772	Plug (A,B)	3
24	07763	Crosshead/Plunger Assy. (A)	3	43	07213	Plug (C)	3
24	13332	Crosshead/Plunger Assy. (B)	3	44	07035	O-Ring (A,B)	3
24	13382	Crosshead/Plunger Assy. (C)	3	44	07214	O-Ring (C)	3
24A	07778	Plunger Pipe (A)	3	45	07773	Inner Hexagon Screw	4
24A	07021	Plunger Pipe (B)	3	46	07774	Inner Hexagon Screw (A,B)	2
24A	13383	Plunger Pipe (C)	3	46	13388	Inner Hexagon Screw (C)	2
24B	08456	Tension Screw	3	48	07775	Intermediate Casing (A)	1
24C	07676	Copper Gasket	3	48	12127	Intermediate Casing (B)	1
25	06648	Oil Scraper	3	48	13389	Intermediate Casing (C)	1
26	07206	Radial Shaft Seal	3	49	01009	O-Ring	1
26A	07764	Spacer Sleeve	3	50	07767	Automatic Seal Ring (A)	3
29	07765	Valve Casing (A, B)	1	50	08477	Grooved Seal (B)	3
29	13384	Valve Casing (C)	1	50	13390	Grooved Seal (C)	3
30	07766	Pressure Ring (A)	3	52	13338	Plug, 3/8" BSP (A,B)	3
30	12123	Pressure Ring (B)	3	52	07109	Plug, 1/2" BSP (C)	3
30	13385	Pressure Ring (C)	3	52A	12007	O-Ring (A,B)	2
31	07767	Automatic Seal Ring (A)	3	52A	07182	Gasket (C)	2
31	08477	Grooved Seal (B)	3	58	08486	Copper Crush Washer (A,B)	1
31	06250	Automatic Seal Packing (C)	3				

P54W, P58W & P59W Repair Instructions

Maintenance and Servicing

For the type of threadlocker used and the required tightening torques, observe the table in the exploded view.

Special tools required

The following special tools are required for assembly:

- Pull-out tool size 1 (Ø15/Ø12)

Suction and Discharge Valves

To Check Valves Screw out plugs (43) with socket wrench.

Remove spring tension cap (34), and valve plate (36) from discharge valve underneath. Remove valve seat (37) with pull-out tongs (size 1). Screw off screws (45) and remove valve casing (29).

Take intermediate casing (48) and valve casing (29) apart.

Pull seal case (39) out of valve casing (29). Remove suction valve parts as described above for discharge valve.

Check valve components for wear or damage.

Check O-rings (38,40,44,49).

Replace worn parts.

New, oiled O-rings, should be used if possible.

Reassemble in correct order.

Tighten plugs (43) to the required torque. Fix valve casing by tightening screw (45,46) evenly to the required torque.

Seals and Plunger

Screw-out screws (45) and remove valve casing (29).

Unscrew screws (46) and remove intermediate casing (48) from the valve casing (29).

Lever out seal packing (31), support ring (32) and seal packing (50) with a screw driver.

Check O-rings (49) in intermediate casing.

Check plunger surfaces and replace worn seals.

Pay attention to the installation position of the seals.

When replacing, wet new seals and O-rings thinly with silicone grease or mineral oil and insert carefully.

If plunger pipe (24A) is damaged, remove tension screw (24B) and take pipe out towards the front. Thoroughly clean contact surfaces of plungers (22). Assemble tension screw (24B), plunger pipe and new copper seal ring (24C).

Cover thread of tension screw (24B) with a fine film of thread-locker, screw into plunger (22) and tighten carefully to the required torque.



Under no circumstances should thread-locker get between the plunger pipe (24A) and the centering neck on the plunger (22). Tensioning of the plunger pipe due to eccentric tightening of the tensioning screw or due to dirt or damage to the contact surface can lead to breakage of the plunger pipe.

Fix valve casing by tightening nuts (45) evenly to the required torque.

If required, supplementary assembly instructions can be requested from the manufacturer Giant Industries.

Spare Parts

When **ordering spare parts**, please specify **pump type, pump number, year of manufacture**, and **parts code number**.

This data can be found on the nameplate and in the spare parts list.

Malfunctions / Remedy

For informations, see assembly instructions Giant Industries.

