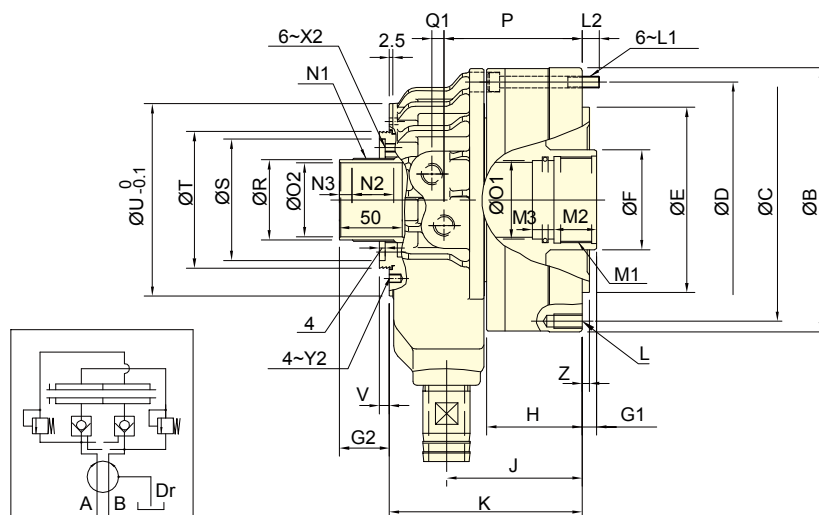
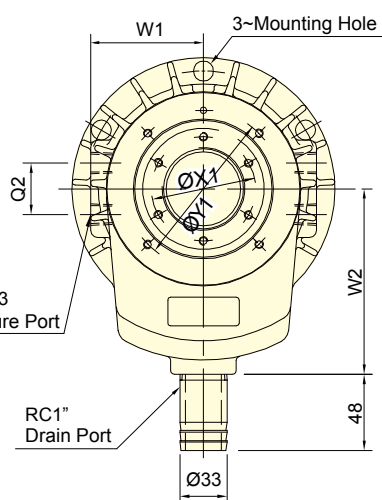




- Super short form, light weight large Through-Hole, just as 2/3 of typical model length.
- Built-in safety check valves and pressure relief valves.
- Can screw it from the rear end of the cylinder when mounting.
- Linear sensor can be attached.(optional)



Subject to technical changes

## SPECIFICATIONS

| Model    | Eff. piston area |                 | Piston stroke | Max. speed | Max. pressure | Moment of inertia | Weight | Total oil leakage |
|----------|------------------|-----------------|---------------|------------|---------------|-------------------|--------|-------------------|
|          | Extend           | Retract         |               |            |               |                   |        |                   |
|          | cm <sup>2</sup>  | cm <sup>2</sup> |               |            |               |                   |        |                   |
| TK-A528  | 73.0             | 69.7            | 12            | 8000       | 4.5 (45)      | 0.012             | 6.2    | 3.0               |
| TK-A533  | 73.0             | 69.7            | 12            | 8000       | 4.5 (45)      | 0.012             | 6.0    | 3.0               |
| TK-C643  | 99.1             | 88.0            | 15            | 7000       | 4.5 (45)      | 0.018             | 7.5    | 3.0               |
| TK-A646  | 105.0            | 93.9            | 15            | 7000       | 4.5 (45)      | 0.018             | 7.3    | 3.0               |
| TK-B646  | 105.0            | 93.9            | 15            | 7000       | 4.5 (45)      | 0.018             | 8.6    | 3.0               |
| TK-C646  | 99.1             | 88.0            | 15            | 7000       | 4.5 (45)      | 0.018             | 7.5    | 3.0               |
| TK-B846  | 135.3            | 125.0           | 20            | 6300       | 4.5 (45)      | 0.032             | 12.4   | 3.9               |
| TK-A853  | 135.3            | 125.0           | 20            | 6300       | 4.5 (45)      | 0.032             | 11.8   | 3.9               |
| TK-B853  | 135.3            | 125.0           | 20            | 6300       | 4.5(45)       | 0.032             | 11.7   | 3.9               |
| TK-A1068 | 170.1            | 155.3           | 25            | 5500       | 4.5 (45)      | 0.065             | 19.2   | 4.2               |
| TK-A1075 | 170.1            | 155.3           | 25            | 5500       | 4.5(45)       | 0.065             | 18.8   | 4.2               |
| TK-A1078 | 170.1            | 155.3           | 25            | 5500       | 4.5 (45)      | 0.065             | 17.4   | 4.2               |

\*Coolant Collector and Confirmation Device Please See Accessories pages.

