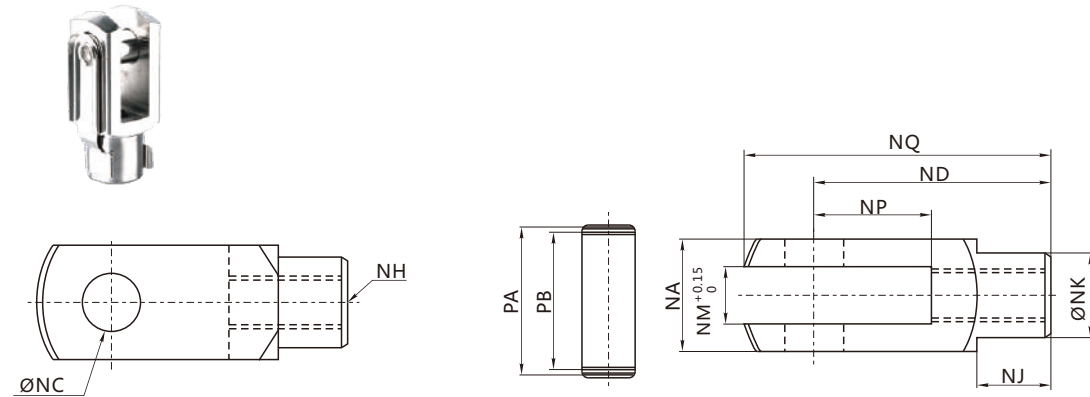
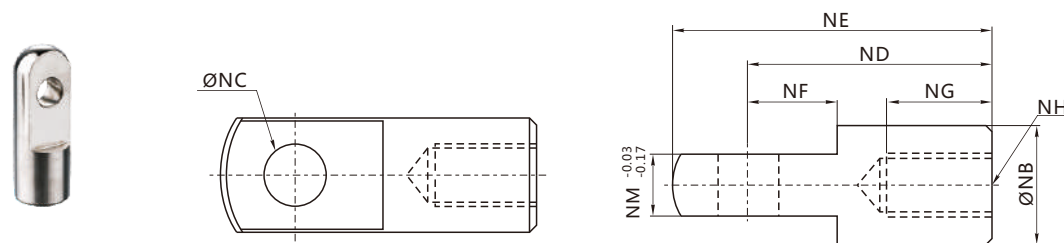


## Y type joint dimensions (mm)



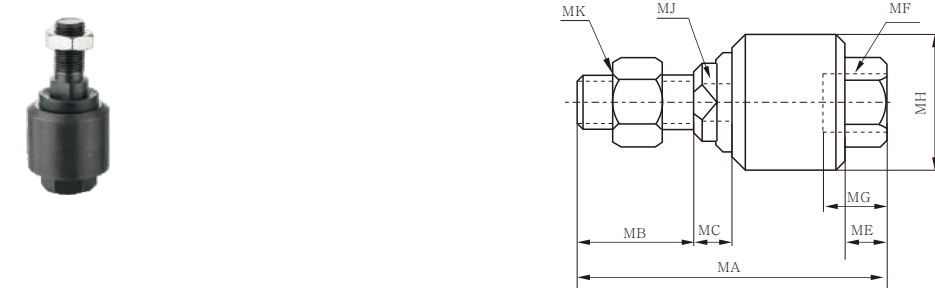
| Series    | Suit bore | NA   | NC | ND  | NH       | NJ | NK | NM | NP | NQ  | PA   | PB   |
|-----------|-----------|------|----|-----|----------|----|----|----|----|-----|------|------|
| AY-10-125 | 32        | 19   | 10 | 40  | M10×1.25 | 12 | 18 | 10 | 20 | 52  | 25   | 19.5 |
| AY-12-125 | 40        | 25.4 | 12 | 48  | M12×1.25 | 20 | 23 | 12 | 24 | 62  | 32.8 | 26.5 |
| AY-16-150 | 50, 63    | 32   | 16 | 64  | M16×1.5  | 22 | 30 | 16 | 32 | 80  | 39.3 | 33   |
| AY-20-150 | 80, 100   | 44.4 | 20 | 80  | M20×1.5  | 30 | 39 | 20 | 40 | 102 | 53.3 | 45   |
| AY-27-200 | 125       | 55   | 30 | 110 | M27×2.0  | -  | -  | 30 | 55 | 139 | 64   | 55.6 |
| AY-36-200 | 160, 200  | 70   | 35 | 144 | M36×2.0  | -  | -  | 35 | 73 | 179 | 80   | 70.6 |

