

## SDA COMPACT CYLINDER



SDA63 x25

### Ordering Code

**SDA**

-

**20**

**X**

**30**

-

**S**

Model

**SDA:** Double Action

**SSA:** Single Action (draw-ount)

**STA:** Single Action (drawing-in)

**SDAD:** Double-shaft

Bore

Stroke

Magnet Code

**S:** With Magnet

**Blank:** Without Magnet

### Specification

| Bore (mm)                   |               | 12                                                         | 16 | 20 | 25 | 32    | 40 | 50          | 63 | 80          | 100 |
|-----------------------------|---------------|------------------------------------------------------------|----|----|----|-------|----|-------------|----|-------------|-----|
| Motion Pattern              |               | Double Action                                              |    |    |    |       |    |             |    |             |     |
|                             |               | Single Action Extrusion type/Single Action Drawing-in Type |    |    |    |       |    |             | -  |             |     |
| Working Medium              |               | Air                                                        |    |    |    |       |    |             |    |             |     |
| Operating Pressure Range    | Double Action | 1.0~9.0 Kgf/cm <sup>2</sup>                                |    |    |    |       |    |             |    |             |     |
|                             | Single Action | 2.0~9.0 Kgf/cm <sup>2</sup>                                |    |    |    |       |    |             | -  |             |     |
| Ensured Pressure Resistance |               | 10.5 Kgf/cm <sup>2</sup>                                   |    |    |    |       |    |             |    |             |     |
| Operating Temperature Range |               | 0~70℃                                                      |    |    |    |       |    |             |    |             |     |
| Operating Speed Range       | Double Action | 30~500 mm/s                                                |    |    |    |       |    | 30~350 mm/s |    | 30~250 mm/s |     |
|                             | Single Action | 100~500 mm/s                                               |    |    |    |       |    | -           |    |             |     |
| Port Size                   |               | M5 × 0.8                                                   |    |    |    | G1/8" |    | G1/4"       |    | G3/8"       |     |

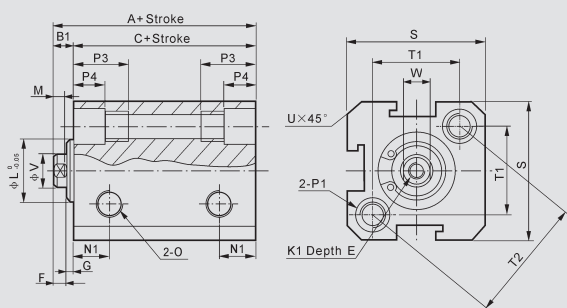
### Stroke

| Bore (mm)     |                | 12                                        | 16 | 20                                        | 25                                        |                                              | 32                                        | 40                                        | 50 | 63                                           | 80                                           | 100 |
|---------------|----------------|-------------------------------------------|----|-------------------------------------------|-------------------------------------------|----------------------------------------------|-------------------------------------------|-------------------------------------------|----|----------------------------------------------|----------------------------------------------|-----|
| Double Action | Without Magnet | 5~60 mm Every 5mm is grouped as one grade |    | 5~85 mm Every 5mm is grouped as one grade | 5~90 mm Every 5mm is grouped as one grade | 100~110 mm Every 5mm is grouped as one grade | 5~90 mm Every 5mm is grouped as one grade |                                           |    | 100~130 mm Every 5mm is grouped as one grade |                                              |     |
|               | With Magnet    | 5~50 mm Every 5mm is grouped as one grade |    | 5~75mm Every 5mm is grouped as one grade  | 5~90 mm Every 5mm is grouped as one grade | 100mm                                        |                                           | 5~90 mm Every 5mm is grouped as one grade |    |                                              | 100~120 mm Every 5mm is grouped as one grade |     |
| Single Action | Without Magnet | 5~30 mm Every 5mm is grouped as one grade |    |                                           |                                           |                                              | 5~30 mm Every 5mm is grouped as one grade |                                           |    | -                                            |                                              |     |
|               | With Magnet    | 5~30 mm Every 5mm is grouped as one grade |    |                                           |                                           |                                              | 5~30 mm Every 5mm is grouped as one grade |                                           |    | -                                            |                                              |     |
| Max. Stroke   |                | 60mm                                      |    | 100mm                                     | 120mm                                     |                                              |                                           | 130mm                                     |    |                                              |                                              |     |

