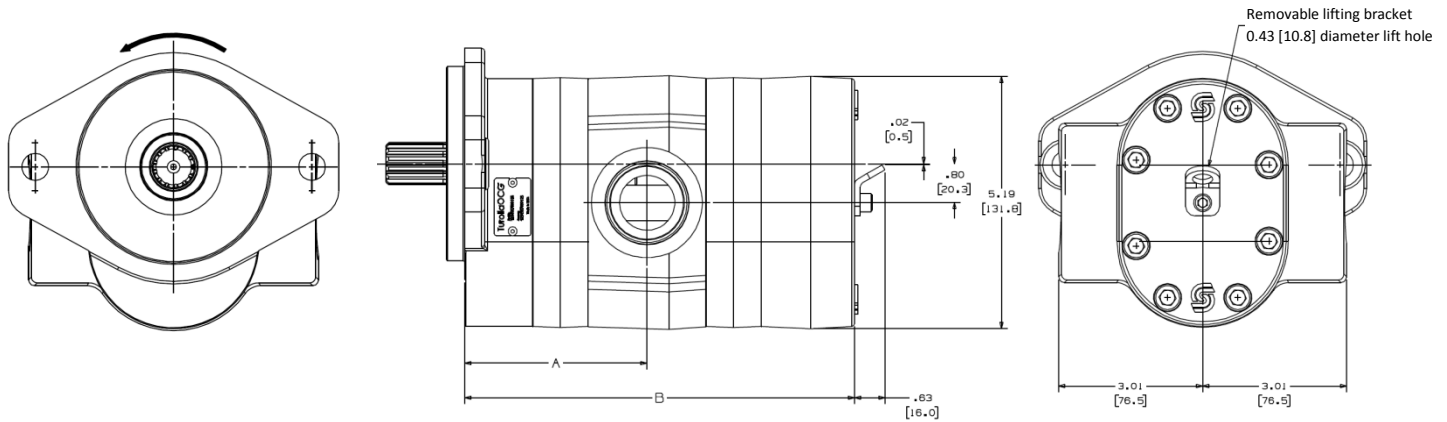


## Dimensions and Ratings



Parameters	Unit	34	38	41	45	51	58	64	72	76	82	90
Displacement	cm <sup>3</sup> /rev	34.0	38.0	41.0	45.0	50.8	58.0	63.6	72.2	76.0	82.0	90.2
	in <sup>3</sup> /rev	2.08	2.32	2.50	2.74	3.10	3.54	3.88	4.40	4.64	5.00	5.50
Rated Pressure	bar	276	276	276	276	276	276	255	226	215	200	180
	psi	4000	4000	4000	4000	4000	4000	3700	3275	3100	2880	2620
Peak Pressure	bar	303	303	303	303	303	303	285	250	235	220	200
	psi	4400	4400	4400	4400	4400	4400	4130	3625	3400	3200	2900
Maximum Speed	rpm	3400	3400	3400	3400	3400	3200	3000	2750	2700	2500	2275
Theoretical flow at max speed	l/min	116	129	139	153	173	186	191	199	205	205	205
	US gal/min	31	34	37	40	46	49	50	52	54	54	54
Dimension A	mm	82.9	85	86.5	88.3	91.3	94.9	97.7	102	104	106.8	111.1
	in	3.27	3.35	3.41	3.48	3.6	3.74	3.85	4.02	4.1	4.21	4.38
Dimension B	mm	179.1	183.1	186.2	189.7	195.8	202.9	208.5	217.2	221.2	226.8	235.5
	in	7.05	7.21	7.33	7.47	7.71	7.99	8.21	8.55	8.71	8.93	9.27

## Product features

<b>Construction</b>	Heavy duty ductile iron
<b>Displacements</b>	34 to 90 cm <sup>3</sup> /rev [2.04 to 5.40 in <sup>3</sup> /rev]
<b>Pressure</b>	276 bar [4000 psi]
<b>Speed</b>	600-3400 rpm
<b>Operating Temperature</b>	-30°C [-20°F] minimum cold start 104°C [220°F] normal conditions 113°C [235°F] peak intermittent
<b>Fluid Viscosity</b>	10 mm <sup>2</sup> /sec (cSt) [60 SUS] min 1600 mm <sup>2</sup> /sec (cSt) [7500 SUS] max