## I type joint dimensions (mm)



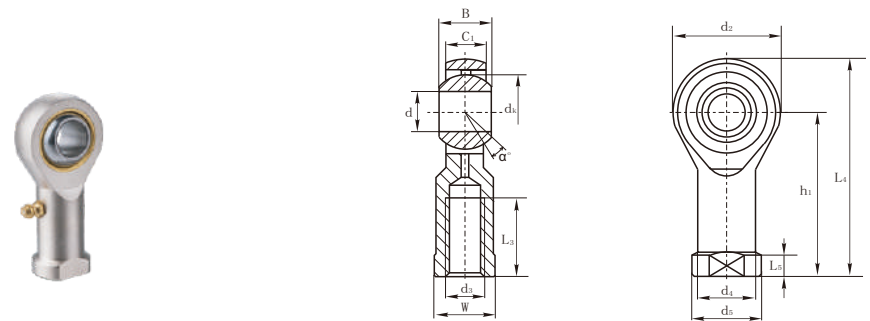
| Series    | Suit bore | NB | NC | ND  | NE  | NF | NG | NH       | NM |
|-----------|-----------|----|----|-----|-----|----|----|----------|----|
| AI-10-125 | 32        | 20 | 10 | 40  | 50  | 15 | 20 | M10×1.25 | 10 |
| AI-12-125 | 40        | 24 | 12 | 48  | 62  | 24 | 20 | M12×1.25 | 12 |
| AI-16-150 | 50, 63    | 32 | 16 | 64  | 82  | 32 | 23 | M16×1.5  | 16 |
| AI-20-150 | 80, 100   | 40 | 20 | 80  | 102 | 40 | 30 | M20×1.5  | 20 |
| AI-27-200 | 125       | -  | 30 | 110 | 139 | 51 | 45 | M27×2.0  | 30 |
| AI-36-200 | 160, 200  | -  | 35 | 144 | 181 | 65 | 55 | M36×2.0  | 35 |

## JA series floating joint dimensions (mm)



| Series    | MA  | MB | MC | ME | MF       | MG | MH | MJ | MK       |
|-----------|-----|----|----|----|----------|----|----|----|----------|
| JA-6-100  | 37  | 15 | 4  | 6  | M6X1.0   | 5  | 16 | 7  | M6X1.0   |
| JA-8-125  | 51  | 20 | 6  | 8  | M8X1.25  | 12 | 24 | 8  | M8X1.25  |
| JA-10-125 | 60  | 22 | 8  | 8  | M10X1.25 | 12 | 26 | 10 | M10X1.25 |
| JA-12-125 | 65  | 24 | 8  | 8  | M12X1.25 | 12 | 28 | 12 | M12X1.25 |
| JA-14-150 | 74  | 25 | 10 | 8  | M14X1.5  | 13 | 35 | 15 | M14X1.5  |
| JA-16-150 | 90  | 30 | 14 | 12 | M16X1.5  | 14 | 45 | 15 | M16X1.5  |
| JA-18-150 | 92  | 30 | 14 | 12 | M18X1.5  | 18 | 45 | 18 | M18X1.5  |
| JA-20-150 | 102 | 30 | 17 | 15 | M20X1.5  | 18 | 53 | 22 | M20X1.5  |
| JA-27-200 | 125 | 40 | 20 | 18 | M27X2.0  | 22 | 63 | 30 | M27X2.0  |
| JA-30-200 | 155 | 48 | 25 | 25 | M30X2.0  | 40 | 88 | 40 | M30X2.0  |
| JA-36-200 | 155 | 48 | 25 | 25 | M36X2.0  | 40 | 88 | 40 | M36X2.0  |

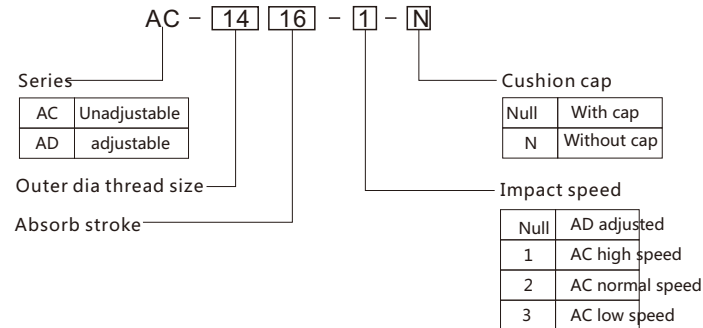
## AU series fish eye joint dimensions (mm)



