



## Heavy Duty Pneumatic Cylinder (FMK - Aluminium Barrel)

Model : FMK

### FEATURES

- ▶ Large range of bore size
- ▶ Stroke available up to 1000 mm
- ▶ Available on request upto 3000 mm stroke cylinder
- ▶ Long established tie rod design, proven ruggedness & reliability
- ▶ Adjustable cushioning at both end
- ▶ Extensive choice of mounting
- ▶ Aluminum barrel / Hard anodized aluminum barrel for 1000mm + Above stroke
- ▶ Available in both magnetic & non-magnetic version



FMK  
Series:K-05

| TECHNICAL SPECIFICATIONS |                                                                                 |      |      |      |      |       |       |       |       |       |
|--------------------------|---------------------------------------------------------------------------------|------|------|------|------|-------|-------|-------|-------|-------|
| BORE SIZE                | 25mm                                                                            | 40mm | 50mm | 65mm | 80mm | 100mm | 125mm | 150mm | 200mm | 250mm |
| STROKE                   | Standard in Multiplication of 25 mm                                             |      |      |      |      |       |       |       |       |       |
| CUSHIONING               | Available at both ends                                                          |      |      |      |      |       |       |       |       |       |
| BARREL                   | Aluminum, Hard Anodized                                                         |      |      |      |      |       |       |       |       |       |
| PISTON ROD               | EN8 with hard chrome plated                                                     |      |      |      |      |       |       |       |       |       |
| PISTON ROD DIA           | 10mm                                                                            | 16mm | 20mm | 25mm | 32mm | 40mm  | 50mm  |       |       |       |
| END COVER                | Aluminum Pressure Diecast                                                       |      |      |      |      |       |       |       |       |       |
| SEALS                    | Polyurethane, Nitrile<br>(Viton seal available on request for high temperature) |      |      |      |      |       |       |       |       |       |
| SURFACE TREATMENT        | Auto finish enameling end cover & cylinder barrel                               |      |      |      |      |       |       |       |       |       |
| MOUNTING                 | Std. Mounting available (for more detail see dimension)                         |      |      |      |      |       |       |       |       |       |

| Bore dia in mm | Rod dia in mm | Action  | Working pressure in bar |       |       |       |       |       |       |       |       |
|----------------|---------------|---------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                |               |         | 2                       | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 25             | 10            | Extend  | 90                      | 135   | 175   | 220   | 273   | 308   | 352   | 394   | 442   |
|                |               | Retract | 79                      | 117   | 148   | 189   | 234   | 264   | 302   | 335   | 380   |
| 40             | 16            | Extend  | 226                     | 339   | 452   | 565   | 678   | 792   | 905   | 1018  | 1130  |
|                |               | Retract | 190                     | 285   | 380   | 475   | 570   | 665   | 760   | 855   | 950   |
| 50             | 16            | Extend  | 393                     | 589   | 785   | 982   | 1178  | 1374  | 1571  | 1767  | 1963  |
|                |               | Retract | 352                     | 529   | 705   | 881   | 1057  | 1234  | 1410  | 1586  | 1762  |
| 65             | 20            | Extend  | 561                     | 842   | 1122  | 1403  | 1683  | 1964  | 2244  | 2525  | 2805  |
|                |               | Retract | 505                     | 757   | 1009  | 1261  | 1514  | 1766  | 2018  | 2270  | 2523  |
| 80             | 25            | Extend  | 905                     | 1357  | 1809  | 2262  | 2714  | 3167  | 3619  | 4072  | 4524  |
|                |               | Retract | 816                     | 1225  | 1633  | 2041  | 2449  | 2857  | 3266  | 3674  | 4082  |
| 100            | 25            | Extend  | 1414                    | 2120  | 2828  | 3534  | 4241  | 4948  | 5655  | 6362  | 7069  |
|                |               | Retract | 1325                    | 1988  | 2650  | 3313  | 3976  | 4640  | 5300  | 5965  | 6625  |
| 125            | 32            | Extend  | 2209                    | 3313  | 4417  | 5522  | 6626  | 7731  | 8835  | 9940  | 11044 |
|                |               | Retract | 2064                    | 3096  | 4128  | 5160  | 6192  | 7224  | 8256  | 9288  | 10320 |
| 150            | 32            | Extend  | 3534                    | 5301  | 7069  | 8836  | 10603 | 12370 | 14137 | 15904 | 17671 |
|                |               | Retract | 3373                    | 5060  | 6747  | 8434  | 10120 | 11807 | 13494 | 15180 | 16867 |
| 200            | 40            | Extend  | 5654                    | 8482  | 11309 | 14137 | 16964 | 19792 | 26619 | 25446 | 28274 |
|                |               | Retract | 5428                    | 8143  | 10857 | 13571 | 16286 | 19000 | 21714 | 24429 | 27143 |
| 250            | 50            | Extend  | 9817                    | 14726 | 19635 | 24544 | 29452 | 34361 | 39270 | 44179 | 49087 |
|                |               | Retract | 9425                    | 14137 | 18850 | 23562 | 28274 | 32987 | 37699 | 42412 | 47124 |