<b>Mounting</b>	SAE-B, 2- bolt
<b>Shaft</b>	Spline - SAE 15 tooth Straight key - 25mm (1 inch)
<b>Optional Shaft (Reduced torque)</b>	Spline - SAE 13 Straight key - 22 (7/8 inch) 1:8 Taper - 22mm (7/8) with key
<b>Inlet Ports</b>	SAE 1.25 SAE split flange, 1 5/8-12 ORB 1.50 inch (38mm) beaded tube
<b>Outlet Ports</b>	SAE 1.25 SAE split flange, 1 5/8-12 ORB
<b>Filtration</b>	22/18/13 ISO 4406 at pump inlet

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## C Mounting Flange

Code	Description
AA	SAE A 2-bolt
AC	SAE A 2-bolt, use with integral PFD/Steering Cover
AM	SAE A 2-bolt, with T seal
AP	SAE A 2-bolt, with T seal, use with integral PFD/Steering cover
AR	SAE A 2-bolt, use with 15 T spline input drive
AS	SAE A 2-bolt, use with integral PFD/Steering cover and 15 T input spline
AL	SAE A 2-bolt, two shaft seals with weep hole
AT	SAE A 2-bolt, two shaft seals with weep hole, use with integral PFD/Steering cover
<b>BB</b>	<b>SAE B 2-bolt</b>
BC	SAE B 2-bolt, use with integral PFD/Steering cover
BM	SAE B 2-bolt, with T seal
BP	SAE B 2-bolt, with T seal, use with integral PFD/Steering cover
BR	SAE B 2-bolt, use with 15 T spline input drive
BS	SAE B 2-bolt, use with integral PFD/Steering cover and 15 T input spline
BT	SAE B 2-bolt, two shaft seals with weep hole, use with integral PFD/Steering Cover
BW	SAE B 2-bolt, two shaft seals with weep hole
PP	Perkins 6 bolt flange with (2) seals (use with WT input shaft and clockwise rotation)



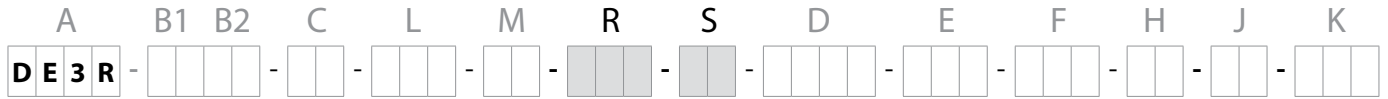
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## L Ports - First Section

Code	Description	
101	1 1/16-12 side inlet, 7/8-14 side outlet	SAE O-ring boss ports No integrated valves
103	1 5/16-12 side inlet, 7/8-14 side outlet	
104	1 5/16-12 side inlet, 1 1/16-12 side outlet	
113	No inlet, 7/8-14 side outlet	
125	1 5/8-12 side inlet, 1 1/16-12 side outlet	
126	No inlet, 1 1/16-12 side outlet	
341	No inlet, 3/4 side split flange outlet (SAE Code 61)	SAE Split Flange Ports - No integrated valves
342	1 1/4 side split flange inlet, 3/4 side split flange outlet (SAE Code 61)	
401	No inlet, 1/2-14 side outlet	British Standard Pipe Parallel (BSPP) threads - No integrated valves
402	3/4-14 side inlet, 1/2-14 side outlet	
403	1-11 side inlet, 1/2-14 side outlet	
404	1 1/4-11 side inlet, 1/2-14 side outlet	
405	No inlet, 3/4-14 side outlet	
407	1-11 side inlet, 3/4-14 side outlet	
408	1 1/4-11 side inlet, 3/4-14 side outlet	
704	1 1/4 side tube inlet, 7/8-14 side ORB outlet	Beaded tube inlet port SAE O-ring boss outlet port No integrated valves
708	1 1/4 side tube inlet, 1 1/16-12 side ORB outlet	
716	1 1/2 side tube inlet, 1 1/16-12 side ORB outlet	
717	1 1/2 side tube inlet, 7/8-14 side ORB outlet	

