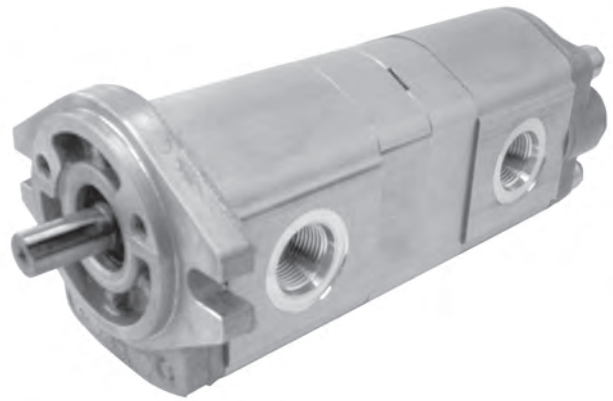


SPD1 DOUBLE PUMPS

The SPD1 series of double pumps consists of two SP20B pump sections. The typical performance of each section and the features of the pump are the same as indicated for the SP20B series of pumps.



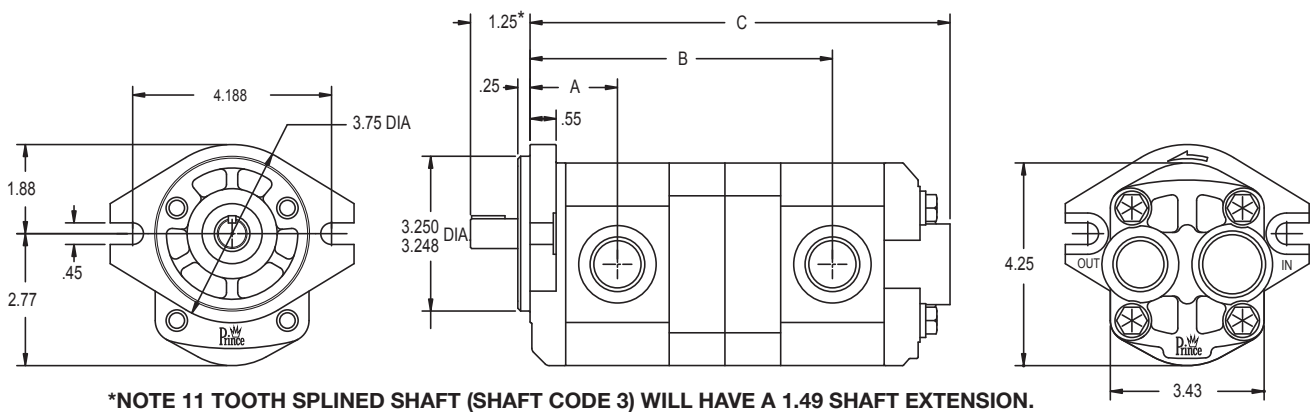
SPD1 DOUBLE PUMPS

SPD1B 16 09 - 1 H 9 L

<p>BASIC MODEL NO. _____</p> <p>FRONT PUMP (SHAFT END) _____</p> <p style="margin-left: 20px;">Displacement Code (see chart)</p> <p>REAR PUMP _____</p> <p style="margin-left: 20px;">DISPLACEMENT CODE (SEE CHART)</p>	<p>ROTATION: (FACING END OF SHAFT)</p> <p style="margin-left: 20px;">L: COUNTER CLOCKWISE</p> <p style="margin-left: 20px;">R: CLOCKWISE</p> <p>Drive Shaft Code:*</p> <p style="margin-left: 20px;">9: SAE 9 TOOTH 16/32 SPLINE</p> <p style="margin-left: 20px;">2: SAE 5/8" STRAIGHT KEYED</p> <p style="margin-left: 20px;">3 - 11 TOOTH 16/32 SPLINE</p> <p style="margin-left: 20px;">4 - 3/4 STRAIGHT KEYED</p> <p>MOUNTING:</p> <p style="margin-left: 20px;">H: 2 BOLT "A" FLANGE</p> <p>INLET CODE:</p> <p style="margin-left: 20px;">1: COMMON INLET (NO REAR INLET)</p> <p style="margin-left: 20px;">2: SEPARATE INLET (INLETS-BOTH SECTIONS)</p>
---	--

*Pumps with nonstandard shafts available in minimum quantities.

