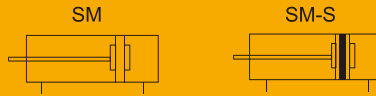


# SM Series Stainless Steel Mini Cylinder



## SM

### Mini Type Cylinder



### Specifications



|                           |   |    |                      |        |
|---------------------------|---|----|----------------------|--------|
| Bore size(mm)             | 20  | 25 | 32                   | 40     |
| Acting type               | Double Acting/Single Acting                     |    |                      |        |
| Working medium            | Clean Air(40 μ m filtration)                    |    |                      |        |
| Working pressure (MPa)    | 0.1~1.0(Double Acting) / 0.2~1.0(Single Acting) |    |                      |        |
| Guaranteed pressure (MPa) | 1.5   |    |                      |        |
| Working temperature (°C)  | -20~80(No freezing)                             |    |                      |        |
| Speed range (mm/s)        | Double Acting: 30~800                           |    | Single Acting:50~800 |        |
| Cushion type              | Rubber cushion / Air cushion                    |    |                      |        |
| Barrel material           | Aluminum alloy                                  |    |                      |        |
| Mounting type             | LB FA SDB                                       |    |                      |        |
| Port size                 | G1/8 ①  |    |                      | G1/4 ① |

① PT、NPT port size is optional.

### How to Order?

| Series | Cushion Type                            | Type Code            | Bore X Stroke         | Adjustable Stroke                       | Magnet Code                        | Tail Type   | Mounting Type                                    | Thread Type                 |
|--------|---|----------------------|-----------------------|---|------------------------------------|---|--|-----------------------------|
| SM     | C: Air cushion<br>Blank: Rubber cushion | 20<br>25<br>32<br>40 | 25<br>50<br>75<br>... | 10<br>20<br>30<br>40<br>50<br>75<br>100 | Blank: No magnet<br>S: With magnet | Blank: Swiveling tail<br>U: Flat tail<br>CM: Round tail | Blank: No bracket<br>LB<br>FA<br>SDB<br>IJ<br>YJ | Blank: G<br>P: PT<br>T: NPT |

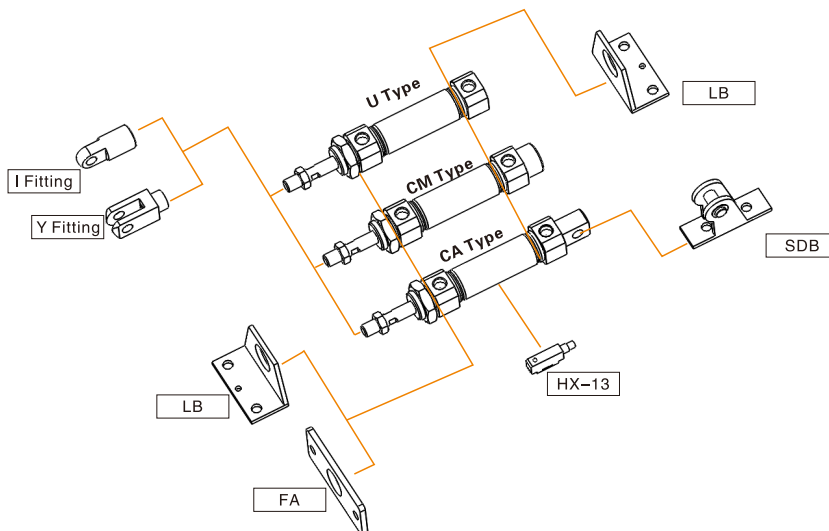
Blank: Basic type  
D: Double -shaft type  
J: Double -shaft, adjustable stroke type  
SA: Single acting spring extend  
SB: Single acting spring return

#### Order Example:

SM series double shaft adjustable stroke cylinder, air cushion, bore 32mm, stroke 25mm, adjustable stroke 20mm, with magnet, no bracket, round tail, PT thread. The ERP code is: SMCJ32x25-20-S-CM-P

Note: There are many mounting types, you can chose LB/FA/SDB/IJ/YJ  
LB and Rear FA are not available for Swiveling tail.