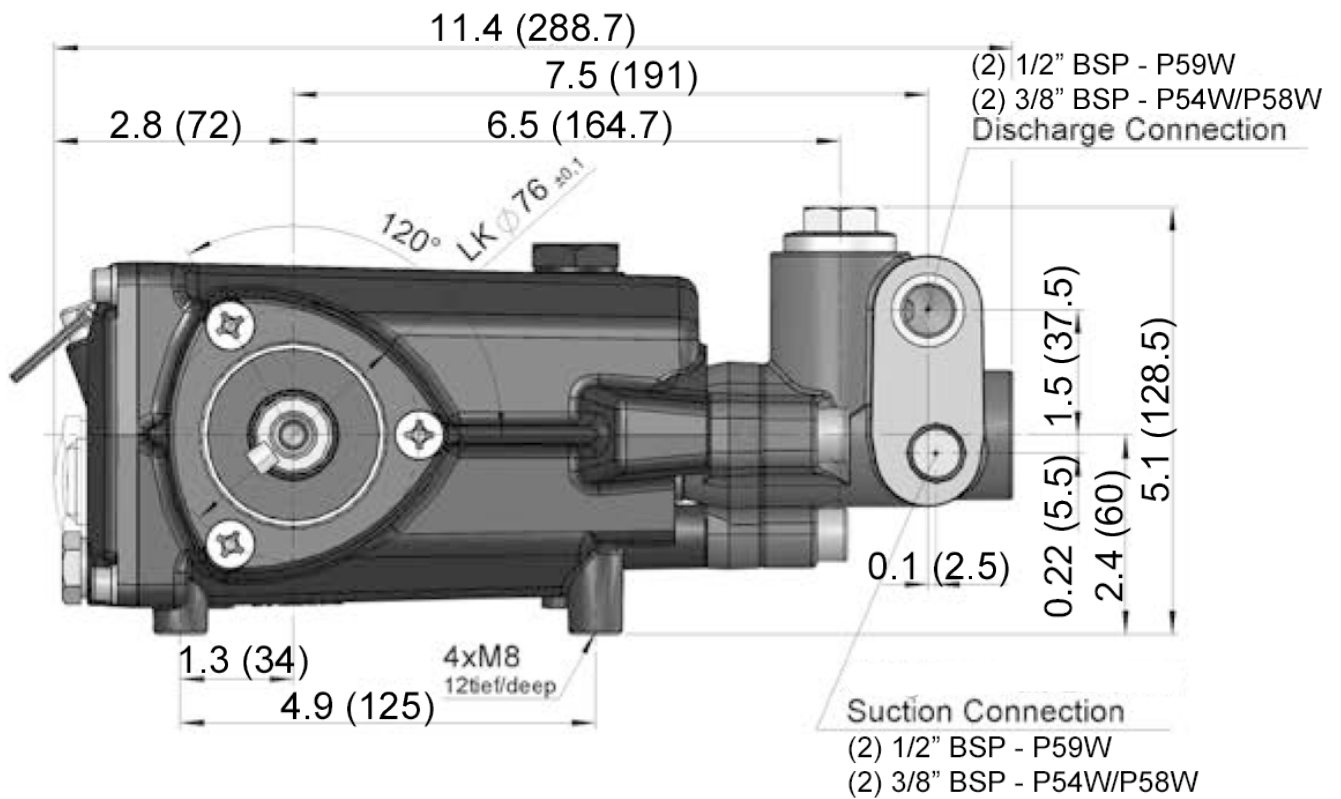
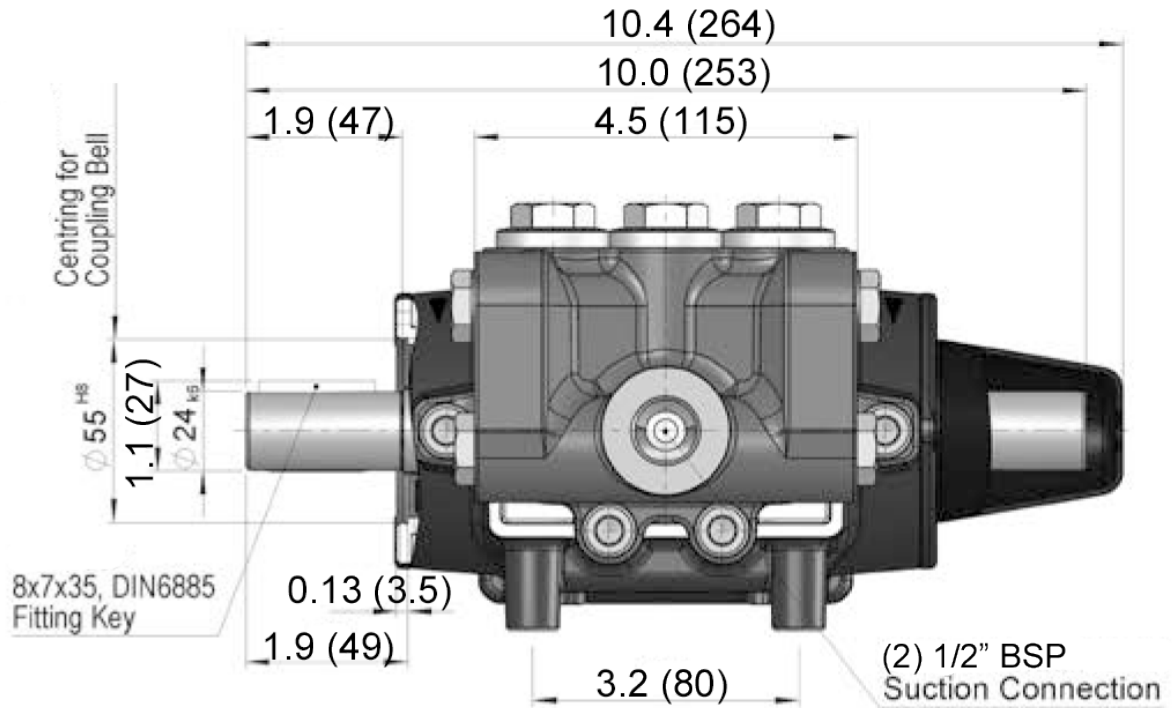
Materials Used

