



Series IT Hydraulic Cylinders Internal Thread



Pressure: 2,500 psi Working
3,500 psi Non-Shock

Bore Sizes: 2.00" to 6.00"

Rod Sizes: 1.00" to 2.50"

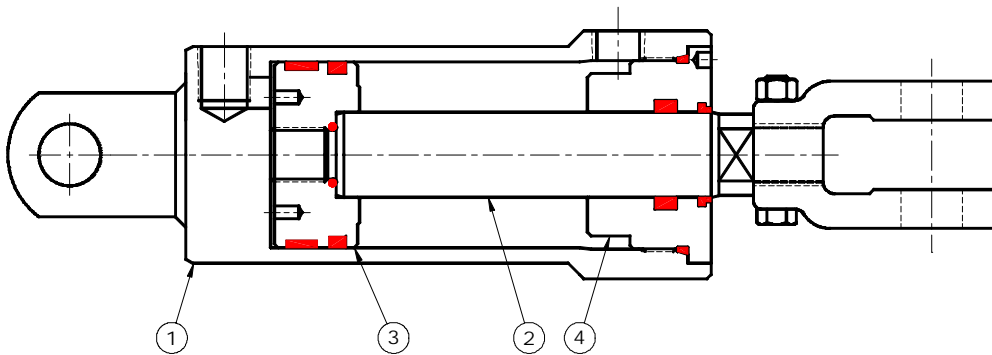
Ports: 3/8" to 1/2" NPT

Attachments: Spherical Bearings
Clevis
Tube Eye

Series IT Cylinder

Our Series IT hydraulic cylinder is designed for simplicity and economy. With a 2,500 psi working pressure and a 3,500 psi non-shock load pressure we have not compromised on the quality, yet have made it an affordable and reliable alternative as opposed to using our more rugged bolted on head gland construction style of hydraulic cylinder.

To strengthen the open end of the cylinder, a thick ring is welded to the barrel to carry the internal thread and port. Both ports are machined into the cylinder barrel end and ring, which means localized weld distortion and the stress concentrations that arise from welding half couplings for ports are eliminated. The internal threads that hold the head gland will not corrode since they are constantly submersed in oil. The piston is securely threaded and adhesive bonded to the rod. To accommodate our customers wide range of needs, we manufacture the barrel and cylinder rod to order on every hydraulic cylinder order to provide the exact strokes and pin to pin dimensions that are required. A variety of mounting accessories can be installed onto the cylinder to suit virtually any application. Other rod materials and mounting styles, such as trunnion and flange mounts, are available on request.

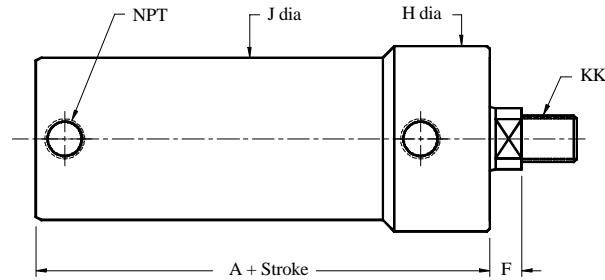


PART NUMBERS		ITEM 1	ITEM 2	ITEM 3	ITEM 4	
BORE	ROD	Barrel	Rod	Piston	Head	Seal Kit
2	1	Part Number is model number and stroke followed by: B for barrel R for rod		B3354-32	B3368-16	12413
	1 1/4			B3354-32	B3368-20	12414
2 1/4	1			B3354-36	B3442-16	12557
	1 1/4			B3354-36	B3442-20	12558
2 1/2	1			B3354-40	B3350-16	12415
	1 1/4			B3354-40	B3350-20	12416
	1 1/2			B3354-40	B3350-24	12417
	2			B3354-40	B3350-32	12418
3	1 1/4			B3354-48	B3352-20	12419
	1 3/8			B3354-48	B3352-22	12556
	1 1/2			B3354-48	B3352-24	12420
	1 3/4			B3354-48	B3352-28	12421
3 1/4	1 1/4			B3354-52	B3446-20	12542
	1 3/8			B3354-52	B3446-22	12543
	1 1/2		B3354-52	B3446-24	12544	
	1 3/4		B3354-52	B3446-28	12545	