Model : FMK

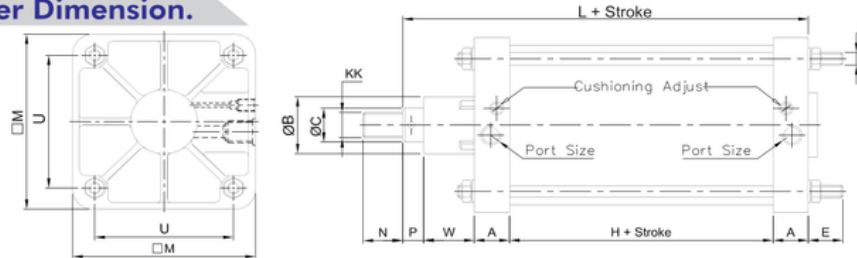
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### Heavy Duty Pneumatic Cylinder (FMK - Aluminium Barrel)



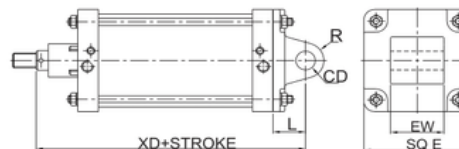
#### Basic Cylinder Dimension.



| SIZE  | H  | A  | W  | P  | N  | E  | U    | M   | ØB | ØC | KK         | L   | D   | K*   | PORT SIZE |
|-------|----|----|----|----|----|----|------|-----|----|----|------------|-----|-----|------|-----------|
| 25mm  | 28 | 17 | 20 | 9  | 15 | 16 | 25   | 40  | 25 | 10 | M08X1.25P. | 91  | M5  | 24   | G 1/8"    |
| 40mm  | 43 | 21 | 19 | 11 | 20 | 19 | 36.5 | 57  | 35 | 16 | M12X1.75P. | 115 | M6  | 63   | G 1/4"    |
| 50mm  | 43 | 21 | 19 | 11 | 20 | 19 | 47.5 | 67  | 35 | 16 | M12X1.75P. | 115 | M6  | 98   | G 1/4"    |
| 65mm  | 51 | 25 | 23 | 17 | 24 | 24 | 60   | 82  | 45 | 20 | M16X1.50P. | 141 | M8  | 165  | G 1/4"    |
| 75mm  | 47 | 32 | 35 | 16 | 30 | 29 | 70   | 94  | 45 | 25 | M20X2.50P. | 162 | M10 | 220  | G 1/2"    |
| 100mm | 47 | 32 | 35 | 16 | 30 | 29 | 88   | 116 | 45 | 25 | M20X2.50P. | 162 | M10 | 360  | G 1/2"    |
| 125mm | 64 | 32 | 44 | 19 | 36 | 35 | 112  | 138 | 60 | 32 | M24X3.00P. | 191 | M12 | 613  | G 1/2"    |
| 150mm | 71 | 32 | 44 | 19 | 36 | 35 | 126  | 165 | 60 | 32 | M24X3.00P. | 198 | M12 | 880  | G 1/2"    |
| 200mm | 87 | 46 | 55 | 20 | 50 | 45 | 175  | 220 | 70 | 40 | M30X3.50P. | 254 | M16 | 1700 | G 3/4"    |
| 250mm | 85 | 56 | 75 | 26 | 57 | 55 | 210  | 272 | 90 | 50 | M42X4.50P. | 298 | M16 | 2450 | G 1"      |

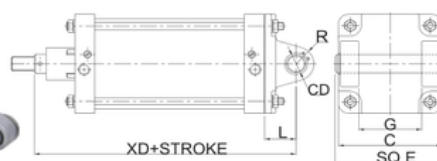
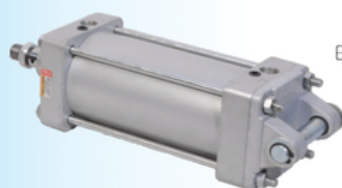
\*K = Push Force at 5 kg/cm<sup>2</sup> Pressure

