

1757 Duplex Piston Pump

Specifications

Pump Size:

maximum piston size x stroke length, in.(mm):
5-1/2 x 10 (139.7 x 254.0)

Rated BHP (kW) at 85 RPM (Crankshaft speed):
127 (95)

Rated piston load, pounds (kg): 13100 (5942)

Maximum discharge pressure, psi (kPa):
1750 (12066)

Pinion gear ratio: 5.846:1

Pinion shaft extension:

Diameter, in.(mm): 2.938 (74.61)

Length, in.(mm): 13.750 (349.25)

Keyway width x depth, in.(mm):

3/4 x 3/8 (19.1 x 9.5)

Maximum recommended sheave diameter,
in.(mm): 50 (1270)

For larger sheave diameters:

Contact Factory

Oil Capacity, gallons (L): 15.0 (56.8)

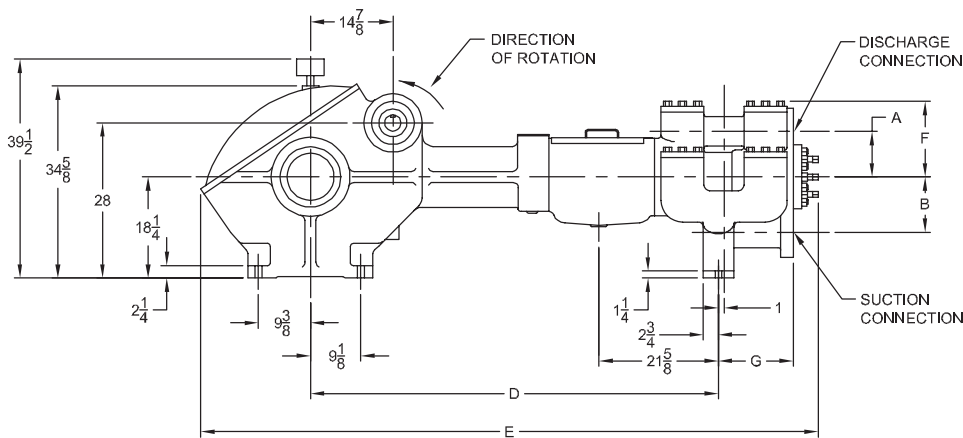
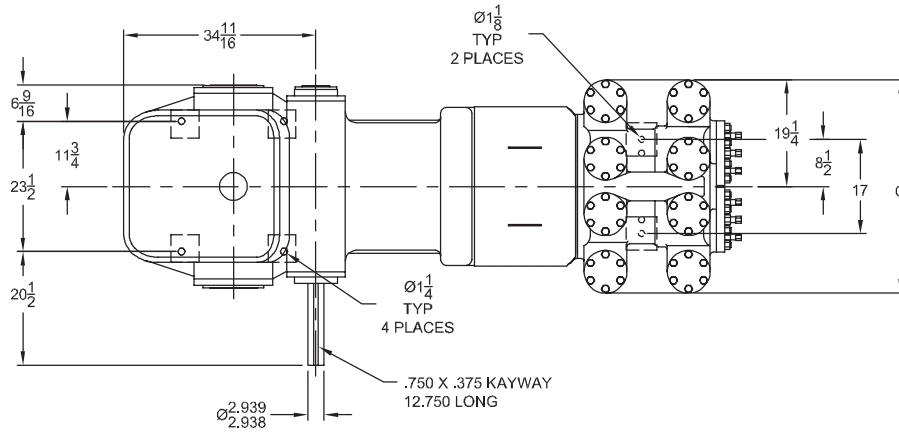
Weight, pump only on

wood shipping skids, pounds (kg): 6125 (2778)

Standard Materials for Fluid End Bodies:

Cast Steel

Cast Ductile Iron



Pump Model	Flange Connections			Dimensions (Inches)						
	Discharge Connection Sizes	Suction Connection Sizes	By-Pass Connection Sizes	A	B	C	D	E	F	G
1757	3 (76.2)-ANSI 600 FF	4 (101.6)-ANSI 150 FF	None	8 1/4	10	38 1/2	73 3/8	111 7/16	13 5/8	13 1/4



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1757 Duplex Double

Performance Data

PUMP	English Units					25 RPM		40 RPM		55 RPM		70 RPM		85 RPM	
	Piston Dia. In.	Piston Area Sq. In.	BPD per RPM	GPM per RPM	Max. Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
1757	2.500	4.9087	23.9280	0.6979	1750	599	17.4	958	27.9	1317	38.4	1675	48.9	2034	59.3
	3.000	7.0686	36.6960	1.0703	1750	918	26.8	1468	42.8	2019	58.9	2569	74.9	3120	91.0
	3.500	9.6211	51.9120	1.5141	1362	1298	37.9	2077	60.6	2856	83.3	3634	106.0	4413	128.7
	4.000	12.5664	69.3360	2.0223	1042	1734	50.6	2774	80.9	3814	111.2	4854	141.6	5894	171.9
	4.500	15.9043	89.2080	2.6019	824	2231	65.0	3569	104.1	4907	143.1	6245	182.1	7583	221.2
	5.000	19.6349	111.288	3.2459	667	2783	81.1	4452	129.8	6121	178.5	7791	227.2	9460	275.9
	5.500	23.7583	135.840	3.9620	551	3396	99.1	5434	158.5	7472	217.9	9509	277.3	11547	336.8
	Brake Horsepower Required					37		60		82		105		127	