| Series    | d  | d <sub>3</sub> 6H | B  | C <sub>1</sub> | W  | h <sub>1</sub> | d <sub>2</sub> | L <sub>4</sub> | L <sub>5</sub> | d <sub>4</sub> | d <sub>5</sub> | d <sub>k</sub> | L <sub>3</sub> min | α  |
|-----------|----|-------------------|----|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------|----|
| AU-4-070  | 4  | M4X0.7            | 8  | 6              | 9  | 27             | 18             | 36             | 4              | 8.5            | 11             | 11.11          | 10                 | 13 |
| AU-5-080  | 5  | M5X0.8            | 8  | 6              | 9  | 27             | 18             | 36             | 4              | 8.5            | 11             | 11.11          | 10                 | 13 |
| AU-6-100  | 6  | M6X1.0            | 9  | 6.75           | 11 | 30             | 20             | 40             | 5              | 10             | 13             | 12.7           | 12                 | 13 |
| AU-8-125  | 8  | M8X1.25           | 12 | 9              | 14 | 36             | 24             | 48             | 5              | 12.5           | 16             | 15.875         | 16                 | 14 |
| AU-10-125 | 10 | M10X1.25          | 14 | 10.5           | 17 | 43             | 28             | 57             | 6.5            | 15             | 19             | 19.05          | 20                 | 13 |
| AU-12-125 | 12 | M12X1.25          | 16 | 12             | 19 | 50             | 32             | 66             | 6.5            | 17.5           | 22             | 22.225         | 22                 | 13 |
| AU-14-150 | 14 | M14X1.5           | 19 | 13.5           | 22 | 57             | 36             | 75             | 8              | 20             | 25             | 25.4           | 25                 | 16 |
| AU-16-150 | 16 | M16X1.5           | 21 | 15             | 22 | 64             | 42             | 85             | 8              | 22             | 27             | 28.575         | 28                 | 15 |
| AU-18-150 | 18 | M18X1.5           | 23 | 16.5           | 27 | 71             | 44             | 93             | 10             | 25             | 31             | 31.75          | 32                 | 15 |
| AU-20-150 | 20 | M20X1.5           | 25 | 18             | 30 | 77             | 50             | 102            | 10             | 27.5           | 34             | 34.925         | 33                 | 14 |
| AU-27-200 | 30 | M27X2.0           | 37 | 25             | 41 | 110            | 70             | 145            | 15             | 40             | 50             | 50.8           | 51                 | 17 |
| AU-36-200 | 35 | M36X2.0           | 43 | 28             | 50 | 125            | 81             | 165.5          | 17             | 46             | 58             | 57.15          | 56                 | 16 |
| AU-42-200 | 40 | M42X2.0           | 49 | 33             | 55 | 142            | 91             | 187.5          | 19             | 53             | 65             | 66.67          | 60                 | 16 |
| AU-48-200 | 50 | M48X2.0           | 60 | 45             | 65 | 160            | 117            | 218.5          | 23             | 65             | 75             | 82.5           | 65                 | 12 |