PART NUMBERS		ITEM 1	ITEM 2	ITEM 3	ITEM 4	
BORE	ROD	Barrel	Rod	Piston	Head	Seal Kit
3 1/2	1 1/4	Part Number is model number and stroke followed by: B for barrel R for rod		B3354-56	B3358-20	12422
	1 3/8			B3354-56	B3358-22	12555
	1 1/2			B3354-56	B3358-24	12423
	1 3/4			B3354-56	B3358-28	12424
4	1 1/2			B3354-64	B3355-24	12425
	1 3/4			B3354-64	B3355-28	12426
	2			B3354-64	B3355-32	12427
	2 1/2			B3354-64	B3355-40	12428
4 1/2	1 3/4			B3354-72	B3360-28	12429
	2			B3354-72	B3360-32	12430
	2 1/2			B3354-72	B3360-40	12431
5	1 3/4			B3354-80	B3426-28	12546
	2			B3354-80	B3426-32	12547
	2 1/2			B3354-80	B3426-40	12548
	3			B3354-80	B3426-48	12549
6	2 1/2			B3354-96	B3452-40	12553
	3			B3354-96	B3452-48	12554

Series IT Cylinder – Basic

See the Accessories section of the catalogue for rod end & blind end options. The 'CD' (Pin Dia), the 'F' (Rod Extension) and 'KK' (Thread) dimensions given are standard but they can be changed to suit any special requirements. Threaded and welded ends are both available.



Bores	Available rod sizes				A	J	H	NPT	F	KK	CD Pin Ø
2	1	1 1/4	—	—	4.44	2.38	3.00	3/8	0.69	1"-14	0.75
2 1/4	1	1 1/4	—	—	4.44	2.63	3.25	3/8	0.69	1"-14	1.00
2 1/2	1	1 1/4	1 1/2	2	4.44	2.88	3.50	3/8	0.69	1"-14	1.00
3	1 1/4	1 3/8	1 1/2	1 3/4	4.81	3.50	4.00	1/2	0.69	1"-14	1.00
3 1/4	1 1/4	1 3/8	1 1/2	1 3/4	4.81	3.75	4.25	1/2	0.69	1"-14	1.00
3 1/2	1 1/4	1 3/8	1 1/2	1.75	4.81	4.00	4.50	1/2	0.69	1"-14	1.00
4	1 1/2	1.75	2	2 1/2	4.88	4.50	5.00	1/2	0.69	1"-14	1.00
4 1/2	1 3/4	2	2 1/2	—	5.44	5.00	5.50	1/2	0.81	1-1/4"-12	1.25
5	1 3/4	2	2 1/2	3	5.69	5.75	6.00	1/2	0.81	1-1/4"-12	1.25
6	2 1/2	3	—	—	6.13	6.75	7.25	3/4	0.88	1-1/4"-12	1.50

Shipping weights (approximate) Base Weight includes two clevises.

BORE	BASE WGT	POUNDS PER INCH OF STROKE BY ROD SIZE							
		1	1 1/4	1 3/8	1 1/2	1 3/4	2	2 1/2	3
2	10.63	0.59	0.72						
2 1/4	13.92	0.63	0.76						
2 1/2	15.52	0.67	0.80		0.95		1.34		
3	20.44		1.07	1.14	1.22	1.40			
3 1/4	22.17		1.13	1.20	1.28	1.46			
3 1/2	24.87		1.18	1.25	1.33	1.51			
4	29.85				1.45	1.63	1.84	2.34	
4 1/2	43.17					1.74	1.95	2.45	
5	53.35					2.47	2.68	3.18	3.79
6	84.10							3.52	4.13

MATERIAL SPECIFICATIONS

Barrel: DOM Tubing ASTM 513/519 Gr. 1020/1026

Head: Ductile Iron ASTM A536 (65-45-12)

Piston: Ductile Iron ASTM A536 (65-45-12)