#### Male Clevis Mounting - (ACL) - S



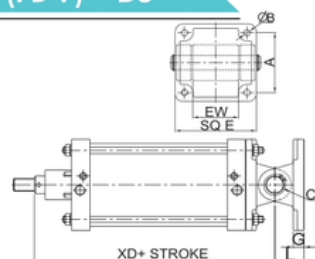
| Cylinder Bore Ø | CD H9 | EW -0.5 -1.2 | L  | R  | E max | XD  |
|-----------------|-------|--------------|----|----|-------|-----|
| 25mm            | 8     | 14.5         | 22 | -  | 41    | 113 |
| 40mm            | 12    | 27           | 25 | 10 | 57    | 140 |
| 50mm            | 12    | 31           | 25 | 12 | 67    | 140 |
| 65mm            | 16    | 40           | 30 | 16 | 82    | 171 |
| 75mm            | 16    | 49.5         | 32 | 17 | 94    | 194 |
| 100mm           | 20    | 59           | 38 | 17 | 116   | 200 |
| 125mm           | 25    | 70           | 45 | 25 | 138   | 236 |
| 150mm           | 25    | 90           | 45 | 25 | 165   | 243 |
| 200mm           | 30    | 88           | 65 | 30 | 220   | 319 |
| 250mm           | 40    | 110          | 70 | 41 | 272   | 368 |

#### Female Clevis Mounting - (ACL) - D



| Cylinder Bore Ø | CD H9 | G    | C   | L  | R  | E max | XD  |
|-----------------|-------|------|-----|----|----|-------|-----|
| 25mm            | 8     | 15   | 46  | 13 | -  | 41    | 104 |
| 40mm            | 12    | 28.5 | 66  | 25 | 10 | 57    | 140 |
| 50mm            | 12    | 32.5 | 72  | 25 | 12 | 67    | 140 |
| 65mm            | 16    | 40.5 | 86  | 30 | 16 | 82    | 171 |
| 75mm            | 16    | 50   | 105 | 32 | 17 | 94    | 194 |
| 100mm           | 20    | 60.5 | 129 | 38 | 17 | 116   | 200 |
| 125mm           | 25    | 72   | 130 | 45 | 25 | 138   | 236 |
| 150mm           | 25    | 92   | 150 | 45 | 25 | 165   | 243 |
| 200mm           | 30    | 90   | 177 | 65 | 30 | 220   | 319 |
| 250mm           | 40    | 110  | 221 | 70 | 41 | 272   | 368 |

#### Pivot Bracket & Pin Mounting - (PB-P) - DS



| Cylinder Bore Ø | CD H9 | EW -0.5 -1.2 | L  | G  | ØB   | A    | E max | XD  |
|-----------------|-------|--------------|----|----|------|------|-------|-----|
| 25mm            | 8     | 14.5         | 13 | 9  | 5.5  | 25   | 41    | 119 |
| 40mm            | 12    | 27           | 25 | 9  | 6.5  | 36.5 | 57    | 140 |
| 50mm            | 12    | 31           | 25 | 11 | 6.5  | 47.5 | 67    | 140 |
| 65mm            | 16    | 42.5         | 30 | 11 | 8.5  | 60   | 82    | 171 |
| 75mm            | 20    | 49.5         | 32 | 14 | 10.5 | 70   | 94    | 194 |
| 100mm           | 20    | 59           | 38 | 15 | 10.5 | 88   | 116   | 200 |
| 125mm           | 25    | 70           | 45 | 25 | 12.5 | 112  | 138   | 236 |
| 150mm           | 25    | 90           | 45 | 25 | 12.5 | 126  | 165   | 243 |
| 200mm           | 30    | 88           | 65 | 30 | 17   | 175  | 220   | 319 |
| 250mm           | 40    | 110          | 70 | 25 | 22   | 210  | 272   | 368 |

(All dimensions are in mm)

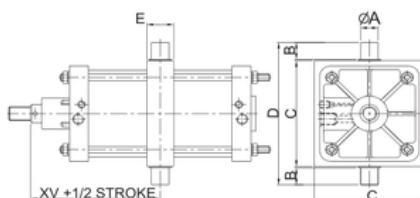
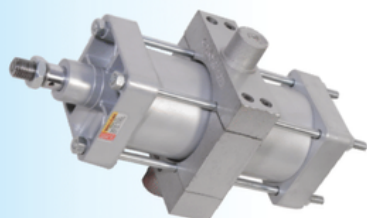
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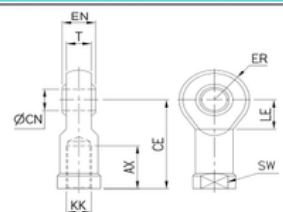
### Heavy Duty Pneumatic Cylinder (FMK - Aluminium Barrel)

