



SELECTING THE RIGHT CYLINDER:

Step 1: Select the hydraulic cylinder that best suits the application.

Step 2: Select a hydraulic pump with adequate oil output and reservoir capacity to power cylinder.

Step 3: Select pump and valve option that is best suited to the cylinder and application.

CYLINDER SIZING CONSIDERATIONS:

1. What push or pull tonnage is required per cylinder in your application? Power Team recommends using 80% of the rated capacity and stroke to maximize product performance and safety.
2. What is the push or pull stroke length required?
3. Does the cylinder need to push, pull or both? (Single-acting cylinders extend the piston under hydraulic pressure. Double-acting cylinders extend and retract the piston under pressure.)
4. Does the application require multiple cylinders?
5. Is the application stationary, or must the components be light in weight for easy portability?
6. Do you need to extend a rod or cable through the center of the cylinder for the application, as in a tensioning operation?
7. Does the application require that the cylinder fit within limited-clearance work areas?
8. Does the application require that the cylinder be "dead-ended" at the end of its work stroke?
9. Will the cylinder need to withstand off-center loads? If yes, consider using swivel load caps.
10. Does the application require that the lifted load be supported for extended periods of time? Locking collars are ideal for such jobs, as are cribbing blocks.
11. Is corrosion resistance required? Our unique "Power-Tech" surface treatment is standard on many Power Team cylinders, and optional on many of our cylinders which feature steel construction.
12. Will the application involve high cycles (over 2,500 in the cylinder's lifetime)? Our "RD," "RH," "RP" and "C" series cylinders are ideal choices. Please refer to pages 12-13 for the capabilities of each cylinder.

WHAT TYPE OF CYLINDER DO YOU NEED?

1. To determine a cylinder's force capacity:

Force pounds

Cylinder Effective Area (sq. in.)

X

PSI from Pump

2. To determine oil capacity of a cylinder:

Oil Capacity (cu. in.)

Cylinder Effective Area (sq. in.)

X

Cylinder Stroke (in.)

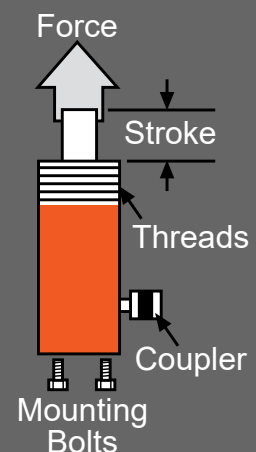
3. To determine reservoir capacity needed for a multiple cylinder system:

Usable Oil

Oil Cap. of Cyl. (cu. in.)

X

Number of Cyl. in System





The following guidelines are for general lifting and construction applications. Hydraulic tools, pullers and presses may fall outside these recommendations. Always check to see that the pump's "usable reservoir capacity" exceeds the cylinder(s) oil capacity.

Generally Recommended ■
 Marginal Check Requirements ■
 Not Requirements for most applications ■