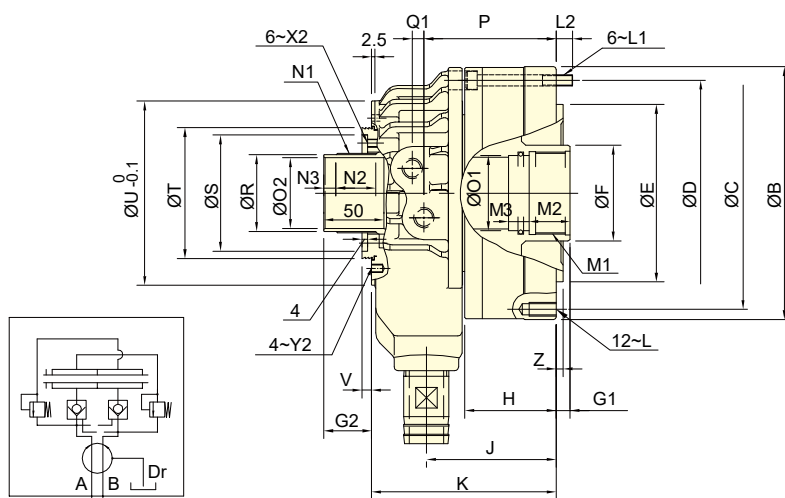
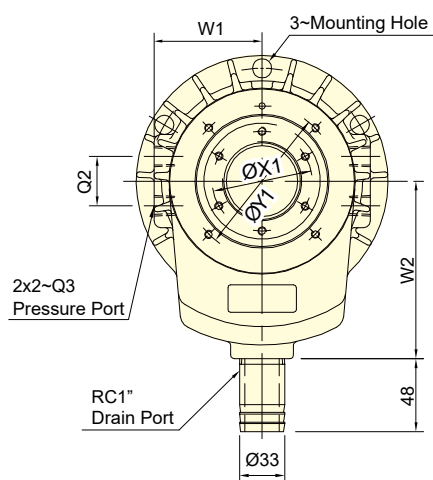
## DIMENSIONS

| Model    | A    | B   | C   | D   | E   | F  | G1   |      | G2   |      | H  | J    | K   | L         | L1     | L2 | M1      | M2 | M3 |
|----------|------|-----|-----|-----|-----|----|------|------|------|------|----|------|-----|-----------|--------|----|---------|----|----|
|          | I.D. |     |     |     | h7  |    | max. | min. | max. | min. |    |      |     |           |        |    |         |    |    |
| TK-A528  | 105  | 141 | 125 | 125 | 110 | 45 | 12   | 0    | 38   | 26   | 49 | 77.5 | 123 | 6~M10x20  | M8x55  | 14 | M38x1.5 | 25 | 13 |
| TK-A533  | 105  | 141 | 125 | 125 | 110 | 45 | 12   | 0    | 38   | 26   | 49 | 77.5 | 123 | 6~M10x20  | M8x55  | 14 | M38x1.5 | 25 | 13 |
| TK-C643  | 128  | 156 | 140 | 140 | 120 | 65 | 15   | 0    | 44   | 29   | 56 | 85   | 125 | 12~M10x20 | M8x60  | 12 | M50x2   | 25 | 13 |
| TK-A646  | 128  | 162 | 147 | 147 | 130 | 65 | 15   | 0    | 44   | 29   | 56 | 85   | 125 | 12~M10x20 | M8x60  | 12 | M55x2   | 25 | 13 |
| TK-B646  | 128  | 162 | 130 | 147 | 100 | 65 | 15   | 0    | 44   | 29   | 66 | 95   | 135 | 12~M10x20 | M8x70  | 12 | M55x2   | 30 | 15 |
| TK-C646  | 125  | 156 | 140 | 140 | 120 | 65 | 15   | 0    | 44   | 29   | 56 | 85   | 125 | 12~M10x20 | M8x60  | 12 | M55x2   | 25 | 13 |
| TK-B846  | 145  | 185 | 170 | 165 | 130 | 70 | 20   | 0    | 48   | 28   | 66 | 95   | 135 | 12~M10x20 | M8x70  | 12 | M55x2   | 30 | 15 |
| TK-A853  | 145  | 185 | 170 | 165 | 140 | 70 | 20   | 0    | 48   | 28   | 66 | 95   | 135 | 12~M10x20 | M8x70  | 12 | M60x2   | 30 | 15 |
| TK-B853  | 145  | 185 | 170 | 165 | 130 | 70 | 20   | 0    | 48   | 28   | 66 | 95   | 135 | 12~M10x20 | M8x70  | 12 | M60x2   | 30 | 15 |
| TK-A1068 | 170  | 212 | 190 | 190 | 160 | 95 | 25   | 0    | 50   | 25   | 74 | 108  | 158 | 12~M10x20 | M10x80 | 16 | M75x2   | 35 | 15 |
| TK-A1075 | 170  | 212 | 190 | 190 | 160 | 95 | 25   | 0    | 50   | 25   | 74 | 108  | 158 | 12~M10x20 | M10x80 | 16 | M85x2   | 35 | 15 |
| TK-A1078 | 170  | 212 | 190 | 190 | 160 | 95 | 25   | 0    | 50   | 25   | 74 | 108  | 158 | 12~M10x20 | M10x80 | 16 | M87x2   | 35 | 15 |

