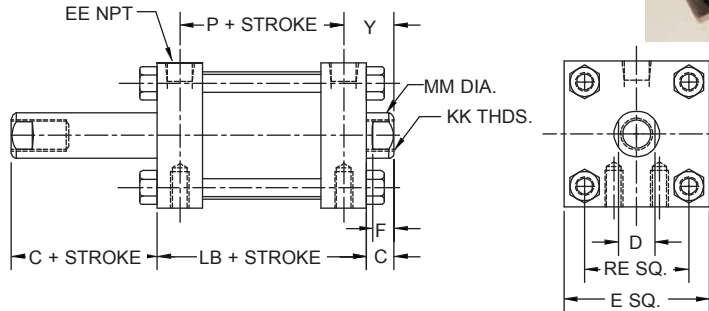


DURAMASTER CYLINDERS

DURA-E CYLINDER VARIATIONS

DURA-DOUBLE ROD

Double rod end cylinders operate with a single piston and two opposing rods. As one extends, the other retracts. As a result, the two ends can do reciprocal work in positioning or in moving a work piece with equal force, equal stroke length and equal speed.



DURA-DOUBLE ROD
EXAMPLE: DED4006MS4B2

BORE	C	D	E SQ.	EE NPT	F	G	KK THD.	LB	MM DIA.	NT	P	RE SQ.	TK	TN	X	Y
1-1/2	3/8	1/2	2	1/8-27	5/16	5/8	3/8-24	1 3/4	5/8	1/4-20	1 1/8	1.43	3/8	5/8	1/4	11/16
2	3/8	1/2	2 1/2	1/8-27	5/16	5/8	3/8-24	1 3/4	5/8	1/4-20	1 1/8	1.84	3/8	7/8	5/16	11/16
2-1/2	3/8	1/2	3	1/8-27	5/16	5/8	3/8-24	1 3/4	5/8	5/16-18	1 1/8	2.19	5/8	1 1/4	5/16	11/16
3-1/4	1/2	13/16	3 3/4	1/4-18	7/16	7/8	5/8-18	2 1/2	1	3/8-16	1 5/8	2.94	7/8	1 1/2	3/8	15/16
4	1/2	13/16	4 1/2	1/4-18	7/16	7/8	5/8-18	2 1/2	1	3/8-16	1 5/8	3.56	7/8	2 1/16	3/8	15/16
5	1/2	13/16	5 1/2	3/8-18	7/16	1	5/8-18	2 3/4	1	1/2-13	1 3/4	4.10	1	2 11/16	1/2	1

DURA BACK-TO-BACK

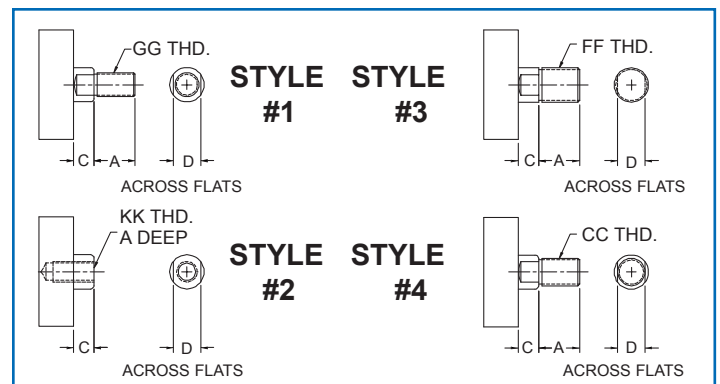
This double rod end cylinder provides four operating positions comparable to two back-to-back cylinders. The center head has two ports and the opposite rods can have different lengths and strokes for an infinite series of combinations.