## Ordering code

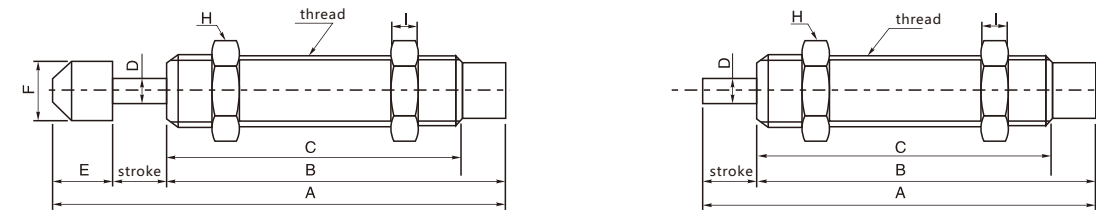


## Specification

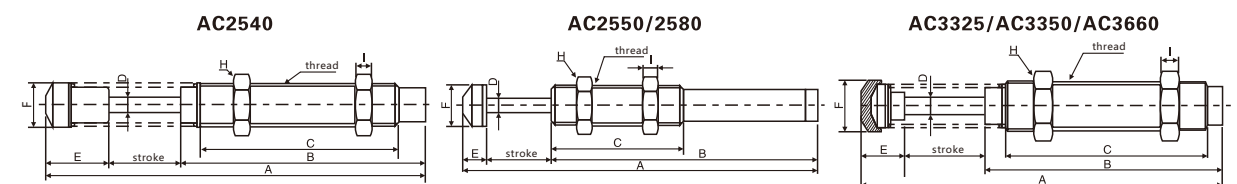
| Series  | Stroke mm | Max. absorb energy Nm | Absorb energy per hour Nm | Max. effective weight kg |      |      | Highest impact speed m/s |     |   | Operating temp. °C |
|---------|-----------|-----------------------|---------------------------|--------------------------|------|------|--------------------------|-----|---|--------------------|
|         |           |                       |                           | 1                        | 2    | 3    | 1                        | 2   | 3 |                    |
| AC-0806 | 6         | 2                     | 8800                      | 0.5                      | 2    | 6    | 4                        | 2   | 1 | -36~80             |
| AC-1005 | 5         | 3                     | 10800                     | 1                        | 3    | 7    | 4                        | 2   | 1 | -36~80             |
| AC-1008 | 8         | 4                     | 15200                     | 2                        | 4    | 9    | 4                        | 2   | 1 | -36~80             |
| AC-1210 | 10        | 5                     | 17640                     | 5                        | 10   | 30   | 4                        | 2   | 1 | -36~80             |
| AC-1412 | 12        | 18                    | 30000                     | 8                        | 50   | 100  | 4                        | 2   | 1 | -36~80             |
| AC-1416 | 16        | 20                    | 36000                     | 10                       | 70   | 150  | 4                        | 2   | 1 | -36~80             |
| AC-1425 | 25        | 30                    | 38000                     | 15                       | 100  | 180  | 4                        | 2   | 1 | -36~80             |
| AC-2020 | 20        | 40                    | 40000                     | 30                       | 200  | 700  | 4.5                      | 2.5 | 1 | -36~80             |
| AC-2030 | 30        | 50                    | 48000                     | 30                       | 200  | 700  | 4.5                      | 2.5 | 1 | -36~80             |
| AC-2040 | 40        | 60                    | 55000                     | 50                       | 300  | 900  | 4.5                      | 2.5 | 1 | -36~80             |
| AC-2050 | 50        | 70                    | 60000                     | 60                       | 400  | 1200 | 4.5                      | 2.5 | 1 | -36~80             |
| AC-2525 | 25        | 80                    | 54000                     | 200                      | 800  | 1300 | 4.5                      | 2.5 | 1 | -36~80             |
| AC-2540 | 40        | 120                   | 75000                     | 300                      | 1000 | 1500 | 4.5                      | 2.5 | 1 | -36~80             |
| AC-2550 | 50        | 130                   | 90000                     | 200                      | 1100 | 1600 | 4.5                      | 2.5 | 1 | -36~80             |
| AC-2580 | 80        | 150                   | 120000                    | 300                      | 1300 | 2000 | 4                        | 2.5 | 1 | -36~80             |
| AC-2725 | 25        | 140                   | 85000                     | 400                      | 1000 | 2200 | 4                        | 2.5 | 1 | -36~80             |
| AC-2750 | 50        | 200                   | 95000                     | 600                      | 1500 | 2500 | 4                        | 2.5 | 1 | -36~80             |
| AC-3325 | 25        | 160                   | 75000                     | 800                      | 2000 | 2800 | 4                        | 2.5 | 1 | -36~80             |
| AC-3350 | 50        | 280                   | 85000                     | 1200                     | 2500 | 3400 | 4                        | 2.5 | 1 | -36~80             |
| AC-3660 | 60        | 300                   | 150000                    | 1500                     | 2800 | 4000 | 4                        | 2.5 | 1 | -36~80             |