Rod: C1045 Chrome Plated

Accessories: Steel CSA G40-21 Gr. 44W

Piston Seal: Polyurethane with Nitrile Loader

Rod seal: Polyurethane

Wear Ring: Reinforced Nylon

Wiper: Polyurethane

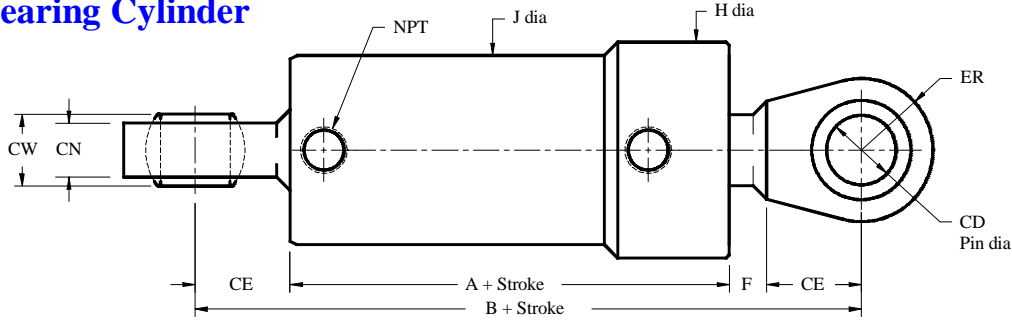
O-Ring: Nitrile

Back-Up: Nitrile

Seal Temperature Range: -65° F to 225° F (-54° C to 107° C)

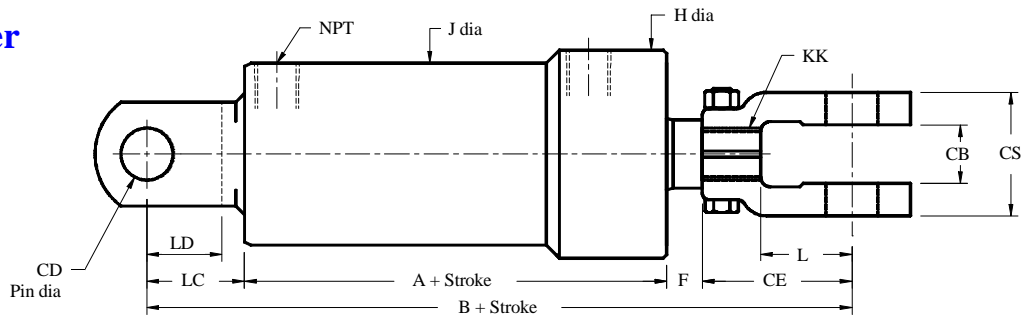
Series IT Cylinder

Spherical Bearing Cylinder



Bore	Available rod sizes				A	B	J	H	NPT	F	CD	ER	CE	CW	CN
2	1	1 1/4	—	—	4.44	7.63	2.38	3.00	3/8	0.69	0.75	1.13	1.25	0.66	0.56
2 1/4	1	1 1/4	—	—	4.44	8.00	2.63	3.25	3/8	0.69	1.00	1.44	1.50	0.88	0.75
2 1/2	1	1 1/4	1 1/2	2	4.44	8.50	2.88	3.50	3/8	0.69	1.00	1.44	1.50	0.88	0.75
3	1 1/4	1 3/8	1 1/2	1 3/4	4.81	8.50	3.50	4.00	1/2	0.69	1.00	1.44	1.50	0.88	0.75
3 1/4	1 1/4	1 3/8	1 1/2	1 3/4	4.81	8.50	3.75	4.25	1/2	0.69	1.00	1.44	1.50	0.88	0.75
3 1/2	1 1/4	1 3/8	1 1/2	1.75	4.81	9.25	4.00	4.50	1/2	0.69	1.25	1.75	1.88	1.09	0.96
4	1 1/2	1.75	2	2 1/2	4.88	9.25	4.50	5.00	1/2	0.69	1.25	1.75	1.88	1.09	0.96
4 1/2	1 3/4	2	2 1/2	—	5.44	10.75	5.00	5.50	1/2	0.81	1.50	2.19	2.25	1.31	1.13
5	1 3/4	2	2 1/2	3	5.69	11.00	5.50	6.00	1/2	0.81	1.50	2.19	2.25	1.31	1.13
6	2 1/2	3	—	—	6.13	12.25	6.75	7.25	3/4	0.88	1.75	2.50	2.63	1.53	1.31