SPD1 DOUBLE PUMPS

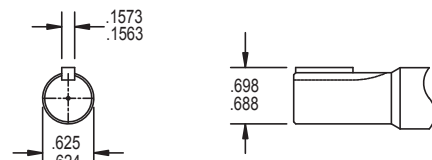


SPLINED SHAFT SPECIFICATIONS

SHAFT CODE 9
 9 Tooth
 16/32 DP
 30° PA
 Flat Root Side Fit

SHAFT CODE 3
 11 Tooth
 16/32 DP
 30° PA
 Flat Root Side Fit

KEYED SHAFT SPECIFICATIONS



SPD1 SERIES DOUBLE PUMPS

BASIC MODEL NUMBER & DISPLACEMENT CODES	DISPLACEMENT		MAXIMUM PRESSURE For 9 tooth & 5/8" shaft (for 11 tooth and 3/4" see formula below)		MAXIMUM SPEED RPM	OUTLET PORT ^o SAE SIZE		INLET PORT SAE SIZE ^o SEPARATE INLET PUMP		INLET PORT SAE SIZE COMMON INLET PUMP		PUMP DIMENSIONS			WT. (L.B.)
	FRONT CU IN/REV	REAR CU IN/REV	FRONT PSI	REAR PSI		FRONT PUMP	REAR PUMP	FRONT PUMP	REAR PUMP	FRONT PUMP	REAR PUMP	A IN.	B IN.	C IN.	
SPD1B 08 08	0.499	0.499	3000	3000	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.83	6.35	8.81	11.6
SPD1B 09 08	0.589	0.499	3000	3000	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.87	6.43	8.89	11.8
SPD1B 09 09	0.589	0.589	3000	3000	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.87	6.46	8.97	12.0
SPD1B 11 08	0.677	0.499	3000	3000	3500+	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.91	6.50	8.97	12.0
SPD1B 11 09	0.677	0.589	3000	3000	3500+	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.91	6.54	9.05	12.2
SPD1B 11 11	0.677	0.677	3000	3000	3500+	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.91	6.58	9.13	12.4
SPD1B 14 08	0.860	0.499	3000	3000	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.99	6.66	9.13	12.2
SPD1B 14 09	0.860	0.589	2800*	2800*	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.99	6.70	9.21	12.4
SPD1B 14 11	0.860	0.677	2600*	2800*	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.99	6.74	9.29	12.6
SPD1B 14 14	0.860	0.860	2400*	2400*	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	1.99	6.82	9.44	12.8
SPD1B 16 08	0.976	0.499	2800*	2800*	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.04	6.76	9.23	12.5
SPD1B 16 09	0.976	0.589	2600*	2600*	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.04	6.80	9.30	12.7
SPD1B 16 11	0.976	0.677	2400*	2600*	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.04	6.84	9.38	12.9
SPD1B 16 14	0.976	0.860	2200*	2400*	3500	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.04	6.92	9.54	13.1
SPD1B 16 16	0.976	0.976	2000*	2200*	3500+	7/8-14	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.04	6.97	9.64	13.4
SPD1B 20 08	1.220	0.499	2400*	2400*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.15	6.98	9.44	12.7
SPD1B 20 09	1.220	0.589	2200*	2400*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.15	7.02	9.52	12.9
SPD1B 20 11	1.220	0.677	2200*	2200*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.15	7.06	9.60	13.1
SPD1B 20 14	1.220	0.860	2000*	2000*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.15	7.13	9.76	13.3
SPD1B 20 16	1.220	0.976	1800*	2000*	3500+	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.15	7.18	9.86	13.6
SPD1B 20 20	1.220	1.220	1600*	1800*	3500+	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.15	7.29	10.07	13.8
SPD1B 23 08	1.403	0.499	2200*	2200*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.23	7.13	9.60	12.9
SPD1B 23 09	1.403	0.589	2000*	2200*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.23	7.17	9.68	13.1
SPD1B 23 11	1.403	0.677	2000*	2000*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.23	7.21	9.76	13.3
SPD1B 23 14	1.403	0.860	1800*	2000*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.23	7.29	9.92	13.5
SPD1B 23 16	1.403	0.976	1800*	1800*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.23	7.34	10.01	13.8
SPD1B 23 20	1.403	1.220	1600*	1600*	3500+	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.23	7.45	10.23	14.0
SPD1B 23 23	1.403	1.403	1400*	1600*	3500+	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.23	7.53	10.39	14.2
SPD1B 27 08	1.654	0.499	1800*	2000*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.34	7.35	9.82	13.1
SPD1B 27 09	1.654	0.589	1800*	2000*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.34	7.39	9.90	13.3
SPD1B 27 11	1.654	0.677	1800*	1800*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.34	7.43	9.97	13.5
SPD1B 27 14	1.654	0.860	1600*	1800*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.34	7.51	10.13	13.7
SPD1B 27 16	1.654	0.976	1600*	1600*	3500	1/1/16-12	7/8-14	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.34	7.56	10.23	14.0
SPD1B 27 20	1.654	1.220	1400*	1600*	3500+	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.34	7.67	10.45	14.2
SPD1B 27 23	1.654	1.403	1400*	1400*	3500+	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.34	7.74	10.60	14.4
SPD1B 27 27	1.654	1.654	1200*	1400*	3500+	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	1/1/16-12	NONE	2.34	7.85	10.82	14.6

^o Standard ports as indicated are UN-2B straight thread O-Ring boss ports. Optional sizes and configurations are available. Consult factory.

* Different pressure and shaft combinations may be used if required provided they conform to the following equations PF x DF + PR x DR < 41.50 for 9 tooth & 5/8" shafts (6250 for 11 tooth & 3/4" shafts) where PF and PR are the operating pressures (psi) and DF and DR are the displacements (cu in/rev) for the front and rear pumps respectively (maximum pressures are 3000 psi for displacement codes 8 - 20 and 2500 psi for displacement codes 23 - 27).

+ Common inlet pumps require a reduction in maximum rpm. Consult factory.