

FORCE FOR PUSH & PULL STROKE

BORE DIA	ROD DIA	10 PSI		20 PSI		60 PSI		80 PSI		100 PSI		200 PSI	
		PUSH	PULL	PUSH	PULL	PUSH	PULL	PUSH	PULL	PUSH	PULL	PUSH	PULL
2.0"	.75"	31	27	63	54	189	162	251	216	314	270	628	540
	1.0"	31	24	63	47	188	141	251	188	314	236	628	471
	1.0"	49	41	98	82	295	247	393	330	491	412	982	825
2.5"	1.375"	49	34	98	68	295	205	393	274	491	342	982	685
	1.0"	71	63	141	126	424	377	565	503	707	628	1414	1257
3.0"	1.375"	71	56	141	112	424	335	565	447	707	558	1414	1117
	1.0"	83	75	166	150	498	451	664	601	830	751	1659	1502
3.25"	1.375"	83	68	166	136	498	409	664	545	830	681	1659	1362
	1.0"	126	118	251	236	754	707	1005	942	1257	1178	2356	2166
4.0"	1.375"	126	111	251	222	754	665	1005	887	1257	1108	2513	2216
	1.0"	196	188	393	377	1178	1131	1571	1508	1963	1885	3927	3770
5.0"	1.375"	196	182	393	363	1178	1089	1571	1452	1963	1815	3927	3630
	1.375"	283	268	565	536	1696	1607	2262	2143	2827	2679	5655	5358

NOTE:

This table does not take into account friction loss, pressure loss, or the compressibility of air. An air cylinder must be overpowered in order to overcome these losses. Use the following formula in conjunction with the force table when sizing your cylinder.

LOAD * FACTOR = Minimum load for cylinder at system pressure

APPLICATION	LOAD FACTOR
NORMAL SPEED	1.25
INTERMEDIATE SPEED	1.5
HIGH SPEED	2

ROD YIELD STRENGTH:
100k * ROD DIA.

BEARING LOAD CAPACITY:
14,800psi * BEARING THICKNESS

ROD DIA.	BEARING THICKNESS
0.75	0.063
1	0.063
1.375	0.093

FORMULA:
FORCE = EFFECTIVE PISTON AREA * AIR PRESSURE