## M Displacement - Second Section

Code	Description	Code	Description
07	7.0 cm <sup>3</sup> /rev [0.43 in <sup>3</sup> /rev]	23	22.5 cm <sup>3</sup> /rev [1.37 in <sup>3</sup> /rev]
10	9.5 cm <sup>3</sup> /rev [0.58 in <sup>3</sup> /rev]	25	25.4 cm <sup>3</sup> /rev [1.55 in <sup>3</sup> /rev]
11	10.8 cm <sup>3</sup> /rev [0.66 in <sup>3</sup> /rev]	29	29.0 cm <sup>3</sup> /rev [1.77 in <sup>3</sup> /rev]
13	12.6 cm <sup>3</sup> /rev [0.77 in <sup>3</sup> /rev]	32	31.8 cm <sup>3</sup> /rev [1.94 in <sup>3</sup> /rev]
14	14.3 cm <sup>3</sup> /rev [0.87 in <sup>3</sup> /rev]	36	36.1 cm <sup>3</sup> /rev [2.20 in <sup>3</sup> /rev]
17	17.0 cm <sup>3</sup> /rev [1.04 in <sup>3</sup> /rev]	38	38.0 cm <sup>3</sup> /rev [2.32 in <sup>3</sup> /rev]
19	19.0 cm <sup>3</sup> /rev [1.16 in <sup>3</sup> /rev]	41	41.0 cm <sup>3</sup> /rev [2.50 in <sup>3</sup> /rev]
21	20.5 cm <sup>3</sup> /rev [1.25 in <sup>3</sup> /rev]	45	45.1 cm <sup>3</sup> /rev [2.75 in <sup>3</sup> /rev]



## R Ports - Second Section

Code	Description	
101	1 1/16-12 side inlet, 7/8-14 side outlet	
103	1 5/16-12 side inlet, 7/8-14 side outlet	
104	1 5/16-12 side inlet, 1 1/16-12 side outlet	SAE O-ring boss ports No integrated valves
113	No inlet, 7/8-14 side outlet	
125	1 5/8-12 side inlet, 1 1/16-12 side outlet	
126	No inlet, 1 1/16-12 side outlet	
341	No inlet, 3/4 side split flange outlet (SAE Code 61)	SAE Split Flange Ports - No integrated valves
342	1 1/4 side split flange inlet, 3/4 side split flange outlet (SAE Code 61)	
401	No inlet, 1/2-14 side outlet	
402	3/4-14 side inlet, 1/2-14 side outlet	
403	1-11 side inlet, 1/2-14 side outlet	British Standard Pipe Parallel (BSPP) threads - No integrated valves
404	1 1/4-11 side inlet, 1/2-14 side outlet	
405	No inlet, 3/4-14 side outlet	
407	1-11 side inlet, 3/4-14 side outlet	
408	1 1/4-11 side inlet, 3/4-14 side outlet	
704	1 1/4 side tube inlet, 7/8-14 side ORB outlet	Beaded tube inlet port SAE O-ring boss outlet port No integrated valves
708	1 1/4 side tube inlet, 1 1/16-12 side ORB outlet	
716	1 1/2 side tube inlet, 1 1/16-12 side ORB outlet	
717	1 1/2 side tube inlet, 7/8-14 side ORB outlet	