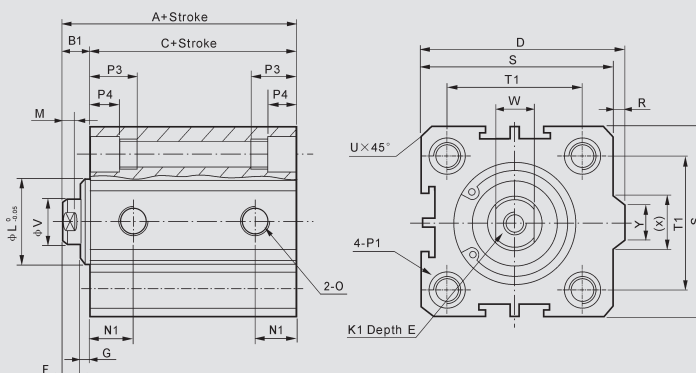
## SDA COMPACT CYLINDER

### Overall Dimension

SDA12-16



SDA20-100



### Dimension Sheet

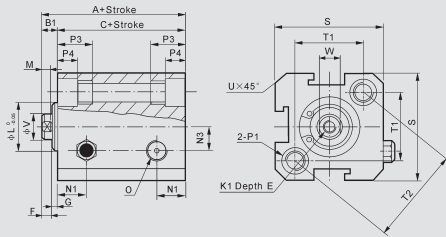
| Type        | Standard Type |     |      | With Magnet |     |      | B    | E  | F | G   | K1      | L    | M   | N1   | N3  | O      |
|-------------|---------------|-----|------|-------------|-----|------|------|----|---|-----|---------|------|-----|------|-----|--------|
| Bore/Symbol | A             | B1  | C    | A           | B1  | C    |      |    |   |     |         |      |     |      |     |        |
| 12          | 22            | 5   | 17   | 32          | 5   | 27   | -    | 6  | 4 | 1   | M3x0.5  | 10.2 | 2.8 | 6.3  | 6   | M5x0.8 |
| 16          | 24            | 5.5 | 18.5 | 34          | 5.5 | 28.5 | -    | 6  | 4 | 1.5 | M3x0.5  | 11   | 2.8 | 7.3  | 6.5 | M5x0.8 |
| 20          | 25            | 5.5 | 19.5 | 35          | 5.5 | 29.5 | 36   | 8  | 4 | 1.5 | M4x0.7  | 16   | 2.8 | 7.5  | -   | M5x0.8 |
| 25          | 27            | 6   | 21   | 37          | 6   | 34   | 42   | 10 | 4 | 2   | M5x0.8  | 17   | 2.8 | 8    | -   | M5x0.8 |
| 32          | 31.5          | 7   | 24.5 | 41.5        | 7   | 34.5 | 50   | 12 | 4 | 3   | M6x1    | 22   | 2.8 | 9    | -   | G1/8   |
| 40          | 33            | 7   | 26   | 43          | 7   | 36   | 58.5 | 12 | 4 | 3   | M8x1.25 | 28   | 2.8 | 10   | -   | G1/8   |
| 50          | 37            | 9   | 28   | 47          | 9   | 38   | 71.5 | 15 | 5 | 4   | M10x1.5 | 38   | 2.8 | 10.5 | -   | G1/4   |
| 63          | 41            | 9   | 32   | 51          | 9   | 42   | 84.5 | 15 | 5 | 4   | M10x1.5 | 40   | 2.8 | 11.8 | -   | G1/4   |
| 80          | 52            | 11  | 41   | 62          | 11  | 51   | 104  | 15 | 6 | 5   | M14x1.5 | 45   | 4   | 14.5 | -   | G3/8   |
| 100         | 63            | 12  | 51   | 73          | 12  | 61   | 124  | 18 | 7 | 5   | M18x1.5 | 55   | 4   | 20.5 | -   | G3/8   |