#### Center Trunion Mounting - (NCTM) - T



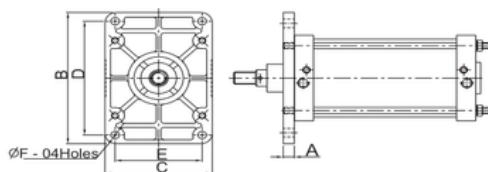
| Cylinder Bore Ø | ØA | B    | C   | D   | E  | XV ±2.5 |
|-----------------|----|------|-----|-----|----|---------|
| 25              | 12 | 12   | 57  | 85  | 24 | 60      |
| 40              | 18 | 20   | 78  | 122 | 35 | 72      |
| 50              | 18 | 20   | 84  | 128 | 35 | 72      |
| 65              | 28 | 28   | 115 | 175 | 45 | 90.5    |
| 75              | 35 | 29   | 130 | 193 | 45 | 106.5   |
| 100             | 35 | 29   | 158 | 221 | 45 | 106.5   |
| 125             | 40 | 33.5 | 180 | 252 | 50 | 127     |
| 150             | 40 | 33.5 | 207 | 279 | 50 | 130.5   |
| 200             | 48 | 36   | 266 | 343 | 80 | 164.5   |
| 250             | 60 | 60   | 335 | 461 | 95 | 199.5   |

#### Rod End Spherical Eye - (AR) - G



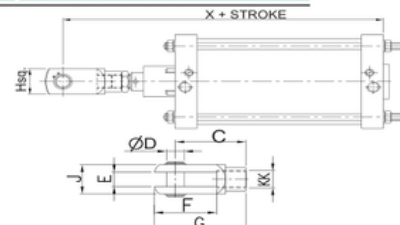
| Cylinder Bore Ø | EN h12 | T    | CN H9 | AX   | CE    | KK        | ER max | LE min | SW   |
|-----------------|--------|------|-------|------|-------|-----------|--------|--------|------|
| 25mm            | 12     | 9    | 8     | 23.5 | 37    | M08X1.25P | 11     | 13.5   | 14   |
| 40mm            | 16     | 12   | 12    | 25   | 50    | M12X1.75P | 15.75  | 16     | 18.8 |
| 50mm            | 16     | 12   | 12    | 25   | 50    | M12X1.75P | 15.75  | 16     | 18.8 |
| 65mm            | 21     | 15   | 16    | 25   | 65.5  | M16X1.50P | 20     | 20     | 24   |
| 75mm            | 25     | 18   | 20    | 35   | 77.5  | M20X2.50P | 23     | 22     | 30   |
| 100mm           | 25     | 18   | 20    | 35   | 77.5  | M20X2.50P | 23     | 22     | 30   |
| 125mm           | 30     | 22.5 | 25    | 40   | 92.5  | M24X3.00P | 30     | 33.5   | 36   |
| 150mm           | 30     | 22.5 | 25    | 40   | 92.5  | M24X3.00P | 30     | 33.5   | 36   |
| 200mm           | 44     | 30   | 35    | 50   | 133.5 | M30X3.50P | 45.5   | 45.5   | 60   |
| 250mm           | 44     | 30   | 35    | 60   | 133.5 | M42X4.50P | 45.5   | 45.5   | 60   |

#### Front Flange Mounting - (FM) - F



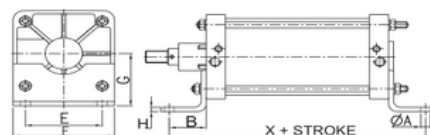
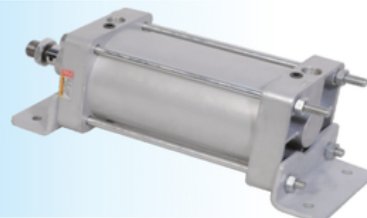
| Cylinder Bore Ø | A  | B    | C   | D   | E    | ØF   |
|-----------------|----|------|-----|-----|------|------|
| 25mm            | 6  | 72.6 | 40  | 56  | 25   | 6.5  |
| 40mm            | 10 | 97   | 60  | 77  | 36.5 | 8.5  |
| 50mm            | 10 | 108  | 75  | 82  | 47.5 | 8.5  |
| 65mm            | 10 | 138  | 85  | 105 | 60   | 10.5 |
| 75mm            | 16 | 153  | 102 | 125 | 70   | 13   |
| 100mm           | 16 | 175  | 120 | 145 | 88   | 13   |
| 125mm           | 19 | 196  | 138 | 170 | 112  | 12.5 |
| 150mm           | 19 | 216  | 163 | 190 | 126  | 12.5 |
| 200mm           | 20 | 315  | 225 | 259 | 175  | 22   |
| 250mm           | 25 | 395  | 275 | 325 | 210  | 25.5 |