	Pressure Stage	CYLINDER CAPACITY (Tons)														
		5	10	15	20	25	30	55	75	100	150	200	300	400	500	
Hand Pumps *	P12 ‡	Single	14	32	44	65	72	93								
	P55 ‡	Single	6	14	19	28	31	40	71							
	P19(L)	Low	4	8	10	15	17	21								
		High	13	30	42	59	68	86								
	P59F	Low	1.8	4.1	5.7	8	9	12	20	29						
		High	8	17	24	34	48	50	85	122						
	P59(L) ‡	Low	1.5	3.2	4.7	7	7.7	9.7	16.7	23.9						
	P157(D) ‡	High	6	14	19	28	31	40	71	101						
	P159(D) ‡	Low	0.5	1	1.3	1.9	2.2	2.8	5	7	9	13	18			
	P300(D) ‡	High	7	15	21	30	34	43	77	110	143	200	250			
P460(D) ‡	Low	0.1	0.3	0.6	0.6	0.7	0.9	1.5	2.2	2.8	4.2	5.6	8.4	11.2		
	High	3.3	7.7	9	14	17.5	22	37	55	71	105	143	213	284		
Electric/ Hydraulic Pumps †	PB10 / PE10	Low	0.5	1.2	1.6	2.2	2.6	3.2	5.5							
		High	6	13.4	18.9	27	31	39	66.2							
	PE17 ‡	Low	0.2	0.5	0.7	0.9	1.1	1.4	2.3	3.3	4.3	6.5	8.7			
		High	3.5	7.9	10.9	16	18	23	39	56.3	73	109	146			
	PE18	Low	0.4	0.8	1.2	1.6	1.8	2.3	3.9	5.7	7.3	10.8	14.6	21.9	29.2	
		High	3.3	7.5	10.3	15	17	21	37	53	69	102	136	207	276	
	PE21 ‡	Low	0.2	0.5	0.7	1.0	1.1	1.4	2.5	3.6	4.6	6.8	9.2	13.8	18.4	
		High	2.8	6.4	9	13	15	19	32	45.5	59	88	118	177	236	
	PED25	Low	0.2	0.4	0.6	0.9	1.0	1.3	2.2	3.2	4.1	6.1	8.3	12.0	15.7	19.9
		High	2.4	5.4	7.5	10.6	12.4	15.6	26.5	38.2	49.5	73.3	99.1	144.3	188.5	238.6
	PE30 ‡	Low	0.2	0.45	0.6	0.9	1	1.3	2.2	3.2	4.1	6				
		High	2	4.5	6	9	10	13	22	32	41	60				
	PE46 ‡	Low	0.1	0.3	0.4	0.5	0.6	0.7	1.3	1.8	2.4	3.5	4.7	7.2	9.6	
		High	1.3	2.9	4.1	5.9	6.8	8.6	14	22	28	42	56	84	112	
	PE55 ‡	Low	0.1	0.2	0.3	0.4	0.4	0.6	0.9	1.4	1.8	2.6	3.5	5.4	7.2	
	PE60 ‡	High	1.4	2.4	3.4	4.8	5.6	7.1	12	17.8	23	34	45	69	92	
	PQ60	Low	0.1	0.2	0.3	0.4	0.4	0.5	0.9	1.3	1.7	2.5	3.4	5.1	6.8	8.5
		High	1	2.2	3.3	4.4	5.2	6.5	11	16.2	21	31	41	63	84	105
	PQ120	Low	0.1	0.2	0.3	0.4	0.4	0.5	0.9	1.3	1.7	2.5	3.4	5.1	6.8	8.5
		High	0.5	1.1	1.6	2.2	2.6	3.2	5.5	7.7	10	15	21	30	40	50
PE400	Low	0.1	0.1	0.2	0.2	0.3	0.3	0.6	0.8	1	1.5	2.1	3	4	5	
	High	0.1	0.3	0.4	0.6	0.7	0.9	1.6	2.2	2.9	4.4	5.9	8.7	11.6	14.5	
Air/ Hydraulic Pumps †	PA6 ‡	Single	10	22.4	31	44.4	51.3	65.2								
	PA9 ‡	Single	10	22.4	31	44.4	51.3	65.2								
	PA17 ‡	Low	0.2	0.5	0.7	0.9	1.1	1.4	2.3	3.3	4.3	6.5	8.7			
		High	3.5	7.9	10.9	16	18	23	39	56	73	109	146			
	PA46 ‡	Low	0.1	0.3	0.4	0.5	0.6	0.7	1.3	2	2.4	3.5	4.7	7.2	9.6	
		High	1.3	2.9	4.1	5.9	6.8	8.6	14	22	28	42	56	84	112	
PA55 ‡	Low	0.1	0.3	0.4	0.6	0.7	0.9	1.5	2.2	2.8	4.1	5.5	8.4	11.2		
	High	1.1	2.4	3.4	4.8	5.6	7.1	12	18	26	34	45	69	92		
Gas/ Hydraulic Pumps †	PG30	Low	0.3	0.7	1	1.3	1.6	2	3.3	4.8	6.2	9.3	12.4	18.1		
		High	2	4.5	6.3	8.9	10.3	13	22	31.8	41.3	61.4	83	121		
	PG55 ‡	Low	0.1	0.3	0.4	0.6	0.7	0.8	1.4	2	2.6	3.9	5.2	7.6	9.9	12.5
		High	1.1	2.5	3.5	4.9	5.6	7.1	12.1	17.3	22.5	33.5	45	66	86	109
	PG120 ‡	Low	0.1	0.3	0.4	0.6	0.7	0.8	1.4	2	2.6	3.9	5.2	7.6	9.9	12.5
		High	0.5	1.0	1.5	2.0	2.4	3.0	5.1	7.3	9.5	14.2	19.1	27.8	36.3	46.0
PG400	Low	0.1	0.1	0.2	0.2	0.3	0.3	0.6	0.8	1.0	1.5	2.0	3.0	3.8	4.9	
	High	0.2	0.3	0.5	0.7	0.8	1.0	1.7	2.4	3.1	4.6	6.2	9.0	11.8	15.0	

‡ Some Power Team pumps are available in special configurations not listed in this catalog. Power Team can "Assemble to order" pumps with special seals, voltages, valves, relief valve settings, etc. For your special requirements, please consult your local distributor or the Power Team factory.