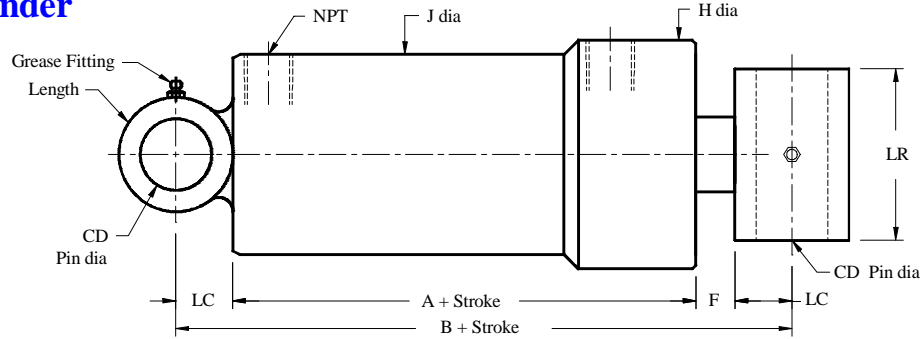
Clevis Cylinder



Bore	Available rod sizes				A	B	J	H	NPT	F	CD	CB	CS	CE	LD	LC	L	KK
2	1	1 1/4	—	—	4.44	9.25	2.38	3.00	3/8	0.69	0.75	0.88	1.88	2.50	1.31	1.63	1.50	3/4"-16
2 1/4	1	1 1/4	—	—	4.44	9.88	2.63	3.25	3/8	0.69	1.00	1.13	2.38	2.88	1.44	1.88	1.75	1"-14
2 1/2	1	1 1/4	1 1/2	2	4.44	10.25	2.88	3.50	3/8	0.69	1.00	1.13	2.38	2.88	1.44	1.88	1.75	1"-14
3	1 1/4	1 3/8	1 1/2	1 3/4	4.81	10.25	3.50	4.00	1/2	0.69	1.00	1.13	2.38	2.88	1.44	1.88	1.75	1"-14
3 1/4	1 1/4	1 3/8	1 1/2	1 3/4	4.81	10.25	3.75	4.25	1/2	0.69	1.00	1.13	2.38	2.88	1.44	1.88	1.75	1"-14
3 1/2	1 1/4	1 3/8	1 1/2	1.75	4.81	10.25	4.00	4.50	1/2	0.69	1.00	1.13	2.38	2.88	1.44	1.88	1.75	1"-14
4	1 1/2	1.75	2	2 1/2	4.88	10.25	4.50	5.00	1/2	0.69	1.00	1.13	2.38	2.88	1.44	1.88	1.75	1-1/4"-12
4 1/2	1 3/4	2	2 1/2	—	5.44	11.88	5.00	5.50	1/2	0.81	1.25	1.38	2.88	3.13	2.00	2.50	1.88	1-1/4"-12
5	1 3/4	2	2 1/2	3	5.69	12.13	5.50	6.00	1/2	0.81	1.25	1.38	2.88	3.13	2.00	2.50	1.88	1-1/2"-12
6	2 1/2	3	—	—	6.13	13.00	6.75	7.25	3/4	0.88	1.50	1.63	3.63	3.50	2.25	2.63	2.13	1-3/4"-12

