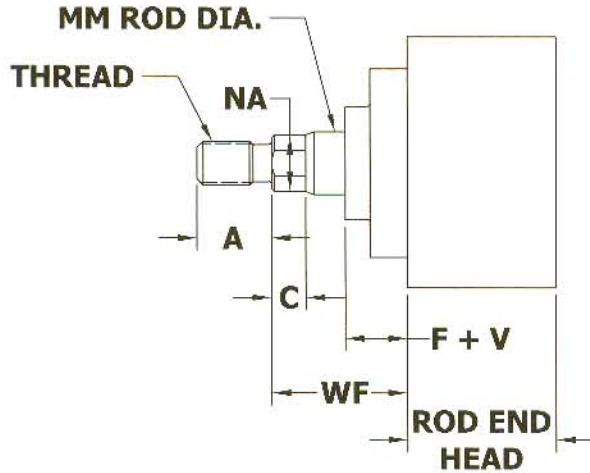


PISTON ROD END DIMENSIONAL DATA

ROD END TYPE NO. 4



DIA. ROD MM	ROD END TYPE	A	C	D †	F + V	WF
	NO. 4					
0.63	0.44-20	0.75	0.38	0.50	0.63	1.00
1.00	0.75-16	1.13	0.50	0.88	0.75	1.38
1.38	1.00-14	1.63	0.63	1.13	1.00	1.63

* Dimension NA is 0.060 under MM diameter dimension.

† Dimension D is size across wrench flats.

NOTE: Rod Threads are Class UNF-2A or 2B.

CYLINDER FORCES

The forces developed by the cylinder can be determined by multiplying the area of the piston by the operating pressure. Please note that on the "Push" stroke the pressure is working on the entire piston area but on the "Pull" stroke the pressure works on the piston area less the rod area. Allow 20% for friction losses.

Cyl. Bore Size	Effective Piston Area (in. ²) with Std. Rod		Theoretical Thrust (lbs. force) on PULL or PUSH Strokes											
	Pull	Push	60 PSI		80 PSI		100 PSI		120 PSI		150 PSI		200 PSI	
			Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push
1.50	1.46	1.77	88	106	117	141	146	177	175	212	219	265	292	354
2.00	2.84	3.14	170	188	227	251	284	314	340	377	425	471	567	628
2.50	4.60	4.91	276	295	368	393	460	491	552	585	690	737	920	982
3.25	7.51	8.30	451	498	601	664	751	830	902	996	1127	1245	1502	1660
4.00	11.78	12.57	707	754	942	1006	1178	1257	1414	1508	1767	1886	2356	2514
5.00	18.85	19.64	1131	1178	1508	1571	1885	1964	2263	2357	2828	2946	3770	3928
6.00	26.79	28.27	1607	1696	2144	2262	2679	2827	3213	3392	4018	4241	5358	5654

TIE ROD TORQUE CHART

CYLINDER DIAMETER	NO. OF TIE RODS	TIE ROD SIZE	TORQUE FT. LBS.
1.50	4	0.25	3
2.00	4	0.31	7
2.50	4	0.31	7
3.25	4	0.38	15
4.00	4	0.38	15
5.00	4	0.50	30
6.00	4	0.50	30