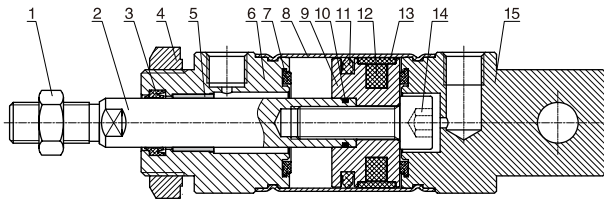
### Optional Accessories



## Stroke

| Bore (mm)     |       | Standard Stroke (mm)  | Max. Stroke (mm) |
|---------------|-------|---|------------------|
| Double Acting | 20    | 10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 400 500     | 600              |
|               | 25~40 | 10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 400 500 600 | 800              |
| Single Acting | 20    | 10 15 20 25 30 40 50 60 75 80 100 125 150                                 | 150              |
|               | 25~40 | 10 15 20 25 30 40 50 60 75 80 100 125 150                                 | 150              |

## Internal Structure

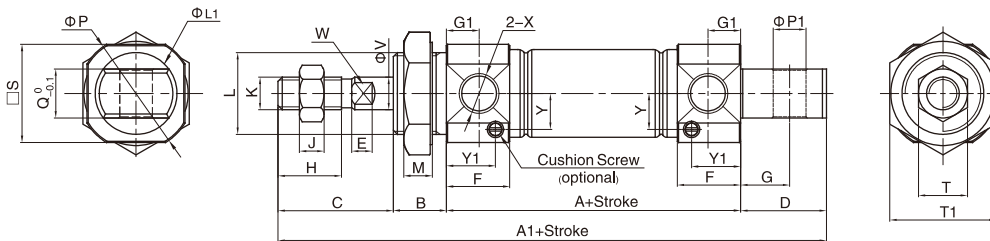


| No. | Part Name                | Material                      |
|-----|--------------------------|-------------------------------|
| 1   | Nut                      | Carbon Steel                  |
| 2   | Piston rod               | S45C hard chrome carbon steel |
| 3   | Piston rod seal          | NBR                           |
| 4   | Nut                      | Carbon Steel                  |
| 5   | Self lubricating Bearing | Bronze Powder                 |
| 6   | Head cover               | Aluminum Alloy                |
| 7   | Anti-bump cushion        | TPU                           |
| 8   | Barrel                   | Stainless steel               |
| 9   | Piston                   | Aluminum Alloy                |
| 10  | O-ring                   | NBR                           |
| 11  | Piston seal              | NBR                           |
| 12  | Magnet                   | Plastic                       |
| 13  | Wear ring                | PTFE                          |
| 14  | Hexagon screw            | Carbon steel                  |
| 15  | Rear cover               | Aluminum Alloy                |

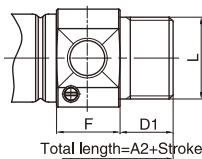
## Main Dimension

SM  $\Phi 20$ - $\Phi 40$

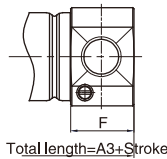
Swiveling tail ( CA Type)