| Series   | Stroke mm | Max. absorb energy Nm | Absorb energy per hour Nm | Max. effective weight kg | Highest impact speed m/s | Operating temp. °C |
|----------|-----------|-----------------------|---------------------------|--------------------------|--------------------------|--------------------|
| AD-1007  | 7         | 5                     | 12400                     | 12                       | 3.5                      | -36~80             |
| AD-1210  | 10        | 6                     | 17640                     | 30                       | 3.5                      | -36~80             |
| AD-1410  | 10        | 20                    | 25000                     | 80                       | 3.5                      | -36~80             |
| AD-1612  | 12        | 22                    | 28000                     | 160                      | 3.5                      | -36~80             |
| AD-2016  | 16        | 25                    | 30000                     | 200                      | 3.5                      | -36~80             |
| AD-2020  | 20        | 30                    | 30000                     | 250                      | 3.5                      | -36~80             |
| AD-2025  | 25        | 39                    | 30000                     | 312                      | 3.5                      | -36~80             |
| AD-2525  | 25        | 85                    | 54000                     | 400                      | 3.5                      | -36~80             |
| AD-2530  | 30        | 95                    | 60000                     | 480                      | 3.5                      | -36~80             |
| AD-2540  | 40        | 100                   | 80000                     | 700                      | 3.5                      | -36~80             |
| AD-2550  | 50        | 130                   | 90000                     | 720                      | 4                        | -36~80             |
| AD-2580  | 80        | 150                   | 120000                    | 800                      | 4                        | -36~80             |
| AD-2725  | 25        | 140                   | 85000                     | 560                      | 4                        | -36~80             |
| AD-2750  | 50        | 200                   | 95000                     | 1000                     | 4                        | -36~80             |
| AD-3650  | 50        | 350                   | 100000                    | 1400                     | 4                        | -36~80             |
| AD-4225  | 25        | 260                   | 125000                    | 3000                     | 4.5                      | -36~80             |
| AD-4250  | 50        | 500                   | 150000                    | 4000                     | 4.5                      | -36~80             |
| AD-4275  | 75        | 750                   | 180000                    | 6000                     | 4.5                      | -36~80             |
| AD-64050 | 50        | 2080                  | 185000                    | 12727                    | 2                        | -36~80             |
| AD-64100 | 100       | 4280                  | 204000                    | 18181                    | 2                        | -36~80             |
| AD-64150 | 150       | 6150                  | 248000                    | 23636                    | 2                        | -36~80             |

## Dimensions ( mm )

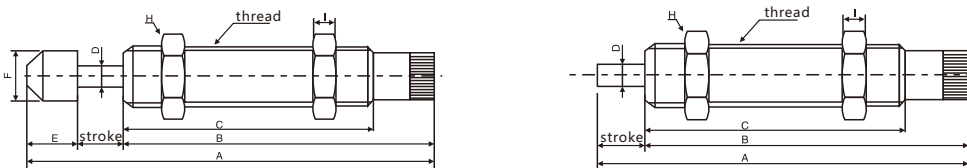


| Series    | Thread    | Stroke (mm) | A     | B     | C    | D | E    | F    | H    | I  |
|-----------|-----------|-------------|-------|-------|------|---|------|------|------|----|
| AC-0806   | M8 × 1.0  | 6           | 50    | 38    | 33   | 3 | 6    | 6.6  | 11   | 3  |
| AC-0806-N | M8 × 1.0  | 6           | 44    | 38    | 33   | 3 | -    | -    | 11   | 3  |
| AC-1005   | M10 × 1.0 | 5           | 38.7  | 27.7  | 22.9 | 3 | 6    | 8.6  | 12.7 | 3  |
| AC-1005-N | M10 × 1.0 | 5           | 32.7  | 27.7  | 22.9 | 3 | -    | -    | 12.7 | 3  |
| AC-1008   | M10 × 1.0 | 8           | 57    | 43    | 38   | 3 | 6    | 8.6  | 12.7 | 3  |
| AC-1008-N | M10 × 1.0 | 8           | 51    | 43    | 38   | 3 | -    | -    | 12.7 | 3  |
| AC-1210   | M12 × 1.0 | 10          | 69.5  | 50    | 45.5 | 3 | 9.5  | 10.3 | 14   | 4  |
| AC-1210-N | M12 × 1.0 | 10          | 60    | 50    | 45.5 | 3 | -    | -    | 14   | 4  |
| AC-1412   | M14 × 1.5 | 12          | 102.3 | 76    | 67   | 4 | 14.3 | 12   | 19   | 6  |
| AC-1412-N | M14 × 1.5 | 12          | 88    | 76    | 67   | 4 | -    | -    | 19   | 6  |
| AC-1416   | M14 × 1.5 | 16          | 125.3 | 95    | 86   | 4 | 14.3 | 12   | 19   | 6  |
| AC-1416-N | M14 × 1.5 | 16          | 111   | 95    | 86   | 4 | -    | -    | 19   | 6  |
| AC-1425   | M14 × 1.5 | 25          | 149.3 | 110.2 | 101  | 4 | 14.3 | 12   | 19   | 6  |
| AC-1425-N | M14 × 1.5 | 25          | 135   | 110.2 | 101  | 4 | -    | -    | 19   | 6  |
| AC-2020   | M20 × 1.5 | 20          | 148   | 110   | 101  | 6 | 18   | 18   | 26   | 8  |
| AC-2020-N | M20 × 1.5 | 20          | 130   | 110   | 101  | 6 | -    | -    | 26   | 8  |
| AC-2030   | M20 × 1.5 | 30          | 158   | 110   | 101  | 6 | 18   | 18   | 26   | 8  |
| AC-2030-N | M20 × 1.5 | 30          | 140   | 110   | 101  | 6 | -    | -    | 26   | 8  |
| AC-2040   | M20 × 1.5 | 40          | 179   | 121   | 110  | 6 | 18   | 18   | 26   | 8  |
| AC-2040-N | M20 × 1.5 | 40          | 161   | 121   | 110  | 6 | -    | -    | 26   | 8  |
| AC-2050   | M20 × 1.5 | 50          | 235   | 167   | 158  | 6 | 18   | 18   | 26   | 8  |
| AC-2050-N | M20 × 1.5 | 50          | 217   | 167   | 158  | 6 | -    | -    | 26   | 8  |
| AC-2525   | M25 × 1.5 | 25          | 155.5 | 111   | 101  | 8 | 19.5 | 22   | 32   | 10 |
| AC-2525-N | M25 × 1.5 | 25          | 136   | 111   | 101  | 8 | -    | -    | 32   | 10 |
| AC-2725   | M27 × 1.5 | 25          | 143.8 | 100   | 87   | 8 | 18.8 | 22   | 36   | 10 |
| AC-2725-N | M27 × 1.5 | 25          | 125   | 100   | 87   | 8 | -    | -    | 36   | 10 |
| AC-2750   | M27 × 1.5 | 50          | 208.8 | 140   | 127  | 8 | 18.8 | 22   | 36   | 10 |
| AC-2750-N | M27 × 1.5 | 50          | 190   | 140   | 127  | 8 | -    | -    | 36   | 10 |