| Bore/Symbol | P1                        |               |                           | P3 | P4   | R   | S   | T1   | T2 | U    | V  | W  | X    | Y  |
|-------------|---------------------------|---------------|---------------------------|----|------|-----|-----|------|----|------|----|----|------|----|
| 12          | Double Sides: $\Phi 6.5$  | Cog: M5x0.8   | Through Hole: $\Phi 4.2$  | 12 | 4.5  | -   | 25  | 16.2 | 23 | 1.6  | 6  | 5  | -    | -  |
| 16          | Double Sides: $\Phi 6.5$  | Cog: M5x0.8   | Through Hole: $\Phi 4.2$  | 12 | 4.5  | -   | 29  | 19.8 | 28 | 1.6  | 6  | 5  | -    | -  |
| 20          | Double Sides: $\Phi 6.5$  | Cog: M5x0.8   | Through Hole: $\Phi 4.2$  | 14 | 4.5  | 2   | 34  | 24   | -  | 2.1  | 8  | 6  | 11.3 | 10 |
| 25          | Double Sides: $\Phi 8.2$  | Cog: M6x1.0   | Through Hole: $\Phi 4.6$  | 15 | 5.5  | 2   | 40  | 28   | -  | 3.1  | 10 | 8  | 12   | 10 |
| 32          | Double Sides: $\Phi 8.2$  | Cog: M6x1.0   | Through Hole: $\Phi 4.6$  | 16 | 5.5  | 6   | 44  | 34   | -  | 2.15 | 12 | 10 | 18.3 | 15 |
| 40          | Double Sides: $\Phi 10$   | Cog: M8x1.25  | Through Hole: $\Phi 6.5$  | 20 | 7.5  | 6.5 | 52  | 40   | -  | 2.25 | 16 | 14 | 21.3 | 16 |
| 50          | Double Sides: $\Phi 11$   | Cog: M8x1.25  | Through Hole: $\Phi 6.5$  | 25 | 8.5  | 9.5 | 62  | 48   | -  | 4.15 | 20 | 17 | 30   | 20 |
| 63          | Double Sides: $\Phi 11$   | Cog: M8x1.25  | Through Hole: $\Phi 6.5$  | 25 | 8.5  | 9.5 | 75  | 60   | -  | 3.15 | 20 | 17 | 28.7 | 20 |
| 80          | Double Sides: $\Phi 14$   | Cog: M12x1.75 | Through Hole: $\Phi 9.2$  | 25 | 10.5 | 10  | 94  | 74   | -  | 3.65 | 25 | 22 | 36   | 26 |
| 100         | Double Sides: $\Phi 17.5$ | Cog: M12x1.75 | Through Hole: $\Phi 11.3$ | 30 | 13   | 10  | 114 | 90   | -  | 3.65 | 32 | 27 | 35   | 26 |