CM Type



U Type



| Bore/Sign | A  | A1  | A2  | A3  | B  | C  | D  | D1 | E   | F    | G  | G1 | H    | J | K        | L       | L1 | M | P    | P1 | Q  | S    | T  | T1 | X    | V  | W  | Y   | Y1   |
|-----------|----|-----|-----|-----|----|----|----|----|-----|------|----|----|------|---|----------|---------|----|---|------|----|----|------|----|----|------|----|----|-----|------|
| 20        | 62 | 124 | 116 | 103 | 13 | 28 | 21 | 13 | 5   | 15.5 | 12 | 8  | 15.5 | 6 | M8X1.25  | M20X1.5 | 20 | 7 | 29   | 8  | 12 | 25   | 12 | 26 | 1/8" | 8  | 6  | 8.8 | 12   |
| 25        | 62 | 128 | 120 | 107 | 13 | 32 | 21 | 13 | 5.5 | 15   | 12 | 8  | 19.5 | 6 | M10X1.25 | M26X1.5 | 22 | 8 | 33.5 | 8  | 12 | 30   | 17 | 32 | 1/8" | 10 | 8  | 10  | 11.5 |
| 32        | 64 | 136 | 122 | 109 | 13 | 32 | 27 | 13 | 5.5 | 15   | 15 | 8  | 19.5 | 6 | M10X1.25 | M26X1.5 | 26 | 8 | 37.5 | 10 | 20 | 34.5 | 17 | 32 | 1/8" | 12 | 10 | 12  | 11   |
| 40        | 88 | 165 | 154 | 138 | 16 | 34 | 27 | 16 | 7   | 22   | 15 | 11 | 21   | 8 | M14X1.5  | M32X2.0 | 32 | 9 | 46.5 | 10 | 20 | 42.5 | 19 | 41 | 1/4" | 16 | 14 | 16  | 18   |

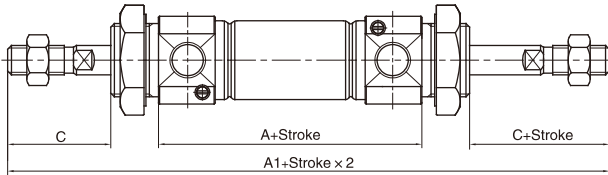
Note: With magnet and without magnet, the dimensions are same.

# SM Series Stainless Steel Mini Cylinder



## ◎ Main Dimension

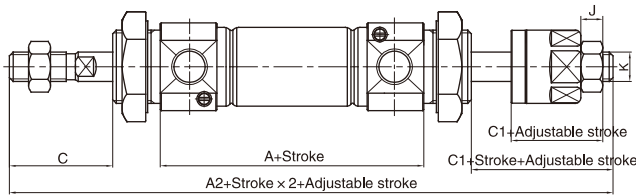
SMD  $\Phi 20-\Phi 40$



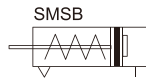
| Bore\Sign | A  | A1  | A2  | C  | C1 | J | K        |
|-----------|----|-----|-----|----|----|---|----------|
| 20        | 62 | 144 | 141 | 28 | 25 | 6 | M8X1.25  |
| 25        | 62 | 152 | 147 | 32 | 27 | 6 | M10X1.25 |
| 32        | 64 | 154 | 149 | 32 | 27 | 6 | M10X1.25 |
| 40        | 88 | 188 | 182 | 34 | 28 | 7 | M12X1.25 |

Note: Unlabeled the same size as standard type.

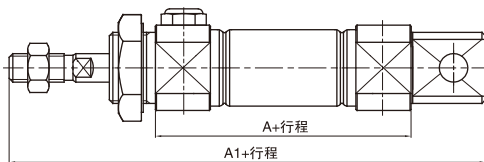
SMJ  $\Phi 20-\Phi 40$



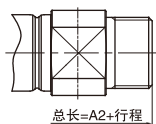
SMSB  $\Phi 20-\Phi 40$



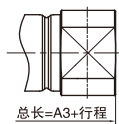
Swiveling tail ( CA Type)



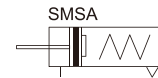
CM Type



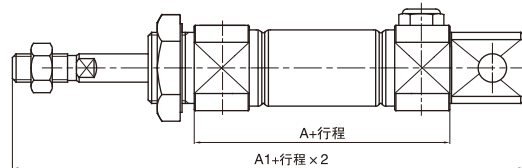
U Type



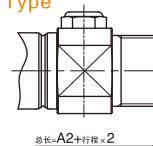
SMSA  $\Phi 20-\Phi 40$



Swiveling tail ( CA Type)