## S Displacement - Third Section

Code	Description	Code	Description
07	7.0 cm <sup>3</sup> /rev [0.43 in <sup>3</sup> /rev]	23	22.5 cm <sup>3</sup> /rev [1.37 in <sup>3</sup> /rev]
10	9.5 cm <sup>3</sup> /rev [0.58 in <sup>3</sup> /rev]	25	25.4 cm <sup>3</sup> /rev [1.55 in <sup>3</sup> /rev]
11	10.8 cm <sup>3</sup> /rev [0.66 in <sup>3</sup> /rev]	29	29.0 cm <sup>3</sup> /rev [1.77 in <sup>3</sup> /rev]
13	12.6 cm <sup>3</sup> /rev [0.77 in <sup>3</sup> /rev]	32	31.8 cm <sup>3</sup> /rev [1.94 in <sup>3</sup> /rev]
14	14.3 cm <sup>3</sup> /rev [0.87 in <sup>3</sup> /rev]	36	36.1 cm <sup>3</sup> /rev [2.20 in <sup>3</sup> /rev]
17	17.0 cm <sup>3</sup> /rev [1.04 in <sup>3</sup> /rev]	38	38.0 cm <sup>3</sup> /rev [2.32 in <sup>3</sup> /rev]
19	19.0 cm <sup>3</sup> /rev [1.16 in <sup>3</sup> /rev]	41	41.0 cm <sup>3</sup> /rev [2.50 in <sup>3</sup> /rev]
21	20.5 cm <sup>3</sup> /rev [1.25 in <sup>3</sup> /rev]	45	45.1 cm <sup>3</sup> /rev [2.75 in <sup>3</sup> /rev]



## D Rear Cover: Port Options, Integrated Valves and Auxiliary Flange

Code	Inlet	Outlet	Description
N101	1 1/16-12 side inlet	7/8-14 side outlet	SAE O-ring boss ports No integrated valves No auxiliary flange
N103	1 5/16-12 side inlet	7/8-14 side outlet	
N104	1 5/16-12 side inlet	1 1/16-12 side outlet	
N125	1 5/8-12 side inlet	1 1/16-12 side outlet	
N126	No inlet	1 1/16-12 side outlet	
N501	1 1/16-12 rear inlet	7/8-14 rear outlet	
N503	1 5/16-12 rear inlet	7/8-14 rear outlet	SAE Metric Ports – No Integrated Valves
N504	1 5/16-12 rear inlet	1 1/16-12 rear outlet	
N252	M33x2-6H rear inlet	M22x1.5-6H side outlet	
N254	M33x2-6H rear inlet	M22x1.5-6H side outlet	
N401	No inlet	1/2-14 side outlet	
N402	3/4-14 side inlet	1/2-14 side outlet	
N403	1-11 side inlet	1/2-14 side outlet	British Standard Pipe Parallel (BSPP) threads - No integrated valves
N404	1 1/4-11 side inlet	1/2-14 side outlet	
N407	1-11 side inlet	3/4-14 side outlet	
N408	1 1/4-11 side inlet	3/4-14 side outlet	
N341	No inlet	3/4 side split flange outlet (SAE code 61)	SAE split flange ports No integrated valves No auxiliary flange
N342	1 1/4 side split flange inlet	3/4 side split flange outlet (SAE code 61)	
N704	1 1/4 side tube inlet	7/8-14 side ORB outlet	Beaded tube inlet port, SAE O-ring boss outlet port No integrated valves No auxiliary flange
N708	1 1/4 side tube inlet	1 1/16-12 side ORB outlet	
N715	1 1/4 REAR tube inlet	1 1/16-12 REAR ORB outlet	
N716	1 1/2 side tube inlet	1 1/16-12 side ORB outlet	
N720	1 1/4 REAR tube inlet	7/8-14 REAR ORB outlet	