DURA BACK-TO-BACK
EXAMPLE: DEB3204/10MS4B2

DURA-E ROD END STYLES

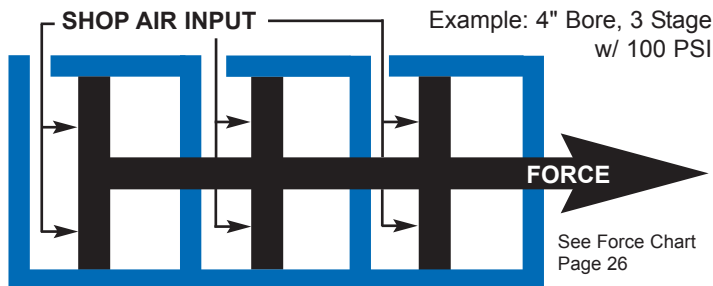
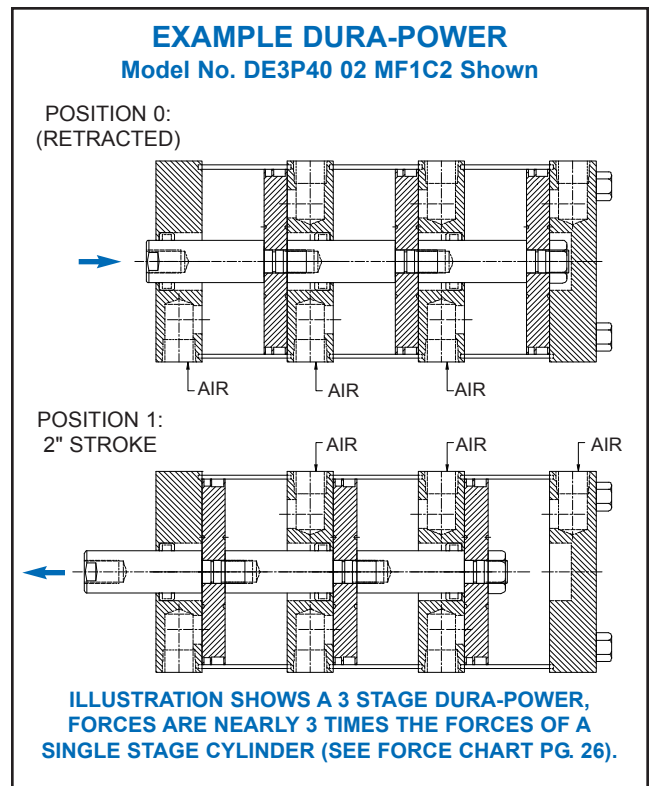
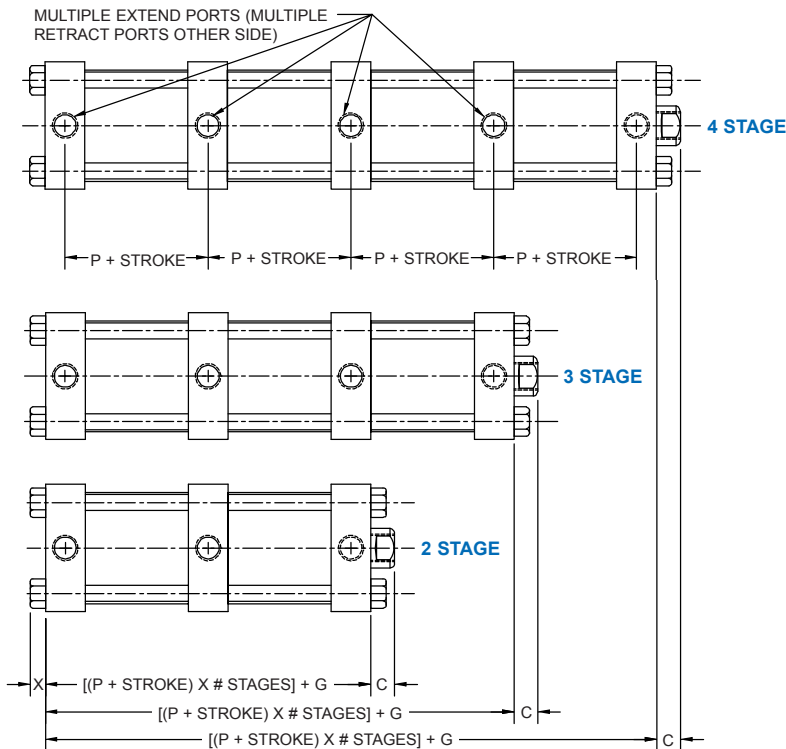
ROD DIA.	A	C	D	CC	FF	GG	KK
5/8	3/4	3/8	1/2	1/2-20	5/8-18	7/16-20	3/8-24
1	1 1/8	1/2	13/16	7/8-14	1-14	3/4-16	5/8-18
1 3/8	1 5/8	5/16	1 1/4	1 1/4-12	1 3/8-12	1-14	3/4-16



DURAMASTER CYLINDERS

DURA-POWER MULTIPLIER

DURA-E CYLINDER VARIATIONS



4" Dia. Piston + 4" Dia. Piston + 4" Dia. Piston = 3 Stage

12.6 Sq. In. X 100 PSI = 1260 Lbs.
 11.8 Sq. In. X 100 PSI = 1180 Lbs.
 11.8 Sq. In. X 100 PSI = 1180 Lbs.

EQUALS 3620 LBS. OUTPUT FORCE (EXTEND)

11.8 Sq. In. X 100 PSI = 1180 Lbs.
 11.8 Sq. In. X 100 PSI = 1180 Lbs.
 11.8 Sq. In. X 100 PSI = 1180 Lbs.

EQUALS 3540 LBS. (RETRACT)

This cylinder is for applications requiring higher forces with restricted mounting space. Each stage is an individually ported chamber with its own piston. The combined effect of the multiple ports acting on multiple pistons greatly increases the effective piston area thereby increasing the cylinder's force. These cylinders can be configured to multiply both the extend force and the retract force.

BORE	C	G	P	X
1-1/2	3/8	5/8	1 1/8	1/4
2	3/8	5/8	1 1/8	5/16
2-1/2	3/8	5/8	1 1/8	5/16
3-1/4	1/2	7/8	1 1/2	3/8
4	1/2	7/8	1 1/2	3/8
5	1/2	1	1 3/4	1/2

NOTE: Add 1/8" to overall length of each stage for magnetic piston on bores 1-1/2", 2" and 2-1/2".



