



# NATIONAL OILWELL

# MISSION PRODUCTS GROUP

## 5S-2 (P50A)

PUMP	English Units					50 RPM		150 RPM		200 RPM		250 RPM		300 RPM		350 RPM	
	Plunger Dia. In.	Plunger Area Sq. In.	BPD per RPM	GPM per RPM	Max. Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
5S-2L (P50ALS)	2.000	3.1416	1.0200	0.0297	646	51	1.49	153	4.46	204	5.95	255	7.44	306	8.92	357	10.41
	1.875	2.7612	0.8965	0.0261	735	45	1.31	135	3.92	180	5.23	225	6.54	269	7.84	314	9.15
	1.750	2.4053	0.7809	0.0228	844	40	1.14	118	3.42	157	4.56	196	5.69	235	6.83	274	7.97
	1.625	2.0739	0.6734	0.0196	979	34	0.98	102	2.95	135	3.93	169	4.91	203	5.89	236	6.87
	1.500	1.7671	0.5737	0.0167	1149	29	0.84	87	2.51	115	3.35	144	4.18	173	5.02	201	5.86
5S-2M (P50A)	1.750	2.4053	0.7809	0.0228	844	40	1.14	118	3.42	157	4.56	196	5.69	235	6.83	274	7.97
	1.625	2.0739	0.6734	0.0196	979	34	0.98	102	2.95	135	3.93	169	4.91	203	5.89	236	6.87
	1.500	1.7671	0.5737	0.0167	1149	29	0.84	87	2.51	115	3.35	144	4.18	173	5.02	201	5.86
	1.375	1.4849	0.4821	0.0141	1367	25	0.70	73	2.11	97	2.81	121	3.52	145	4.22	169	4.92
	1.250	1.2272	0.3984	0.0116	1654	20	0.58	60	1.74	80	2.32	100	2.91	120	3.49	140	4.07
	1.125	0.9940	0.3227	0.0094	2042	17	0.47	49	1.41	65	1.88	81	2.35	97	2.82	113	3.29
5S-2H (P50H)	1.000	0.7854	0.2550	0.0074	2585	13	0.37	39	1.12	51	1.49	64	1.86	77	2.23	90	2.60
	0.875	0.6013	0.1952	0.0057	3376	10	0.28	30	0.85	40	1.14	49	1.42	59	1.71	69	1.99
	0.750	0.4418	0.1434	0.0042	4595	8	0.21	22	0.63	29	0.84	36	1.05	44	1.26	51	1.46
<b>Brake Horsepower Required</b>						<b>0.8</b>		<b>2.3</b>		<b>4.0</b>		<b>3.9</b>		<b>4.7</b>		<b>5.5</b>	

PUMP	Metric Units					50 RPM		150 RPM		200 RPM		250 RPM		300 RPM		350 RPM	
	Plunger Dia. cm	Plunger Area cm <sup>2</sup>	M <sup>3</sup> /Hr per RPM	L/Sec. per RPM	Max. Press. kPa	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.	M <sup>3</sup> /Hr	L/Sec.
5S-2L (P50ALS)	51	20.268	0.0068	0.0019	4455	0.34	0.09	1.01	0.28	1.35	0.38	1.69	0.47	2.03	0.56	2.36	0.66
	48	17.814	0.0059	0.0016	5069	0.30	0.08	0.89	0.25	1.19	0.33	1.48	0.41	1.78	0.49	2.08	0.58
	44	15.518	0.0052	0.0014	5819	0.26	0.07	0.78	0.22	1.03	0.29	1.29	0.36	1.55	0.43	1.81	0.50
	41	13.380	0.0045	0.0012	6749	0.22	0.06	0.67	0.19	0.89	0.25	1.12	0.31	1.34	0.37	1.56	0.43
	38	11.401	0.0038	0.0011	7920	0.19	0.05	0.57	0.16	0.76	0.21	0.95	0.26	1.14	0.32	1.33	0.37
5S-2M (P50A)	44	15.518	0.0052	0.0014	5819	0.26	0.07	0.78	0.22	1.03	0.29	1.29	0.36	1.55	0.43	1.81	0.50
	41	13.380	0.0045	0.0012	6749	0.22	0.06	0.67	0.19	0.89	0.25	1.12	0.31	1.34	0.37	1.56	0.43
	38	11.401	0.0038	0.0011	7920	0.19	0.05	0.57	0.16	0.76	0.21	0.95	0.26	1.14	0.32	1.33	0.37
	35	9.580	0.0032	0.0009	9426	0.16	0.04	0.48	0.13	0.64	0.18	0.80	0.22	0.96	0.27	1.12	0.31
	32	7.917	0.0026	0.0007	11405	0.13	0.04	0.40	0.11	0.53	0.15	0.66	0.18	0.79	0.22	0.92	0.26
	29	6.413	0.0021	0.0006	14081	0.11	0.03	0.32	0.09	0.43	0.12	0.53	0.15	0.64	0.18	0.75	0.21
5S-2H (P50H)	25	5.067	0.0017	0.0005	17821	0.08	0.02	0.25	0.07	0.34	0.09	0.42	0.12	0.51	0.14	0.59	0.16
	22	3.879	0.0013	0.0004	23276	0.06	0.02	0.19	0.05	0.26	0.07	0.32	0.09	0.39	0.11	0.45	0.13
	19	2.850	0.0010	0.0003	31681	0.05	0.01	0.14	0.04	0.19	0.05	0.24	0.07	0.29	0.08	0.33	0.09
<b>Kilowatts Required</b>						<b>0.6</b>		<b>1.7</b>		<b>3.0</b>		<b>2.9</b>		<b>3.5</b>		<b>4.1</b>	

Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 72% Mechanical Efficiency.



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