| Model    | N1      | N2 | N3 | O1 | O2 | P   | Q1  | Q2 | Q3    | R  | S   | T   | U   | V    | W1 | W2  | X1 | X2    | Y1  | Y2   | Z |
|----------|---------|----|----|----|----|-----|-----|----|-------|----|-----|-----|-----|------|----|-----|----|-------|-----|------|---|
|          |         |    |    | H8 | H8 |     |     |    |       | g7 | H7  |     |     |      |    |     |    |       |     |      |   |
| TK-A528  | M39x1.5 | 25 | 8  | 35 | 28 | 79  | 8.5 | 30 | RC1/4 | 37 | 62  | 70  | 98  | 6    | 62 | 110 | 49 | M6x6  | 83  | M5x6 | 5 |
| TK-A533  | M39x1.5 | 25 | 8  | 35 | 33 | 79  | 8.5 | 30 | RC1/4 | 37 | 62  | 70  | 98  | 6    | 62 | 110 | 49 | M6x6  | 83  | M5x6 | 5 |
| TK-C643  | M52x1.5 | 29 | 9  | 45 | 43 | 87  | 8.5 | 36 | RC3/8 | 50 | 76  | 85  | 116 | 9.5  | 74 | 120 | 64 | M6x10 | 98  | M5x6 | 5 |
| TK-A646  | M52x1.5 | 29 | 9  | 50 | 46 | 87  | 8.5 | 36 | RC3/8 | 50 | 76  | 85  | 116 | 9.5  | 74 | 120 | 64 | M6x10 | 98  | M5x6 | 5 |
| TK-B646  | M52x1.5 | 29 | 9  | 50 | 46 | 97  | 8.5 | 36 | RC3/8 | 50 | 76  | 85  | 116 | 9.5  | 74 | 120 | 64 | M6x10 | 98  | M5x6 | 5 |
| TK-C646  | M52x1.5 | 29 | 9  | 50 | 46 | 87  | 8.5 | 36 | RC3/8 | 50 | 76  | 85  | 116 | 9.5  | 74 | 120 | 64 | M6x10 | 98  | M5x6 | 5 |
| TK-B846  | M58x1.5 | 30 | 8  | 50 | 46 | 97  | 8.5 | 36 | RC3/8 | 56 | 85  | 96  | 128 | 11.5 | 79 | 130 | 73 | M6x12 | 110 | M6x6 | 5 |
| TK-A853  | M58x1.5 | 30 | 8  | 55 | 53 | 97  | 8.5 | 36 | RC3/8 | 56 | 85  | 96  | 128 | 11.5 | 79 | 130 | 73 | M6x12 | 110 | M6x6 | 5 |
| TK-B853  | M58x1.5 | 30 | 8  | 55 | 53 | 97  | 8.5 | 36 | RC3/8 | 56 | 85  | 96  | 128 | 11.5 | 79 | 130 | 73 | M6x12 | 110 | M6x6 | 5 |
| TK-A1068 | M84x2   | 34 | 9  | 70 | 68 | 110 | 12  | 40 | RC1/2 | 81 | 108 | 121 | 164 | 10   | 98 | 160 | 98 | M6x12 | 155 | M6x8 | 5 |
| TK-A1075 | M84x2   | 34 | 9  | 80 | 75 | 110 | 12  | 40 | RC1/2 | 81 | 108 | 121 | 164 | 10   | 98 | 160 | 98 | M6x12 | 155 | M6x8 | 5 |
| TK-A1078 | M84x2   | 34 | 9  | 82 | 78 | 110 | 12  | 40 | RC1/2 | 81 | 108 | 121 | 164 | 10   | 98 | 160 | 98 | M6x12 | 155 | M6x8 | 5 |