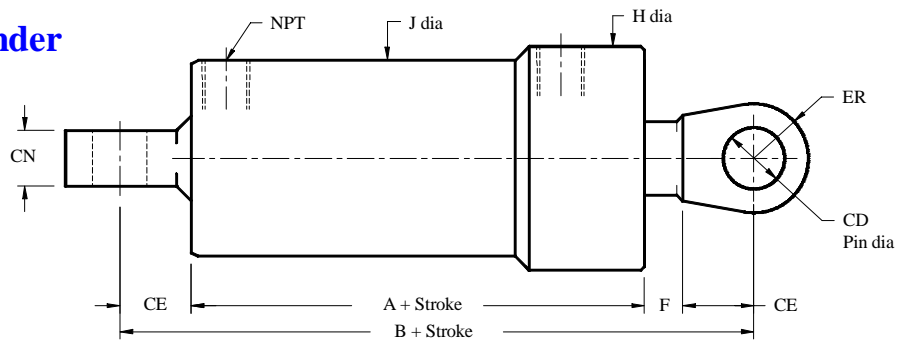
Series IT Cylinder

Tube Eye Cylinder



Bore	Available rod sizes				A	B	J	H	NPT	F	CD	LC	LR	LENGTH
	1	1 1/4	—	—										
2	1	1 1/4	—	—	4.44	6.38	2.38	3.00	3/8	0.69	0.75	0.63	2.00	3.25
2 1/4	1	1 1/4	—	—	4.44	6.81	2.63	3.25	3/8	0.69	1.00	0.88	2.00	3.00
2 1/2	1	1 1/4	1 1/2	2	4.44	7.25	2.88	3.50	3/8	0.69	1.00	0.88	2.00	3.00
3	1 1/4	1 3/8	1 1/2	1 3/4	4.81	7.25	3.50	4.00	1/2	0.69	1.00	0.88	2.00	4.13
3 1/4	1 1/4	1 3/8	1 1/2	1 3/4	4.81	7.25	3.75	4.25	1/2	0.69	1.00	0.88	2.00	4.13
3 1/2	1 1/4	1 3/8	1 1/2	1.75	4.81	7.25	4.00	4.50	1/2	0.69	1.00	0.88	2.00	4.13
4	1 1/2	1.75	2	2 1/2	4.88	7.25	4.50	5.00	1/2	0.69	1.00	0.88	3.00	4.75
4 1/2	1 3/4	2	2 1/2	—	5.44	8.25	5.00	5.50	1/2	0.81	1.25	1.00	6.00	3.25
5	1 3/4	2	2 1/2	3	5.69	8.50	5.50	6.00	1/2	0.81	1.25	1.00	6.00	3.25
6	2 1/2	3	—	—	6.13	9.25	6.75	7.25	3/4	0.88	1.50	1.13	7.00	4.00

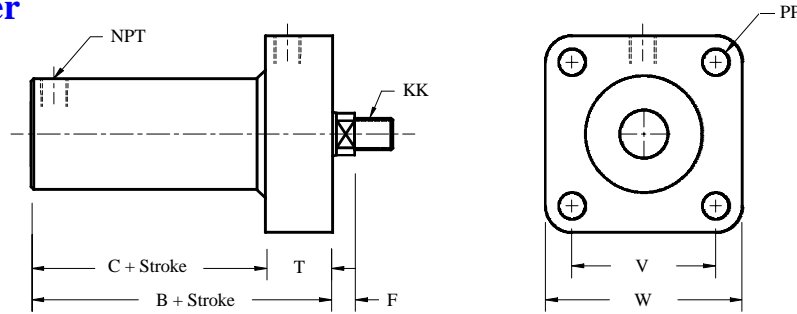
Welded Lug Cylinder



Bore	Available rod sizes				A	B	J	H	NPT	F	CD	ER	CE	CN
	1	1 1/4	—	—										
2	1	1 1/4	—	—	4.44	7.63	2.38	3.00	3/8	0.69	0.75	0.88	1.25	0.75
2 1/4	1	1 1/4	—	—	4.44	8.06	2.63	3.25	3/8	0.69	1.00	1.25	1.63	1.00
2 1/2	1	1 1/4	1 1/2	2	4.44	8.50	2.88	3.50	3/8	0.69	1.00	1.25	1.63	1.00
3	1 1/4	1 3/8	1 1/2	1 3/4	4.81	8.50	3.50	4.00	1/2	0.69	1.00	1.25	1.63	1.00
3 1/4	1 1/4	1 3/8	1 1/2	1 3/4	4.81	8.50	3.75	4.25	1/2	0.69	1.00	1.25	1.63	1.00
3 1/2	1 1/4	1 3/8	1 1/2	1.75	4.81	8.50	4.00	4.50	1/2	0.69	1.00	1.25	1.63	1.00
4	1 1/2	1.75	2	2 1/2	4.88	8.50	4.50	5.00	1/2	0.69	1.00	1.25	1.63	1.00
4 1/2	1 3/4	2	2 1/2	—	5.44	10.00	5.00	5.50	1/2	0.81	1.25	1.50	2.00	1.25
5	1 3/4	2	2 1/2	3	5.69	10.25	5.50	6.00	1/2	0.81	1.25	1.50	2.00	1.25
6	2 1/2	3	—	—	6.13	11.50	6.75	7.25	3/4	0.88	1.50	1.75	2.25	1.50

