

FLUID POWER DATA

HYDRAULIC CYLINDER DATA



HYDRAULIC CYLINDER FORCES AT VARIOUS PRESSURES

Cyl. Bore Dia.	Piston Rod Dia	Cyl. Working Action	Work Area Sq. In.	Hydraulic Pressure (psig)					Cyl. Bore Dia.	Piston Rod Dia	Cyl. Working Action	Work Area Sq. In.	Hydraulic Pressure (psig)					
				500	1000	1500	2000	3000					500	1000	1500	2000	3000	
1.5"		Push	1.77	884	1768	2652	3536	5304	6"		PUSH	28.27	14137	28274	42411	56548	84822	
	D .62	PULL	1.46	730	1460	2190	2920	4380		K 2.5	P	23.36	11682	23364	35046	46728	70092	
	F 1.0	L	.98	490	980	1470	1960	2940		L 3.00	U	21.20	10600	21200	31800	42400	63600	
2"		Push	3.14	1570	3140	4710	6280	9420		M 3.50	L	18.65	9325	18650	27975	37300	55950	
	F 1.0	PULL	2.36	1178	2356	3534	4712	7068		N 4.00	L	15.70	7854	15708	23562	31416	47124	
	G 1.38	L	1.66	828	1656	2484	3312	4968										
2.5"		Push	4.91	2454	4908	7362	9816	14724		7"		PUSH	38.48	19242	38484	57726	76968	115452
	F 1.0	PULL	4.13	2062	4124	6186	8248	12372			L 3.00	P	31.41	15708	31416	47124	62832	94248
	G 1.38	L	3.43	1710	3420	5130	6840	10260			M 3.50	U	28.86	14430	28860	43290	57720	86580
3.25"		Push	8.29	4148	8296	12444	16592	24888			N 4.00	L	25.92	12960	25920	38880	51840	77760
	G 1.38	PULL	6.81	3405	6810	10215	13620	20430			P 4.5	L	22.58	11290	22580	33870	45160	67740
	H 1.75	L	5.88	2940	5880	8820	11760	17640			R 5.00	L	18.85	9425	18850	28275	37700	56550
4"		Push	12.57	6283	12566	18849	25135	37698	8"			PUSH	50.26	25132	50264	75396	100528	150792
	J 2.0	PULL	10.15	5080	10160	15240	20320	30480			M 3.50	P	40.64	20322	40644	60966	81288	121932
	K 2.5	L	7.66	3828	7656	11484	15312	22968			N 4.00	U	37.70	18850	37700	56550	75400	113100
5"		Push	19.63	9817	19634	29451	39268	58902			P 4.50	L	34.36	17180	34360	51540	68720	103080
	J 2.0	PULL	16.50	8246	16492	24738	32984	49476			R 5.00	L	30.63	15315	30630	45945	61260	91890
	K 2.5	L	14.73	7360	14720	22080	29440	44160			S 5.50	L	26.50	13253	26506	39759	53012	79518
5"		Push	19.63	9817	19634	29451	39268	58902		10"		PUSH	78.54	39270	78540	117810	157080	235620
	L 3.00	PULL	12.57	6280	12560	18840	25120	37680			P 4.50	P	62.64	31320	62640	93960	125280	187920
	M 3.50	L	10.02	5006	10012	15018	20024	30036			R 5.00	U	58.90	29450	58900	88350	117800	176700
5"		Push	19.63	9817	19634	29451	39268	58902			S 5.50	L	54.78	27350	54780	82170	109560	164340
	J 2.0	PULL	16.50	8246	16492	24738	32984	49476			T 7.00	L	40.06	20030	40060	60090	80120	120180
	K 2.5	L	14.73	7360	14720	22080	29440	44160										

Fluid Power Data

HYDRAULIC CYLINDER SPEED VS GPM REQUIRED

BORE	1	2	3	4	5	6	7	8	9	10	20	30	40	50	60	GPM PER IN/SEC
1.50	.46	.92	1.4	1.8	2.3	2.8	3.2	3.7	4.1	4.6	9.2	14	18	23	28	.460
2.00	.82	1.6	2.5	3.3	4.1	4.9	5.7	6.5	7.4	8.2	16	25	33	41	49	.817
2.50	1.3	2.6	3.8	5.1	6.4	7.7	9.0	10	12	13	26	38	51	64	77	1.28
3.25	2.2	4.3	6.5	8.6	11	13	15	17	19	22	43	65	86	108	130	2.16
4.00	3.3	6.5	9.8	13	16	20	23	26	29	33	65	98	131	164	196	3.27
5.00	5.1	10	15	20	26	31	36	41	46	51	102	153	204	256	307	5.11
6.00	7.4	15	22	29	37	44	52	59	66	74	147	221	294	368	442	7.36
7.00	10	20	30	40	50	60	70	80	90	100	200	300	400	500	599	9.99
8.00	13	26	39	52	66	79	92	105	118	131	262	393	524	655	786	13.1
10.00	20	41	61	82	102	122	143	163	184	204	408	612	816	1020	1224	20.4
12.00	29	59	88	118	147	176	206	235	265	294	588	882	1176	1470	1764	29.4
14.00	40	80	120	160	200	240	280	320	360	400	800	1200	1600	2000	2400	40.0

HYDRAULIC CYLINDER STOP TUBE DATA: MOUNTING CONSIDERATIONS