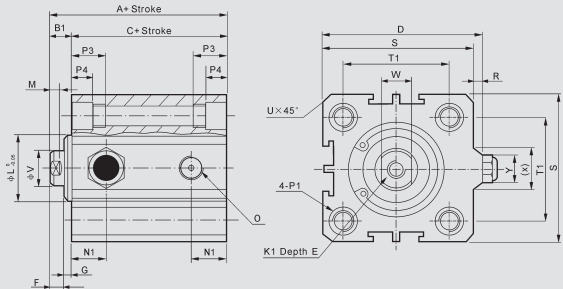
## SDA COMPACT CYLINDER

### Overall Dimension

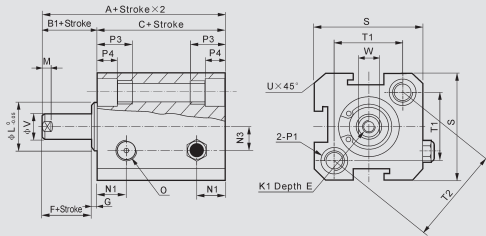
SSA12-16



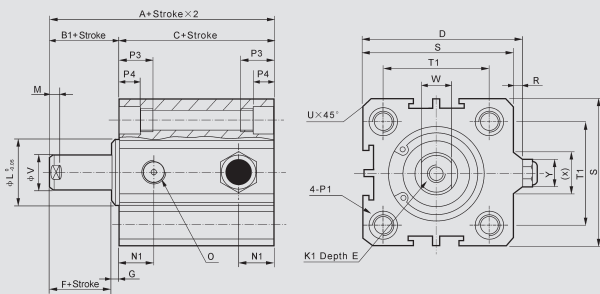
SSA20-40



STA12-16



STA20-40



### Dimension Sheet

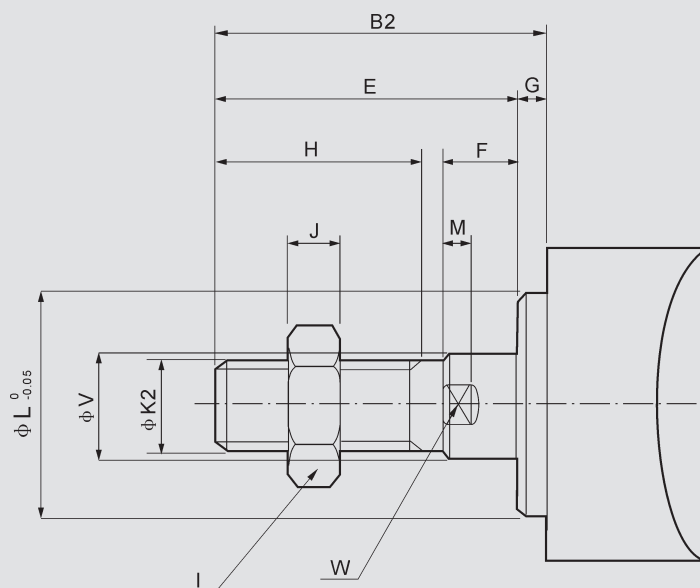
| Type                  | Standard Type |      |     |      |      | With Magnet |      |     |      |      | D    | E  | F | G   | K1      | L    | M   | N1  | N3  |
|-----------------------|---------------|------|-----|------|------|-------------|------|-----|------|------|------|----|---|-----|---------|------|-----|-----|-----|
| Bore/Symbol<br>Stroke | A             |      | B1  | C    |      | A           |      | B1  | C    |      |      |    |   |     |         |      |     |     |     |
|                       | ≤10           | > 10 |     | ≤10  | > 10 | ≤10         | > 10 |     | ≤10  | > 10 |      |    |   |     |         |      |     |     |     |
| 12                    | 32            | 42   | 5   | 27   | 37   | 42          | 52   | 5   | 37   | 47   | -    | 6  | 4 | 1   | M3x0.5  | 10.2 | 2.8 | 6.3 | 6   |
| 16                    | 34            | 44   | 5.5 | 28.5 | 38.5 | 44          | 54   | 5.5 | 38.5 | 48.5 | -    | 6  | 4 | 1.5 | M3x0.5  | 11   | 2.8 | 7.3 | 6.5 |
| 20                    | 35            | 45   | 5.5 | 29.5 | 39.5 | 45          | 55   | 5.5 | 39.5 | 49.5 | 36   | 8  | 4 | 1.5 | M4x0.7  | 16   | 2.8 | 7.5 | -   |
| 25                    | 37            | 47   | 6   | 34   | 41   | 47          | 57   | 6   | 41   | 51   | 42   | 10 | 4 | 2   | M5x0.8  | 17   | 2.8 | 8   | -   |
| 32                    | 41.5          | 51.5 | 7   | 34.5 | 44.5 | 51.5        | 61.5 | 7   | 44.5 | 54.5 | 50   | 12 | 4 | 3   | M6x1    | 22   | 2.8 | 9   | -   |
| 40                    | 43            | 53   | 7   | 36   | 46   | 53          | 63   | 7   | 46   | 56   | 58.5 | 12 | 4 | 3   | M8x1.25 | 28   | 2.8 | 10  | -   |