#### Rod End Fork - (ARC) - A



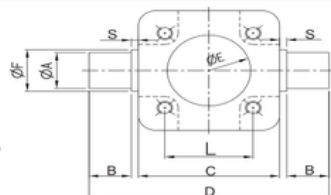
| Cylinder Bore Ø | C    | ØD | E    | F    | G   | Hsq. | J  | X   | KK        |
|-----------------|------|----|------|------|-----|------|----|-----|-----------|
| 25mm            | 39.5 | 10 | 10   | 30   | 51  | 19   | 19 | 132 | M08X1.25P |
| 40mm            | 52.5 | 12 | 12.5 | 47   | 64  | 25   | 25 | 173 | M12X1.75P |
| 50mm            | 52.5 | 12 | 12.5 | 47   | 64  | 25   | 25 | 173 | M12X1.75P |
| 65mm            | 64   | 16 | 17   | 61.5 | 80  | 32   | 32 | 213 | M16X1.50P |
| 75mm            | 80   | 20 | 21   | 76   | 99  | 38   | 38 | 253 | M20X2.50P |
| 100mm           | 80   | 20 | 21   | 76   | 99  | 38   | 38 | 253 | M20X2.50P |
| 125mm           | 100  | 25 | 25   | 93   | 124 | 50   | 50 | 301 | M24X3.00P |
| 150mm           | 100  | 25 | 25   | 93   | 124 | 50   | 50 | 308 | M24X3.00P |
| 200mm           | 111  | 30 | 32   | 100  | 142 | 63   | 63 | 377 | M30X3.50P |
| 250mm           | 128  | 35 | 35   | 108  | 167 | 70   | 70 | 443 | M42X4.50P |

#### Foot Mounting - (AFB) - L



| Cylinder Bore Ø | ØA   | B    | E   | F    | G    | H | X   |
|-----------------|------|------|-----|------|------|---|-----|
| 25mm            | 5.5  | 14.5 | 25  | 38   | 25   | 3 | 91  |
| 40mm            | 6.5  | 23   | 38  | 55   | 35.5 | 4 | 121 |
| 50mm            | 6.5  | 27   | 46  | 66   | 38   | 5 | 121 |
| 65mm            | 9    | 26   | 60  | 80   | 55   | 5 | 151 |
| 75mm            | 10.5 | 30   | 70  | 96.5 | 57   | 6 | 169 |
| 100mm           | 10.5 | 30   | 88  | 125  | 70   | 6 | 169 |
| 125mm           | 12.5 | 33   | 112 | 140  | 78   | 6 | 194 |
| 150mm           | 12.5 | 33   | 126 | 156  | 88   | 6 | 201 |
| 200mm           | 16.5 | 44   | 175 | 225  | 120  | 8 | 267 |
| 250mm           | 21   | 50   | 210 | 275  | 150  | 8 | 297 |

#### Front & Rear Trunion Mounting - (FM) - M



| Bore  | ØA | B  | ØE | C   | D   | T  | L    | S   | ØF         |
|-------|----|----|----|-----|-----|----|------|-----|------------|
| 25mm  | 12 | 12 | 26 | 40  | 68  | 15 | 25   | 2   | 14         |
| 40mm  | 18 | 18 | 36 | 55  | 95  | 20 | 36.5 | 2   | 20         |
| 50mm  | 18 | 18 | 36 | 67  | 107 | 20 | 47.5 | 2   | 20         |
| 65mm  | 20 | 25 | 46 | 80  | 134 | 24 | 60   | 2   | 24         |
| 75mm  | 35 | 29 | 65 | 93  | 156 | 40 | 70   | 2.5 | 40         |
| 100mm | 35 | 29 | 75 | 115 | 178 | 40 | 88   | 2.5 | 40         |
| 125mm | 25 | 25 | 64 | 132 | 210 | 50 | 112  | -   | -          |
| 150mm | 32 | 32 | 64 | 163 | 264 | 50 | 126  | -   | -          |
| 200mm | 45 | 36 | 70 | 230 | 302 | 45 | 175  | 2.5 | -          |
| 250mm | 50 | 60 | 90 | 277 | 397 | 50 | 210  | 2.5 | ON REQUEST |

(All Dimensions are in mm)

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