\* Integrated auxiliary flange requires use of input shaft option AH or AC

\*\* Requires use of mounting flange option AC or AP

\*\*\* Requires use of mounting flange option BC or BP



## D Rear Cover: Port Options, Integrated Valves and Auxiliary Flange

Code	Inlet	Outlet	Description
F09A**	1 5/16-12 side inlet, 3/4-16 side priority, 7/8-14 side secondary (SAE A flange)	Integrated Priority Flow Divider, cartridge style relief for settings up to: 221bar and 34.3 l/min [3200 psi and 9 US gal/min]	
F09B***	1 5/16-12 side inlet, 3/4-16 side priority, 7/8-14 side secondary (SAE B flange)		
F13A**	1 5/8-12 rear inlet, 3/4-16 rear priority, 7/8-14 rear secondary (SAE A flange)		
F13B***	1 5/8-12 rear inlet, 3/4-16 rear priority, 7/8-14 rear secondary (SAE B flange)		
F21A**	1 5/8-12 side inlet, 3/4-16 side priority, 7/8-14 side secondary (SAE A flange)		
F21B***	1 5/8-12 side inlet, 3/4-16 side priority, 7/8-14 side secondary (SAE B flange)		
F25A**	1 5/16-12 rear inlet, 3/4-16 rear priority, 7/8-14 rear secondary (SAE A flange)		
F25B***	1 5/16-12 rear inlet, 3/4-16 rear priority, 7/8-14 rear secondary (SAE B flange)		
D23A*	1 5/16-12 side inlet, 3/4-16 side priority, no secondary port (SAE A flange)	Integrated Steering Cover, Priority Relief Valve (Cartridge Style) for settings up to: 221 bar and 34.3 l/min [3200 psi and 9 US gal/min]	
D23B**	1 5/16-12 side inlet, 3/4-16 side priority, no secondary port (SAE B flange)		
D24A*	1 5/16-12 rear inlet, 3/4-16 rear priority, no secondary port (SAE A flange)		
D24B**	1 5/16-12 rear inlet, 3/4-16 rear priority, no secondary port (SAE B flange)		
L01A**	1 5/16-12 side inlet, 3/4-16 side priority, 7/8-14 side secondary, 7/16-20 side LS (SAE-A flange)	Integrated Load Sense Divider (Dynamic), Priority Relief Valve	
L01B***	1 5/16-12 side inlet, 3/4-16 side priority, 7/8-14 side secondary, 7/16-20 side LS (SAE-B flange)		
L08A**	1 5/16-12 rear inlet, 3/4-16 rear priority, 7/8-14 rear secondary, 7/16-20 rear LS (SAE-A flange)		
L08B***	1 5/16-12 rear inlet, 3/4-16 rear priority, 7/8-14 rear secondary, 7/16-20 rear LS (SAE-B flange)		



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<b>B103*</b>	1 5/16-12 side inlet	7/8-14 side outlet,	SAE-A 2-Bolt Auxiliary Flange SAE O-ring boss ports
<b>B104*</b>	1 5/16-12 side inlet	1 1/16-12 side outlet	No integrated valves
<b>R104</b>	1 5/16-12 side inlet	1 1/16-12 side outlet	Integrated Relief Valve Internally Drained Maximum Displacement 23cc

\* Integrated auxiliary flange requires use of input shaft option AH or AC

\*\* Requires use of mounting flange option AC or AP

\*\*\* Requires use of mounting flange option BC or BP

A variety of integrated valve options including PFD, Steering Covers, and Load sense priority flow dividers covers are available with D Series multiple pumps. Please contact your technical representative to determine which hardware best suits specific application needs.

## E Flow Control Valve

Code	Description	
<b>NNN</b>	No flow control setting, standard for units without integrated flow control valves	
<b>04X</b>	3.8 l/min [1 US gal/min]	For integrated PFD Steering cover with cartridge style relief valve (Cover options F09A, F09B, F13A, F13B, F21A, F21B, F25A or F25B)
<b>08X</b>	7.6 l/min [2 US gal/min]	
<b>11X</b>	11.4 l/min [3 US gal/min]	
<b>15X</b>	15.1 l/min [4 US gal/min]	
<b>19X</b>	18.9 l/min [5 US gal/min]	
<b>23X</b>	22.7 l/min [6 US gal/min]	
<b>27X</b>	26.5 l/min [7 US gal/min]	
<b>30X</b>	30.3 l/min [8 US gal/min]	
<b>34X</b>	34.3 l/min [9 US gal/min]	
<b>38A</b>	10 bar standby	For integrated load sense divider (use with L08A or L08B rear ports)
<b>38L</b>	10 bar standby	For integrated load sense divider (use with L01A or L01B side ports)
<b>R1N</b>	Maximum flow not to exceed 75 l/min, pressure range from 7-55 bar	For integrated relief valve, internally drained (without flow control) Use with R104 cover option 23cc and under
<b>R2N</b>	Maximum flow not to exceed 75 l/min, pressure range from 41-248 bar	For integrated relief valve, internally drained (without flow control) Use with R104 cover option 23cc and under