Valve Casing:	Special Brass
Plunger:	Solid ceramic
Valves:	High-Grade Stainless Steel
Seals:	Nitrile with fabric reinforcing
O-Rings:	Nitrile.

Paint

The pump drive is painted in RAL 3001 as standard.

P54W, P58W & P59W PUMP DIMENSIONS Inches (mm)



GIANT INDUSTRIES LIMITED WARRANTY

Giant Industries, Inc. pumps and accessories are warranted by the manufacturer to be free from defects in workmanship and material as follows:

1. Five (5) years from the date of shipment for all pumps used in portable pressure washers with NON-SALINE, clean water applications.
2. Two (2) years from the date of shipment for Giant pumps used in car wash applications.
3. One (1) year from the date of shipment for all other Giant industrial and consumer pumps.
4. Six (6) months from the date of shipment for all rebuilt pumps
5. Ninety (90) days from the date of shipment for all Giant accessories.

This warranty is limited to repair or replacement of pumps and accessories of which the manufacturer's evaluation shows were defective at the time of shipment by the manufacturer. The following items are NOT covered or will void the warranty:

1. Defects caused by negligence or fault of the buyer or third party.
2. Normal wear and tear to standard wear parts.
3. Use of repair parts other than those manufactured or authorized by Giant.
4. Improper use of the product as a component part.
5. Changes or modifications made by the customer or third party.
6. The operation of pumps and or accessories exceeding the specifications set forth in the Operations Manuals provided by Giant Industries, Inc.

Liability under this warranty is on all non-wear parts and limited to the replacement or repair of those products returned freight prepaid to Giant Industries which are deemed to be defective due to workmanship or failure of material. A Returned Goods Authorization (R.G.A.) number and completed warranty evaluation form is required prior to the return to Giant Industries of all products under warranty consideration. Call (419)-531-4600 or fax (419)-531-6836 to obtain an R.G.A. number.

Repair or replacement of defective products as provided is the sole and exclusive remedy provided hereunder and the MANUFACTURER SHALL NOT BE LIABLE FOR FURTHER LOSS, DAMAGES, OR EXPENSES, INCLUDING INCIDENTAL AND CONSEQUENTIAL DAMAGES DIRECTLY OR INDIRECTLY ARISING FROM THE SALE OR USE OF THIS PRODUCT.

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WARNING: This product might contain a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov

GIANT
Performance Under Pressure

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