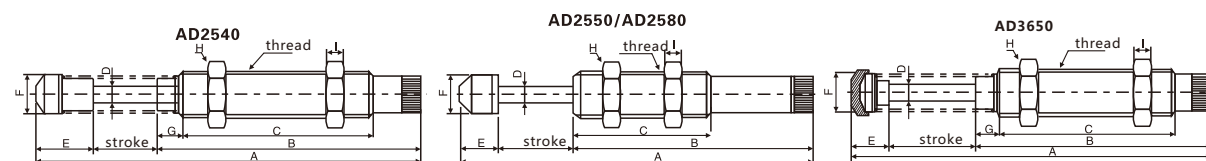


| Series    | Thread    | Stroke (mm) | A     | B     | C     | D  | E    | F    | H  | I  |
|-----------|-----------|-------------|-------|-------|-------|----|------|------|----|----|
| AC-2540   | M25 × 1.5 | 40          | 213   | 137   | 117   | 8  | 36   | 22   | 32 | 10 |
| AC-2550   | M25 × 1.5 | 50          | 240   | 170.5 | 100   | 8  | 19.5 | 22   | 32 | 10 |
| AC-2550-N | M25 × 1.5 | 50          | 240   | 170.5 | 100   | 8  | 19.5 | 22   | 32 | 10 |
| AC-2580   | M25 × 1.5 | 80          | 336.5 | 237   | 100   | 8  | 19.5 | 22   | 32 | 10 |
| AC-2580-N | M25 × 1.5 | 80          | 336.5 | 237   | 100   | 8  | 19.5 | 22   | 32 | 10 |
| AC-3325   | M33 × 1.5 | 25          | 143   | 103   | 74.5  | 10 | 15   | 27.8 | 41 | 10 |
| AC-3350   | M33 × 1.5 | 50          | 208   | 143   | 114.5 | 10 | 15   | 27.8 | 41 | 10 |
| AC-3660   | M36 × 1.5 | 60          | 248   | 162   | 134   | 10 | 26   | 35   | 46 | 10 |

■ Dimensions ( mm )