PUMP	Metric Units					25 RPM		40 RPM		55 RPM		70 RPM		85 RPM	
	Plunger Dia. mm	Plunger Area cm ²	M ³ /Hr per RPM	L/Sec. per RPM	Max. Press. kPa	M ³ /Hr	L/Sec.	M ³ /Hr	L/Sec.	M ³ /Hr	L/Sec.	M ³ /Hr	L/Sec.	M ³ /Hr	L/Sec.
1757	64	31.669	0.1585	0.0440	12066	4.0	1.1	6.3	1.8	8.7	2.4	11.1	3.1	13.5	3.7
	76	45.604	0.2431	0.0675	12066	6.1	1.7	9.7	2.7	13.4	3.7	17.0	4.7	20.7	5.7
	89	62.072	0.3439	0.0955	9388	8.6	2.4	13.8	3.8	18.9	5.3	24.1	6.7	29.2	8.1
	102	81.073	0.4593	0.1276	7188	11.5	3.2	18.4	5.1	25.3	7.0	32.1	8.9	39.0	10.8
	114	102.608	0.5909	0.1642	5679	14.8	4.1	23.6	6.6	32.5	9.0	41.4	11.5	50.2	14.0
	127	126.677	0.7371	0.2048	4600	18.4	5.1	29.5	8.2	40.5	11.3	51.6	14.3	62.7	17.4
	140	153.279	0.8998	0.2500	3802	22.5	6.2	36.0	10.0	49.5	13.7	63.0	17.5	76.5	21.2
	Kilowatts Required					28		45		61		78		95	

For operation below 54 RPM, an auxiliary lubrication system is required.

RPM shown is Crankshaft speed. For Pinion Shaft speed, multiply RPM by Gear Ratio. Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 85% Mechanical Efficiency.

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1759 Duplex Double-Acting Piston Pump

Performance Data

PUMP	English Units					25 RPM		40 RPM		55 RPM		70 RPM		85 RPM	
	Piston Dia. In.	Piston Area Sq. In.	BPD per RPM	GPM per RPM	Max. Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
1759	4.000	12.5664	69.3360	2.0223	1042	1734	50.6	2774	80.9	3814	111.2	4854	141.6	5894	171.9
	4.500	15.9043	89.2080	2.6019	824	2231	65.0	3569	104.1	4907	143.1	6245	182.1	7583	221.2
	5.000	19.6349	111.288	3.2459	667	2783	81.1	4452	129.8	6121	178.5	7791	227.2	9460	275.9
	5.500	23.7583	135.840	3.9620	551	3396	99.1	5434	158.5	7472	217.9	9509	277.3	11547	336.8
	6.000	28.2743	162.576	4.7418	463	4065	118.5	6504	189.7	8942	260.8	11381	331.9	13819	403.1
	6.500	33.1830	191.664	5.5902	395	4792	139.8	7667	223.6	10542	307.5	13417	391.3	16292	475.2
	7.000	38.4845	223.200	6.5100	340	5580	162.8	8928	260.4	12276	358.1	15624	455.7	18972	553.4
	7.500	44.1786	257.040	7.4970	297	6426	187.4	10282	299.9	14138	412.3	17993	524.8	21849	637.2
Brake Horsepower Required						38		61		84		107		130	

PUMP	Metric Units					25 RPM		40 RPM		55 RPM		70 RPM		85 RPM	
	Plunger Dia. mm	Plunger Area cm ²	M ³ /Hr per RPM	L/Sec. per RPM	Max. Press. kPa	M ³ /Hr	L/Sec.	M ³ /Hr	L/Sec.	M ³ /Hr	L/Sec.	M ³ /Hr	L/Sec.	M ³ /Hr	L/Sec.
1759	102	81.073	0.4593	0.1276	7184	11.5	3.2	18.4	5.1	25.3	7.0	32.1	8.9	39.0	10.8
	114	102.608	0.5909	0.1642	5679	14.8	4.1	23.6	6.6	32.5	9.0	41.4	11.5	50.2	14.0
	127	126.677	0.7371	0.2048	4600	18.4	5.1	29.5	8.2	40.5	11.3	51.6	14.3	62.7	17.4
	140	153.279	0.8998	0.2500	3802	22.5	6.2	36.0	10.0	49.5	13.7	63.0	17.5	76.5	21.2
	152	182.415	1.0769	0.2992	3194	26.9	7.5	43.1	12.0	59.2	16.5	75.4	20.9	91.5	25.4
	165	214.084	1.2695	0.3527	2722	31.7	8.8	50.8	14.1	69.8	19.4	88.9	24.7	107.9	30.0
	178	248.286	1.4784	0.4107	2347	37.0	10.3	59.1	16.4	81.3	22.6	103.5	28.8	125.7	34.9
	191	285.023	1.7026	0.4730	2044	42.6	11.8	68.1	18.9	93.6	26.0	119.2	33.1	144.7	40.2
Kilowatts Required						28		46		63		80		97	

For operation below 54 RPM, an auxiliary lubrication system is required.

RPM shown is Crankshaft speed. For Pinion Shaft speed, multiply RPM by Gear Ratio. Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 85% Mechanical Efficiency.

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