- Super short form, light weight large Through-Hole, just as 2/3 of typical model length.
- Built-in safety check valves and pressure relief valves.
- Can screw it from the rear end of the cylinder when mounting.
- Linear sensor can be attached.(optional)



Subject to technical changes

## SPECIFICATIONS

| Model       | Eff. piston area          |                            | Piston stroke | Max. speed | Max. pressure | Moment of inertia | Weight | Total oil leakage |
|-------------|---------------------------|----------------------------|---------------|------------|---------------|-------------------|--------|-------------------|
|             | Extend<br>cm <sup>2</sup> | Retract<br>cm <sup>2</sup> |               |            |               |                   |        |                   |
| TK-A1287    | 234.0                     | 217.5                      | 30            | 3800       | 4.0 (40)      | 0.092             | 24.8   | 4.5               |
| TK-A1291    | 234.0                     | 217.5                      | 30            | 3800       | 4.0 (40)      | 0.092             | 24.8   | 4.5               |
| TK-A1511    | 336.4                     | 315.2                      | 30            | 3000       | 3.5(35)       | 0.38              | 57.9   | 7.0               |
| TK-A1512    | 336.4                     | 315.2                      | 30            | 3000       | 3.5(35)       | 0.38              | 53.8   | 7.0               |
| TK-A1512-35 | 336.4                     | 315.2                      | 35            | 3000       | 3.5(35)       | 0.38              | 53.8   | 7.0               |
| TK-2114     | 373.2                     | 336.1                      | 35            | 2500       | 3.0 (30)      | 0.54              | 58.2   | 8.0               |

## DIMENSIONS

| Model       | A    | B   | C   | D   | E   | F   | G1   |      | G2   |      | H   | J     | K     | L      | L1      | L2   | M1     | M2 | M3 | N1     |
|-------------|------|-----|-----|-----|-----|-----|------|------|------|------|-----|-------|-------|--------|---------|------|--------|----|----|--------|
|             | I.D. |     |     |     | h7  |     | max. | min. | max. | min. |     |       |       |        |         |      |        |    |    |        |
| TK-A1287    | 200  | 245 | 215 | 225 | 180 | 110 | 30   | 0    | 59   | 29   | 86  | 126   | 184   | M12x24 | M10x90  | 14.5 | M95x2  | 35 | 15 | M99x2  |
| TK-A1291    | 200  | 245 | 215 | 225 | 180 | 110 | 30   | 0    | 59   | 29   | 86  | 126   | 184   | M12x24 | M10x90  | 14.5 | M100x2 | 35 | 15 | M99x2  |
| TK-A1511    | 250  | 300 | 275 | 275 | 230 | 140 | 30   | 0    | 58   | 28   | 102 | 156   | 226   | M16x36 | M12x110 | 21   | M120x2 | 45 | 15 | M129x2 |
| TK-A1512    | 250  | 300 | 275 | 275 | 230 | 140 | 30   | 0    | 58   | 28   | 102 | 156   | 226   | M16x36 | M12x110 | 21   | M130x2 | 45 | 15 | M129x2 |
| TK-A1512-35 | 250  | 300 | 275 | 275 | 230 | 140 | 35   | 0    | 63   | 28   | 102 | 161   | 231   | M16x36 | M12x115 | 21   | M130x2 | 45 | 15 | M129x2 |
| TK-2114     | 265  | 320 | 295 | 295 | 240 | 165 | 35   | 0    | 60   | 25   | 115 | 173.5 | 247.5 | M16x32 | M12x120 | 17.5 | M155x2 | 45 | 20 | M149x2 |

