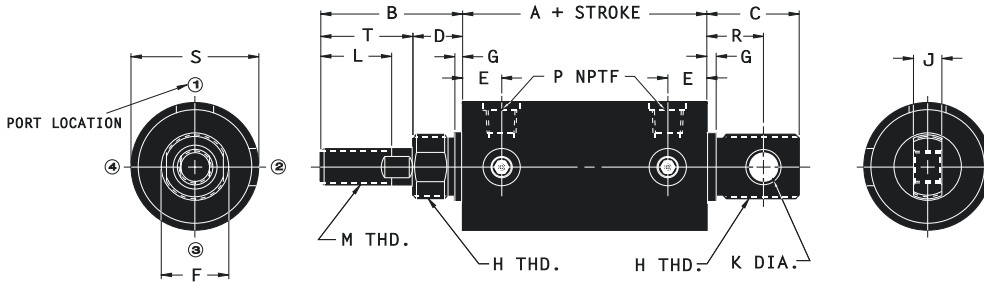
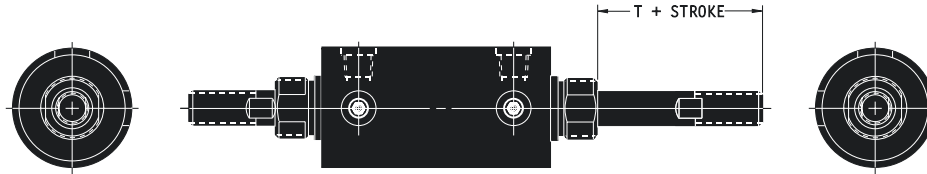


## DOUBLE-ACTING – DOUBLE-ENDED CYLINDERS FDE / ODE / HDE / DDE



**Models F/O/OLF**



**Models FDE/ODE/HDE/DDE**

DIMENSION REFERENCE	CYLINDER BORE						DIMENSION REFERENCE	CYLINDER BORE							
	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	2	2 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>4</sub>	4		1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	2	2 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>4</sub>	4		
A	2 <sup>25</sup> / <sub>32</sub>	3 <sup>5</sup> / <sub>16</sub>	3 <sup>5</sup> / <sub>16</sub>	3 <sup>5</sup> / <sub>16</sub>	4 <sup>11</sup> / <sub>16</sub>	4 <sup>11</sup> / <sub>16</sub>	R	1 <sup>11</sup> / <sub>16</sub>	7 <sup>7</sup> / <sub>8</sub>	1	1	1	1		
B	2 <sup>1</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	3 <sup>19</sup> / <sub>32</sub>	3 <sup>19</sup> / <sub>32</sub>	S	1 <sup>3</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>4</sub>		
C	1 <sup>1</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>11</sup> / <sub>16</sub>	T	1 <sup>1</sup> / <sub>2</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>5</sup> / <sub>8</sub>	1 <sup>5</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>		
D	5 <sup>5</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>32</sub>	1 <sup>7</sup> / <sub>32</sub>	AH	3 <sup>25</sup> / <sub>32</sub>	4 <sup>5</sup> / <sub>16</sub>	4 <sup>5</sup> / <sub>16</sub>	4 <sup>5</sup> / <sub>16</sub>	5 <sup>11</sup> / <sub>16</sub>	5 <sup>11</sup> / <sub>16</sub>		
E	1 <sup>19</sup> / <sub>32</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>11</sup> / <sub>16</sub>	1 <sup>11</sup> / <sub>16</sub>	3 <sup>31</sup> / <sub>32</sub>	3 <sup>31</sup> / <sub>32</sub>	UC	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>15</sup> / <sub>16</sub>	1 <sup>15</sup> / <sub>16</sub>		
F	1.062	1.187	1.187	1.187	1.687	1.687	UT	—	3 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>8</sub>		
G	1 <sup>1</sup> / <sub>8</sub>	5 <sup>5</sup> / <sub>32</sub>	5 <sup>5</sup> / <sub>32</sub>	5 <sup>5</sup> / <sub>32</sub>	5 <sup>5</sup> / <sub>32</sub>	5 <sup>5</sup> / <sub>32</sub>	<b>AX DIMENSION CHART INCLUDING STROKE LENGTHS</b>								
H	1-14	1 <sup>1</sup> / <sub>8</sub> -12	1 <sup>1</sup> / <sub>8</sub> -12	1 <sup>1</sup> / <sub>8</sub> -12	1 <sup>5</sup> / <sub>8</sub> -12	1 <sup>5</sup> / <sub>8</sub> -12	CYLINDER BORE SIZE	<b>STROKE LENGTHS</b>							
J	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>		1" or Less	Over 1" to 1 <sup>1</sup> / <sub>2</sub> "	Over 1 <sup>1</sup> / <sub>2</sub> " to 2 <sup>1</sup> / <sub>2</sub> "	Over 2 <sup>1</sup> / <sub>2</sub> " to 3"	Over 3" to 3 <sup>1</sup> / <sub>2</sub> "	Over 3 <sup>1</sup> / <sub>2</sub> " to 4 <sup>1</sup> / <sub>2</sub> "	Over 4 <sup>1</sup> / <sub>2</sub> " to 5 <sup>1</sup> / <sub>2</sub> "	Over 5 <sup>1</sup> / <sub>2</sub> " to 6"
K	5 <sup>5</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>16</sub>	7 <sup>7</sup> / <sub>16</sub>	7 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>8</sub>	6 <sup>25</sup> / <sub>32</sub>	7 <sup>25</sup> / <sub>32</sub>	8 <sup>25</sup> / <sub>32</sub>	9 <sup>25</sup> / <sub>32</sub>	10 <sup>25</sup> / <sub>32</sub>	11 <sup>25</sup> / <sub>32</sub>	13 <sup>25</sup> / <sub>32</sub>	15 <sup>25</sup> / <sub>32</sub>
L	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub> , 2, 2 <sup>1</sup> / <sub>2</sub>	7 <sup>5</sup> / <sub>16</sub>	8 <sup>5</sup> / <sub>16</sub>	9 <sup>5</sup> / <sub>16</sub>	10 <sup>5</sup> / <sub>16</sub>	11 <sup>5</sup> / <sub>16</sub>	12 <sup>5</sup> / <sub>16</sub>	14 <sup>5</sup> / <sub>16</sub>	16 <sup>5</sup> / <sub>16</sub>
M*	1 <sup>1</sup> / <sub>2</sub> -20	5 <sup>5</sup> / <sub>8</sub> -18	5 <sup>5</sup> / <sub>8</sub> -18	5 <sup>5</sup> / <sub>8</sub> -18	1-14	1-14	3 <sup>3</sup> / <sub>4</sub> , 4	8 <sup>11</sup> / <sub>16</sub>	9 <sup>11</sup> / <sub>16</sub>	10 <sup>11</sup> / <sub>16</sub>	11 <sup>11</sup> / <sub>16</sub>	12 <sup>11</sup> / <sub>16</sub>	13 <sup>11</sup> / <sub>16</sub>	15 <sup>11</sup> / <sub>16</sub>	17 <sup>11</sup> / <sub>16</sub>
P-NPTF	1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>									

\*Thread size and rod diameter.

Note: Dimensions not shown remain the same (according to bore size) as on the Models F/O/OLF drawing with the following exceptions: Models HDE, DDE, HCC and DCC use AH dimension in place of A dimension and Models HSR and DSR add 1" to all AX dimensions. See Application Information for special options.