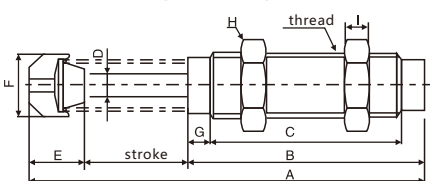


| Series    | Thread  | Stroke (mm) | A     | B     | C     | D | E    | F    | H    | I  |
|-----------|---------|-------------|-------|-------|-------|---|------|------|------|----|
| AD-1007   | M10×1.0 | 7           | 79    | 58    | 44    | 3 | 7    | 8.5  | 12.7 | 3  |
| AD-1007-N | M10×1.0 | 7           | 72    | 58    | 44    | 3 | —    | —    | 12.7 | 3  |
| AD-1210   | M12×1.0 | 10          | 78    | 61    | 46    | 3 | 7    | 8.5  | 14   | 4  |
| AD-1210-N | M12×1.0 | 10          | 71    | 61    | 46    | 3 | —    | —    | 14   | 4  |
| AD-1410   | M14×1.5 | 10          | 112.8 | 88.5  | 72.5  | 4 | 14.3 | 12   | 19   | 6  |
| AD-1410-N | M14×1.5 | 10          | 98.5  | 88.5  | 72.5  | 4 | —    | —    | 19   | 6  |
| AD-1612   | M16×1.5 | 12          | 117   | 90    | 76    | 4 | 15   | 13.5 | 19   | 6  |
| AD-1612-N | M16×1.5 | 12          | 102   | 90    | 76    | 4 | —    | —    | 19   | 6  |
| AD-2016   | M20×1.5 | 16          | 151   | 117   | 101   | 4 | 18   | 18   | 26   | 8  |
| AD-2016-N | M20×1.5 | 16          | 133   | 117   | 101   | 4 | —    | —    | 26   | 8  |
| AD-2020   | M20×1.5 | 20          | 136   | 98    | 75    | 6 | 18   | 18   | 26   | 8  |
| AD-2020-N | M20×1.5 | 20          | 124   | 98    | 75    | 6 | —    | —    | 26   | 8  |
| AD-2025   | M20×1.5 | 25          | 160   | 117   | 101   | 6 | 18   | 18   | 26   | 8  |
| AD-2025-N | M20×1.5 | 25          | 142   | 117   | 101   | 6 | —    | —    | 26   | 8  |
| AD-2525   | M25×1.5 | 25          | 163   | 118.5 | 101   | 8 | 19.5 | 22   | 32   | 10 |
| AD-2525-N | M25×1.5 | 25          | 143.5 | 118.5 | 101   | 8 | —    | —    | 32   | 10 |
| AD-2530   | M25×1.5 | 30          | 168   | 118.5 | 101   | 8 | 19.5 | 22   | 32   | 10 |
| AD-2530-N | M25×1.5 | 30          | 148.5 | 118.5 | 101   | 8 | —    | —    | 32   | 10 |
| AD-2725   | M27×1.5 | 25          | 153.8 | 110   | 90.2  | 8 | 18.8 | 23   | 36   | 10 |
| AD-2725-N | M27×1.5 | 25          | 138.8 | 110   | 90.2  | 8 | —    | —    | 36   | 10 |
| AD-2750   | M27×1.5 | 50          | 218.8 | 150   | 130.2 | 8 | 18.8 | 23   | 36   | 10 |
| AD-2750-N | M27×1.5 | 50          | 203.8 | 150   | 130.2 | 8 | —    | —    | 36   | 10 |



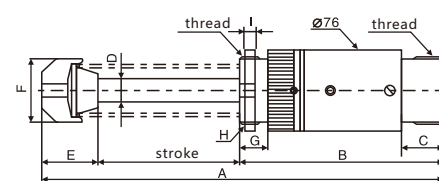
| Series  | Thread    | Stroke<br>(mm) | A     | B     | C   | D  | E    | F    | G  | H  | I  |
|---------|-----------|----------------|-------|-------|-----|----|------|------|----|----|----|
| AD-2540 | M25 × 1.5 | 40             | 220.5 | 144.5 | 117 | 8  | 36   | 22   | 10 | 32 | 10 |
| AD-2550 | M25 × 1.5 | 50             | 247.5 | 178   | 100 | 8  | 19.5 | 22   | —  | 32 | 10 |
| AD-2580 | M25 × 1.5 | 80             | 344   | 244.5 | 100 | 8  | 19.5 | 22   | —  | 32 | 10 |
| AD-3650 | M36 × 1.5 | 50             | 246.8 | 171   | 134 | 10 | 25.8 | 35.8 | 17 | 46 | 10 |