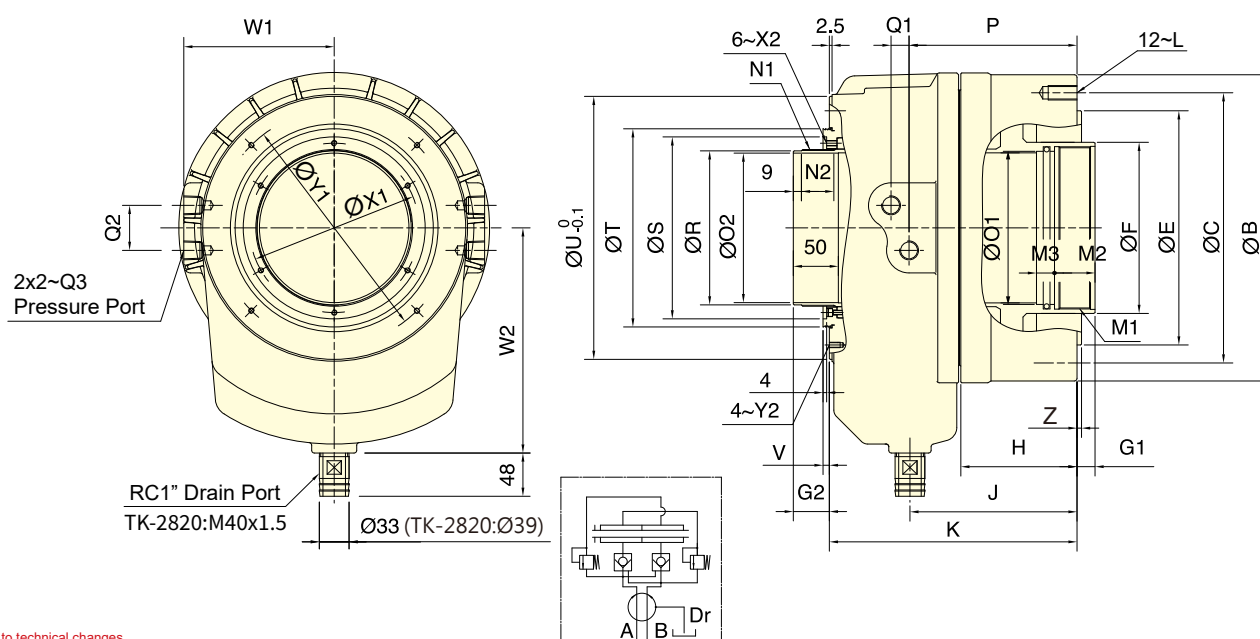
  

| Model       | N2 | N3 | O1  | O2  | P      | Q1 | Q2 | Q3    | R   | S   | T   | U   | V | W1  | W2  | X1  | X2    | Y1  | Y2    | Z |
|-------------|----|----|-----|-----|--------|----|----|-------|-----|-----|-----|-----|---|-----|-----|-----|-------|-----|-------|---|
|             |    |    | H8  | H8  |        |    |    |       | g7  | H7  |     |     |   |     |     |     |       |     |       |   |
| TK-A1287    | 38 | 9  | 90  | 87  | 127.5  | 15 | 45 | RC1/2 | 96  | 120 | 138 | 180 | 7 | 110 | 185 | 108 | M6x10 | 165 | M6x10 | 5 |
| TK-A1291    | 38 | 9  | 95  | 91  | 127.5  | 15 | 45 | RC1/2 | 96  | 120 | 138 | 180 | 7 | 110 | 185 | 108 | M6x10 | 165 | M6x10 | 5 |
| TK-A1511    | 38 | 9  | 115 | 110 | 153.75 | 17 | 50 | RC1/2 | 126 | 150 | 170 | 227 | 7 | 134 | 210 | 138 | M6x10 | 210 | M6x9  | 6 |
| TK-A1512    | 38 | 9  | 125 | 120 | 153.75 | 17 | 50 | RC1/2 | 126 | 150 | 170 | 227 | 7 | 134 | 210 | 138 | M6x10 | 210 | M6x9  | 6 |
| TK-A1512-35 | 38 | 9  | 125 | 120 | 158.75 | 17 | 50 | RC1/2 | 126 | 150 | 170 | 227 | 7 | 134 | 210 | 138 | M6x10 | 210 | M6x9  | 6 |
| TK-2114     | 38 | 9  | 145 | 140 | 170    | 17 | 50 | RC1/2 | 146 | 170 | 190 | 250 | 7 | 145 | 210 | 160 | M6x10 | 230 | M6x10 | 6 |