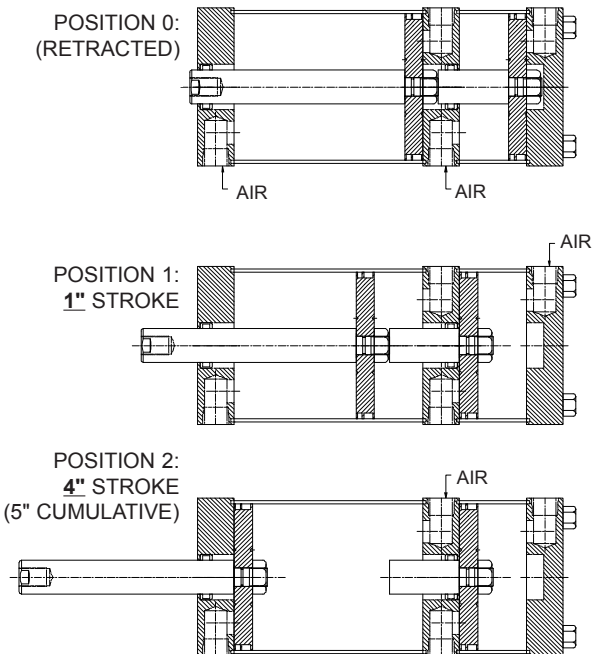
DURA MULTI-POSITION

Rod cylinders need not be limited to only two positions. With multiple rods & pistons "chained" together, a single rod end can have multiple stopping points or 'stages'. Dura-Multi-Position cylinders have been built with as many as 9 stages and varying strokes at each stage. Consult the factory for help with your own custom application.

EXAMPLE MULTI-POSITION:

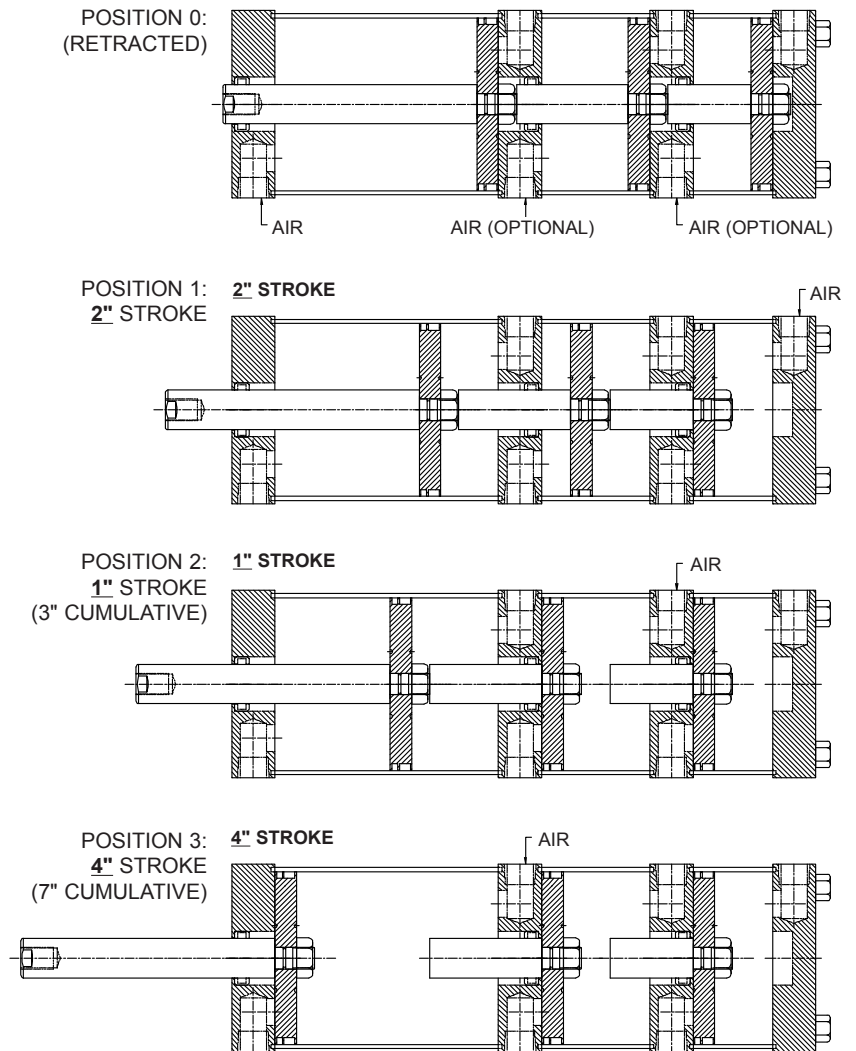
Specify each incremental stroke, in order, starting from retracted.

Example Model No. DE2M32 01/04 MF2B2



EXAMPLE MULTI-POSITION:

Specify each incremental stroke, in order, starting from retracted.
Example Model No. DE3M40 02/01/04 MS4C2



Multi-Position cylinders extend and retract in multi-stages, or in a single stroke. Consult factory for custom application.