

350 bar Tie Rod Cylinders *Application & selection*

Shown: TRFM-1506, TRFL-3210 and TRCM-3206



Enerpac 350 bar Tie Rod cylinders provide a variety of mounting options for pushing and positioning workpieces and fixtures on a machine.

Enerpac tie rod cylinders are designed to the highest industry standards to provide long life and worry-free performance in the most demanding applications.

Standard bore sizes

Bore diameter	Rod diameter	Capacity at 350 bar		Effective area	
		Push kN	Pull kN	Push cm ²	Pull cm ²
38,1	25,4	39	22	11,4	6,3
50,8	35,0	70	37	20,3	10,7
63,5	44,4	109	56	31,7	16,1
82,5	50,8	185	115	53,5	33,3
101,6	63,5	280	170	81,1	49,4

Additional bore sizes

Bore diameter	Rod diameter	Capacity at 350 bar	
		Push kN	Pull kN
127,0	88,9	437	223
152,4	101,6	629	349
177,8	127,0	856	419
203,2	139,7	1118	590

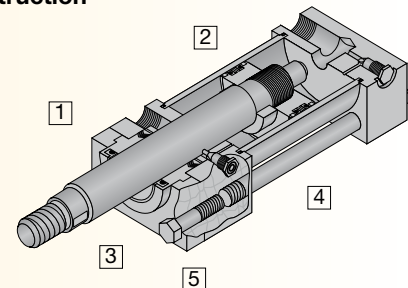
Contact Enerpac for ordering information on additional bore sizes.

Flexibility of motion

- Rod seal (1) uses spring loaded multiple lip vee rings, a supporting bronze bearing ring bushing and a double lip wiper
- Piston seal (2) combines two bi-directional sealing cast iron piston rings with two block vee seals with back-up rings
- Hardened chrome plated piston rod (3) resists scoring and corrosion, assuring maximum life
- Steel tubing barrel (4), honed to a fine finish assures superior sealing, minimum friction and maximum seal life
- Rod bushing and seals can be serviced by merely removing the retainer plate (5) on most models.

Tie Rod cylinder construction

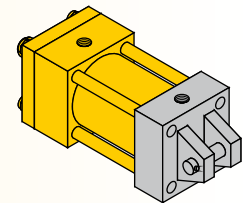
- 1 Rod Seal
- 2 Piston Seal
- 3 Piston Rod
- 4 Barrel
- 5 Retainer Plate



Tie Rod cylinder mounting styles

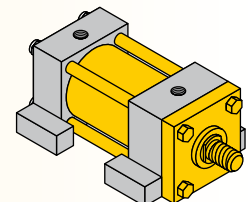
Clevis Mount – TRCM Series

- NFPA style MP1
- Allows cylinder to pivot
- Requires provision for pivoting on rod end.



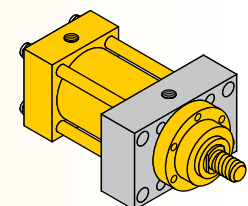
Foot mount – TRFM series

- NFPA style MS2
- Allows easy mounting with only four bolts
- Backup key included in design to ensure long life.



Flange mount – TRFL series

- NFPA style ME5
- Allows cylinder length to be buried in machine
- Strongest, most rigid mount.



Product selection

Piston diameter	Rod diameter	Stroke	Clevis mount	Foot mount	Flange mount
mm	mm	mm			
38,1	25,4	50,8	TRCM-1502	TRFM-1502	TRFL-1502
38,1	25,4	101,6	TRCM-1504	TRFM-1504	TRFL-1504
38,1	25,4	152,4	TRCM-1506	TRFM-1506	TRFL-1506
38,1	25,4	254,0	TRCM-1510*	TRFM-1510	TRFL-1510
38,1	25,4	304,8	TRCM-1512*	TRFM-1512	TRFL-1512
50,8	35,0	50,8	TRCM-2002	TRFM-2002	TRFL-2002
50,8	35,0	101,6	TRCM-2004	TRFM-2004	TRFL-2004
50,8	35,0	152,4	TRCM-2006	TRFM-2006	TRFL-2006
50,8	35,0	254,0	TRCM-2010	TRFM-2010	TRFL-2010
50,8	35,0	304,8	TRCM-2012	TRFM-2012	TRFL-2012
63,5	44,4	50,8	TRCM-2502	TRFM-2502	TRFL-2502
63,5	44,4	101,6	TRCM-2504	TRFM-2504	TRFL-2504
63,5	44,4	152,4	TRCM-2506	TRFM-2506	TRFL-2506
63,5	44,4	254,0	TRCM-2510	TRFM-2510	TRFL-2510
63,5	44,4	304,8	TRCM-2512	TRFM-2512	TRFL-2512
82,5	50,8	50,8	TRCM-3202	TRFM-3202	TRFL-3202
82,5	50,8	101,6	TRCM-3204	TRFM-3204	TRFL-3204
82,5	50,8	152,4	TRCM-3206	TRFM-3206	TRFL-3206
82,5	50,8	254,0	TRCM-3210	TRFM-3210	TRFL-3210
82,5	50,8	304,8	TRCM-3212	TRFM-3212	TRFL-3212
101,6	63,5	50,8	TRCM-4002	TRFM-4002	TRFL-4002
101,6	63,5	101,6	TRCM-4004	TRFM-4004	TRFL-4004
101,6	63,5	152,4	TRCM-4006	TRFM-4006	TRFL-4006
101,6	63,5	254,0	TRCM-4010	TRFM-4010	TRFL-4010
101,6	63,5	304,8	TRCM-4012	TRFM-4012	TRFL-4012

Cushions are available for all cylinder models. Cushions slow down heavy loads prior to end of stroke, preventing damage to the cylinder of the machine. To add cushions to your Enerpac Tie Rod cylinder, simply add the letter "C" to the end of any model number. Note: the addition of cushions does not affect the outside dimensions of the cylinder.

* These models are only rated to 276 bar due to constraints on the mechanical properties of the rod.

Custom build your Tie Rod cylinder

TR	CM	15	12	C
1	2	3	4	5
1 Product Type TR = Tie Rod		3 Bore Diameter (mm) 15 = 38,1 mm 20 = 50,8 25 = 63,5 32 = 82,5 40 = 101,6	4 Stroke (mm) 02 = 50,8 04 = 101,6 06 = 152,4 10 = 254,0 12 = 304,8	5 Cushions Blank = None C = Cushions both ends
2 Mounting CM = Clevis Mount FM = Foot Mount FL = Flange Mount				

Seal and repair kits

Seal kits include piston, rod and barrel seals. Repair kits include seal kit plus rod bushing and rear bearing ring.

Product dimensions in mm

Bore diameter mm	Rod diameter mm	Seal kit	Repair kit
38,1	25,4	TR15SK	TR15RK
50,8	35,0	TR20SK	TR20RK
63,5	44,4	TR25SK	TR25RK
82,5	50,8	TR32SK	TR32RK
101,6	63,5	TR40SK	TR40RK

Force: 39 - 280 kN

Stroke: 50,8 - 304,8 mm

Pressure: 35 - 350 bar

E Cilindros Atirantados

F Vérins à tirants

D Zugankerzylinder

Options

Accessories

93 ▶



ZW Series Pumps

114 ▶



VP Series Valves

136 ▶



Fittings

194 ▶



Important

Consult individual product selection pages for application and installation criteria specific to each mounting style. If you are unsure of an application, contact Enerpac directly.

Enerpac can provide many other tie rod cylinders in a wide variety of mounting styles, bore and stroke sizes. Contact Enerpac directly and talk to our Custom Products group for a quotation.