\*Coolant Collector and Confirmation Device Please See Accessories pages.



- New design, short form, light weight large through-hole.
- Built-in safety check valves and pressure relief valves.
- Linear sensor can be attached.(optional)



Subject to technical changes

## SPECIFICATIONS

| Model    | Eff. piston area |                 | Piston stroke | Max. speed | Max. pressure | Moment of inertia | Weight | Total oil leakage |
|----------|------------------|-----------------|---------------|------------|---------------|-------------------|--------|-------------------|
|          | Extend           | Retract         |               |            |               |                   |        |                   |
|          | cm <sup>2</sup>  | cm <sup>2</sup> |               |            |               |                   |        |                   |
| TK-2416  | 418.4            | 375.4           | 35            | 2000       | 3.0 (30)      | 1.12              | 78.0   | 9.0               |
| TK-2416L | 418.4            | 375.4           | 51            | 2000       | 3.0 (30)      | 1.31              | 79.2   | 9.0               |
| TK-2820  | 526.2            | 472.6           | 51            | 1600       | 3.0 (30)      | 2.4               | 134.0  | 10.0              |

## DIMENSIONS

| Model    | A    | B   | C   | E   | F   | G1   |      | G2   |      | H   | J     | K   | L      | M1     | M2 | M3 | N1     | N2 |
|----------|------|-----|-----|-----|-----|------|------|------|------|-----|-------|-----|--------|--------|----|----|--------|----|
|          | I.D. |     |     | h7  |     | max. | min. | max. | min. |     |       |     |        |        |    |    |        |    |
| TK-2416  | 290  | 340 | 300 | 260 | 190 | 35   | 0    | 60   | 25   | 129 | 185.5 | 275 | M16x32 | M180x3 | 45 | 20 | M174x2 | 38 |
| TK-2416L | 290  | 340 | 300 | 260 | 190 | 51   | 0    | 76   | 25   | 145 | 201.5 | 291 | M16x32 | M180x3 | 45 | 20 | M174x2 | 52 |
| TK-2820  | 340  | 395 | 360 | 320 | 235 | 51   | 0    | 76   | 25   | 152 | 212.5 | 316 | M20x40 | M220x3 | 45 | 20 | M218x2 | 52 |

| Model    | O1  | O2  | P     | Q1 | Q2 | Q3    | R   | S   | T   | U   | V | W1    | W2  | X1  | X2    | Y1  | Y2    | Z |
|----------|-----|-----|-------|----|----|-------|-----|-----|-----|-----|---|-------|-----|-----|-------|-----|-------|---|
|          | H8  | H8  |       |    |    |       | g7  | H7  |     |     |   |       |     |     |       |     |       |   |
| TK-2416  | 170 | 166 | 186.5 | 20 | 50 | RC1/2 | 171 | 202 | 220 | 292 | 7 | 167   | 250 | 188 | M6x11 | 260 | M6x12 | 5 |
| TK-2416L | 170 | 166 | 202.5 | 20 | 50 | RC1/2 | 171 | 202 | 220 | 292 | 7 | 167   | 250 | 188 | M6x11 | 260 | M6x12 | 6 |
| TK-2820  | 210 | 205 | 216   | 21 | 50 | RC1/2 | 215 | 262 | 285 | 360 | 7 | 202.5 | 300 | 240 | M6x12 | 320 | M6x12 | 6 |

\*Coolant Collector and Confirmation Device Please See Accessories pages.