



CYLINDER PUSH AND PULL FORCES

Square Head "High Pressure" Cylinders

Working Pressure of Hydraulic Fluid P.S.I.

BORE	AREA	ROD	SIZE	50	100	250	500	1000	1500	2000	3000	5000
1-1/2	PUSH	—		88	177	443	885	1,770	2,655	3,540	5,310	8,850
	PULL	STD	5/8	73	146	365	730	1,460	2,190	2,920	4,380	7,300
	PULL	2:1	1	49	98	245	490	980	1,470	1,960	2,940	4,900
2	PUSH	—		157	314	785	1,570	3,140	4,710	6,280	9,420	15,700
	PULL	STD	1	118	236	590	1,180	2,360	3,540	4,720	7,080	11,800
	PULL	2:1	1-3/8	83	166	415	830	1,660	2,490	3,320	4,980	8,300
2-1/2	PUSH	—		246	491	1,228	2,455	4,910	7,265	9,820	14,730	24,550
	PULL	STD	1	206	412	1,030	2,060	4,120	6,180	8,240	12,360	20,600
	PULL	2:1	1-3/4	125	250	625	1,250	2,500	3,750	5,000	7,500	12,500
3-1/2	PUSH	—		415	830	2,075	4,150	8,300	12,450	16,600	24,900	41,500
	PULL	STD	1-3/8	341	681	1,703	3,405	6,810	10,215	13,620	20,430	34,050
	PULL	2:1	2	258	515	1,288	2,575	5,150	7,725	10,300	15,450	25,750
4	PUSH	—		628	1,257	3,143	6,285	12,570	18,855	25,140	37,710	62,850
	PULL	STD	1-3/4	508	1,016	2,540	5,080	10,160	15,240	20,320	30,480	50,800
	PULL	2:1	2-1/2	383	766	1,916	3,830	7,660	11,490	15,320	22,980	38,300
5	PUSH	—		982	1,964	4,910	9,820	19,640	29,460	39,280	58,920	98,200
	PULL	STD	2	825	1,649	4,123	8,245	16,490	24,735	32,980	49,470	82,450
	PULL	2:1	3-1/2	500	1,001	2,503	5,005	10,010	15,015	20,020	30,030	50,050
6	PUSH	—		1,413	2,827	7,068	14,135	28,270	42,405	56,540	84,810	141,350
	PULL	STD	2-1/2	1,168	2,336	5,840	11,680	23,360	35,040	46,720	70,080	116,800
	PULL	2:1	4	786	1,571	3,928	7,855	15,710	23,565	31,420	47,130	78,550
7	PUSH	—		1,924	3,849	9,623	19,245	38,490	57,735	76,980	115,470	192,450
	PULL	STD	3	1,571	3,142	7,855	15,710	31,420	47,130	62,840	94,260	157,100
	PULL	2:1	5	942	1,885	4,713	9,425	18,850	28,275	37,700	56,550	94,250
8	PUSH	—		2,514	5,027	12,568	25,135	50,270	75,405	100,540	150,810	251,350
	PULL	STD	3-1/2	2,032	4,064	10,160	20,320	40,640	60,960	81,280	121,920	203,200
	PULL	2:1	5-1/2	1,326	2,651	6,628	13,255	26,510	39,765	53,020	79,530	132,550
10	PUSH	—		3,927	7,854	19,635	39,270	78,540	117,810	157,080	235,620	392,700
	PULL	STD	4-1/2	3,132	6,264	15,660	31,320	62,640	93,960	125,280	187,920	313,200
	PULL	2:1	7	2,003	4,006	10,015	20,030	40,060	60,090	80,120	120,180	200,300

This table is a ready reference of forces available from either end from various cylinder and rod sizes at a range of pressures. For pressures intermediate between those shown, add force values from two or more pressures whose sum equals the given operating pressure.

Please consult your Seal & Cylinder Source, Inc. Specialist or check in our resources section at www.sealandcylinder.com for all your design requirements.