| Bore/Symbol | O      | P1               |             |                   |  | P3 | P4  | R   | S  | T1   | T2 | U    | V  | W  | X    | Y  |
|-------------|--------|------------------|-------------|-------------------|--|----|-----|-----|----|------|----|------|----|----|------|----|
| 12          | M5x0.8 | Double Side:Φ6.5 | Cog:M5x0.8  | Through Hole:Φ4.2 |  | 12 | 4.5 | -   | 25 | 16.2 | 23 | 1.6  | 6  | 5  | -    | -  |
| 16          | M5x0.8 | Double Side:Φ6.5 | Cog:M5x0.8  | Through Hole:Φ4.2 |  | 12 | 4.5 | -   | 29 | 19.8 | 28 | 1.6  | 6  | 5  | -    | -  |
| 20          | M5x0.8 | Double Side:Φ6.5 | Cog:M5x0.8  | Through Hole:Φ4.2 |  | 14 | 4.5 | 2   | 34 | 24   | -  | 2.1  | 8  | 6  | 11.3 | 10 |
| 25          | M5x0.8 | Double Side:Φ8.2 | Cog:M6x1.0  | Through Hole:Φ4.6 |  | 15 | 5.5 | 2   | 40 | 28   | -  | 3.1  | 10 | 8  | 12   | 10 |
| 32          | G1/8   | Double Side:Φ8.2 | Cog:M6x1.0  | Through Hole:Φ4.6 |  | 16 | 5.5 | 6   | 44 | 34   | -  | 2.15 | 12 | 10 | 18.3 | 15 |
| 40          | G1/8   | Double Side:Φ10  | Cog:M8x1.25 | Through Hole:Φ6.5 |  | 20 | 7.5 | 6.5 | 52 | 40   | -  | 2.25 | 16 | 14 | 21.3 | 16 |

## SDA COMPACT CYLINDER

### Overall Dimension

SDA, SSA, STA



### Dimension Sheet

| Bore/Symbol | B2   | E  | F | G   | H  | I  | J  | K2       | L    | M   | V  | W  |
|-------------|------|----|---|-----|----|----|----|----------|------|-----|----|----|
| 12          | 17   | 16 | 4 | 1   | 10 | 8  | 4  | M5x0.8   | 10.2 | 2.8 | 6  | 5  |
| 16          | 17.5 | 16 | 4 | 1.5 | 10 | 8  | 4  | M5x0.8   | 11   | 2.8 | 6  | 5  |
| 20          | 20.5 | 19 | 4 | 1.5 | 13 | 10 | 5  | M6x1.0   | 16   | 2.8 | 8  | 6  |
| 25          | 23   | 21 | 4 | 2   | 15 | 12 | 6  | M10x1.25 | 17   | 2.8 | 10 | 8  |
| 32          | 25   | 22 | 4 | 3   | 15 | 17 | 6  | M14x1.5  | 22   | 2.8 | 12 | 10 |
| 40          | 35   | 32 | 4 | 3   | 25 | 19 | 8  | M18x1.5  | 28   | 2.8 | 16 | 14 |
| 50          | 37   | 33 | 5 | 4   | 25 | 27 | 11 | M18x1.5  | 38   | 2.8 | 20 | 17 |
| 63          | 37   | 33 | 5 | 4   | 25 | 27 | 11 | M22x1.5  | 40   | 2.8 | 20 | 17 |
| 80          | 44   | 39 | 6 | 5   | 30 | 32 | 13 | M22x1.5  | 45   | 4   | 25 | 22 |
| 100         | 50   | 45 | 7 | 5   | 35 | 36 | 13 | M26x1.5  | 55   | 4   | 32 | 27 |