CM Type



U Type

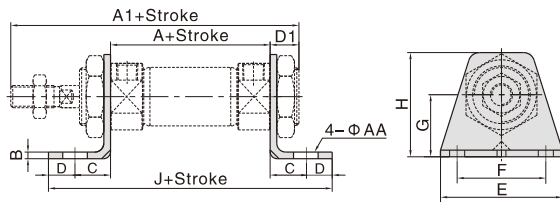


| Bore\Sign | A    |        |         | A1   |        |         | A2   |        |         | A3   |        |         |
|-----------|------|--------|---------|------|--------|---------|------|--------|---------|------|--------|---------|
|           | 0-50 | 51-100 | 101-150 | 0-50 | 51-100 | 101-150 | 0-50 | 51-100 | 101-150 | 0-50 | 51-100 | 101-150 |
| 20        | 87   | 112    | 137     | 149  | 174    | 199     | 141  | 166    | 191     | 128  | 153    | 178     |
| 25        | 87   | 112    | 137     | 153  | 178    | 203     | 145  | 170    | 195     | 132  | 157    | 182     |
| 32        | 89   | 114    | 139     | 161  | 186    | 211     | 147  | 172    | 197     | 134  | 159    | 184     |
| 40        | 113  | 138    | 163     | 190  | 215    | 240     | 179  | 204    | 229     | 163  | 188    | 213     |

Note: Unlabeled the same size as standard type.

## Accessory Dimensions

### LB

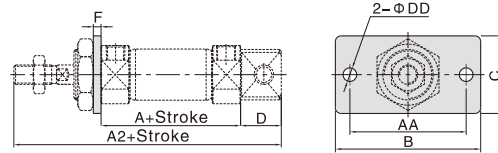


| Bore/Sign | A  | A1  | AA | B | C  | D  | D1 | E  | F  | G  | H  | J   |
|-----------|----|-----|----|---|----|----|----|----|----|----|----|-----|
| FJ-SM20LB | 62 | 116 | 7  | 3 | 20 | 8  | 13 | 55 | 40 | 25 | 40 | 118 |
| FJ-SM25LB | 62 | 120 | 7  | 3 | 20 | 8  | 13 | 55 | 40 | 28 | 47 | 118 |
| FJ-SM40LB | 88 | 154 | 7  | 3 | 23 | 10 | 16 | 75 | 55 | 30 | 54 | 154 |

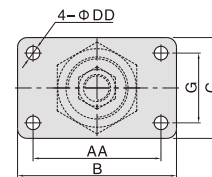
Note: Φ 32 series borrowed Φ 25 series

### FA

Φ 20- Φ 32



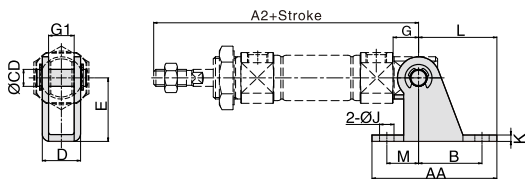
Φ 40



| Bore/Sign | A  | A2  | AA | B  | C  | D  | DD | F | G  |
|-----------|----|-----|----|----|----|----|----|---|----|
| FJ-SM20FA | 62 | 124 | 60 | 75 | 34 | 21 | 7  | 4 | -  |
| FJ-SM25FA | 62 | 128 | 60 | 75 | 40 | 21 | 7  | 4 | -  |
| FJ-SM40FA | 88 | 165 | 66 | 82 | 52 | 27 | 7  | 5 | 36 |

Note: Φ 32 series borrowed Φ 25 series

### SDB



| Bore/Sign  | A2  | AA | B  | D    | E  | G  | G1   | CD | K | J   | L  | M  |
|------------|-----|----|----|------|----|----|------|----|---|-----|----|----|
| FJ-SM20SDB | 115 | 59 | 30 | 18.1 | 30 | 12 | 12.1 | 8  | 3 | 6.8 | 37 | 15 |
| FJ-SM32SDB | 124 | 75 | 40 | 28.1 | 40 | 15 | 20.1 | 10 | 4 | 9   | 50 | 15 |

Note: Φ 25 series borrowed Φ 20 series  
Φ 40 series borrowed Φ 32 series