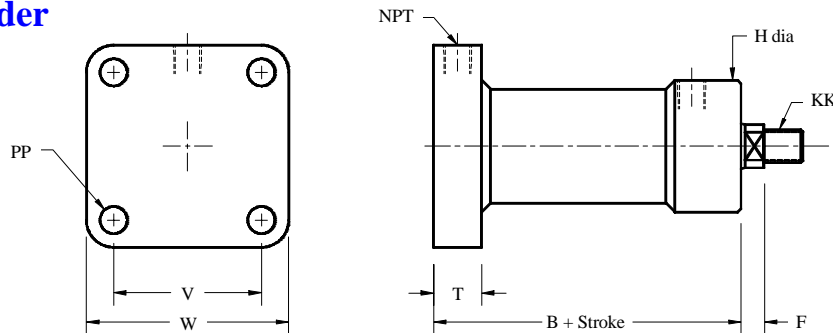
Series IT Cylinder

Front Flange Cylinder



Bore	Available rod sizes				B	C	F	T	V	W	PP	NPT	KK
	1	1 1/4	1 1/2	2									
2	1	1 1/4	—	—	4.44	2.50	0.69	1.94	2.63	3.63	15/32	3/8	3/4"-16
2 1/4	1	1 1/4	—	—	4.44	2.50	0.69	1.94	3.00	4.25	9/16	3/8	1"-14
2 1/2	1	1 1/4	1 1/2	2	4.44	2.50	0.69	1.94	3.25	4.50	9/16	3/8	1"-14
3	1 1/4	1 3/8	1 1/2	1 3/4	4.81	2.69	0.69	2.13	3.75	5.00	9/16	1/2	1"-14
3 1/4	1 1/4	1 3/8	1 1/2	1 3/4	4.81	2.69	0.69	2.13	4.00	5.50	11/16	1/2	1"-14
3 1/2	1 1/4	1 3/8	1 1/2	1.75	4.81	2.69	0.69	2.13	4.25	5.75	11/16	1/2	1"-14
4	1 1/2	1.75	2	2 1/2	4.88	2.75	0.69	2.13	4.50	6.00	11/16	1/2	1-1/4"-12
4 1/2	1 3/4	2	2 1/2	—	5.44	3.31	0.81	2.13	5.00	6.75	13/16	1/2	1-1/4"-12
5	1 3/4	2	2 1/2	3	5.69	3.50	0.81	2.19	5.38	7.13	13/16	1/2	1-1/2"-12
6	2 1/2	3	—	—	6.13	3.50	0.88	2.63	6.13	8.25	15/16	3/4	1-3/4"-12

Rear Flange Cylinder



Bore	Available rod sizes				B	F	H	T	V	W	PP	NPT	KK
	1	1 1/4	1 1/2	2									
2	1	1 1/4	—	—	4.13	0.69	3.00	1.00	2.63	3.63	15/32	3/8	3/4"-16
2 1/4	1	1 1/4	—	—	4.13	0.69	3.25	1.00	3.00	4.25	9/16	3/8	1"-14
2 1/2	1	1 1/4	1 1/2	2	4.13	0.69	3.50	1.00	3.25	4.50	9/16	3/8	1"-14
3	1 1/4	1 3/8	1 1/2	1 3/4	4.63	0.69	4.00	1.25	3.75	5.00	9/16	1/2	1"-14
3 1/4	1 1/4	1 3/8	1 1/2	1 3/4	4.63	0.69	4.25	1.25	4.00	5.50	11/16	1/2	1"-14
3 1/2	1 1/4	1 3/8	1 1/2	1.75	4.63	0.69	4.50	1.25	4.25	5.75	11/16	1/2	1"-14
4	1 1/2	1.75	2	2 1/2	4.69	0.69	5.00	1.25	4.50	6.00	11/16	1/2	1-1/4"-12
4 1/2	1 3/4	2	2 1/2	—	5.25	0.81	5.50	1.25	5.00	6.75	13/16	1/2	1-1/4"-12
5	1 3/4	2	2 1/2	3	5.69	0.81	6.00	1.50	5.38	7.13	13/16	1/2	1-1/2"-12
6	2 1/2	3	—	—	6.13	0.88	7.25	1.50	6.13	8.25	15/16	3/4	1-3/4"-12