## AD4225/AD4250/AD4275



| Series   | Thread     | Stroke<br>(mm) | A     | B     | C     | D  | E    | F    | G    | H    | I   |
|----------|------------|----------------|-------|-------|-------|----|------|------|------|------|-----|
| AD-4225  | M42×1.5    | 25             | 186.4 | 127.5 | 88    | 12 | 33.9 | 44.5 | 28.5 | 50   | 15  |
| AD-4250  | M42×1.5    | 50             | 240.9 | 157   | 117.5 | 12 | 33.9 | 44.5 | 28.5 | 50   | 15  |
| AD-4275  | M42×1.5    | 75             | 301.4 | 187.5 | 148   | 12 | 33.9 | 44.5 | 28.5 | 50   | 15  |
| AD-64050 | UNF21/2-12 | 50             | 247.8 | 146   | 26    | 20 | 51.8 | 59   | 23   | 76.2 | 9.4 |
| AD-64100 | UNF21/2-12 | 100            | 347.8 | 196   | 26    | 20 | 51.8 | 59   | 23   | 76.2 | 9.4 |
| AD-64150 | UNF21/2-12 | 150            | 467.8 | 256   | 26    | 20 | 61.8 | 59   | 23   | 76.2 | 9.4 |

**AD64050/AD64100/AD64150**

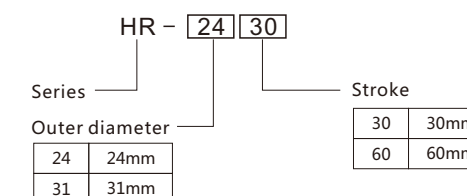


## ■ Specification

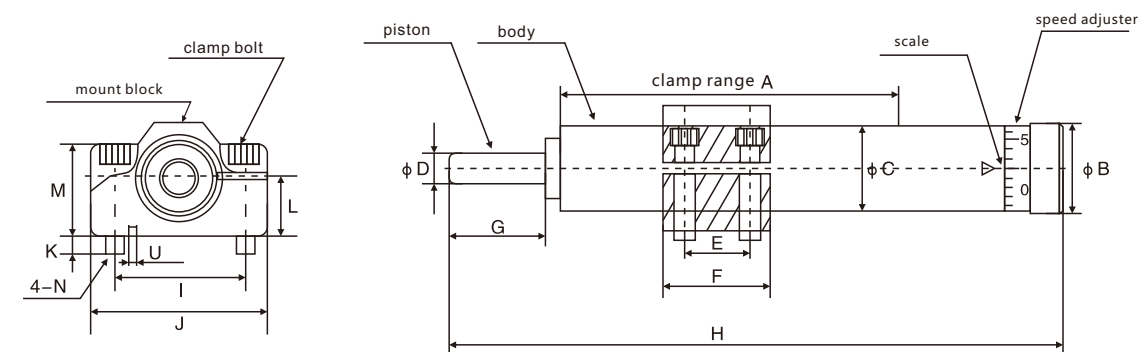


| Series   | Max. stroke | Max. load mass | Operating temp |
|----------|-------------|----------------|----------------|
|          | mm          | kgf            | °C             |
| HR-2412  | 12          | 350            | -36~+80        |
| HR-2415  | 15          | 350            | -36~+80        |
| HR-2430  | 30          | 350            | -36~+80        |
| HR-2460  | 60          | 350            | -36~+80        |
| HR-2480  | 80          | 350            | -36~+80        |
| HR-24100 | 100         | 350            | -36~+80        |
| HR-3140  | 40          | 550            | -36~+80        |
| HR-3160  | 60          | 550            | -36~+80        |
| HR-31100 | 100         | 550            | -36~+80        |

■ Ordering code



■ Dimensions ( mm )



| <div>Symbol</div> <div>Series</div> | A   | B  | C  | D  | E  | F  | G   | H   | I  | J  | K  | L  | M  | N | U |
|-------------------------------------|-----|----|----|----|----|----|-----|-----|----|----|----|----|----|---|---|
| HR-2412                             | 68  | 28 | 24 | 9  | 20 | 32 | 12  | 142 | 38 | 52 | 7  | 17 | 28 | 5 | 2 |
| HR-2415                             | 85  |    |    |    |    |    | 15  | 155 |    |    |    |    |    |   |   |
| HR-2430                             | 112 |    |    |    |    |    | 30  | 202 |    |    |    |    |    |   |   |
| HR-2460                             | 156 |    |    |    |    |    | 60  | 277 |    |    |    |    |    |   |   |
| HR-2480                             | 199 |    |    |    |    |    | 80  | 342 |    |    |    |    |    |   |   |
| HR-24100                            | 232 |    |    |    |    |    | 100 | 395 |    |    |    |    |    |   |   |
| HR-3140                             | 153 | 36 | 31 | 12 | 26 | 42 | 40  | 270 | 44 | 60 | 10 | 21 | 35 | 6 | 2 |
| HR-3160                             | 189 |    |    |    |    |    | 60  | 325 |    |    |    |    |    |   |   |
| HR-31100                            | 269 |    |    |    |    |    | 100 | 405 |    |    |    |    |    |   |   |