## MCMB series

#### MINIATURE CYLINDERS





#### Table for standard stroke

| Tube I.D.        | Stroke (mm)                                 | Max.<br>stroke |
|------------------|---|----------------|
| φ 20, 25, 32, 40 | 25, 50, 75, 100, 125,<br>150, 200, 250, 300 | 900            |

#### Features:

#### ■ Non-lubrication:

Designs of oil-filled alloy. special housing and bushing provide the needed self-lubrication of piston rod.

#### ■ High quality-long service life:

Stainless cylinder tubes resist corrosion and abrasion.

#### ■ Cylinder mountings:

Available with a comprehensive selection of mountings for fixed or flexible installation.

#### Standard with magnet:

| Model                  |       | MC     | MB                 |        |
|------------------------|-------|--------|--------------------|--------|
| Tube I.D. (mm)         | 20    | 25     | 32                 | 40     |
| Port size              |       | PT 1/8 |                    | PT 1/4 |
| Medium                 |       | А      | ir                 |        |
| Max operating pressure |       | 9.9 kç | gf/cm²             |        |
| Min operating pressure |       | 0.5 kç | gf/cm²             |        |
| Proof pressure         |       | 15 kg  | Jf/cm <sup>2</sup> |        |
| Available speed range  | _     | 5~+60℃ | (No freezir        | ng)    |
| Ambient temperature    |       | Not re | quired             |        |
| Lubricator             |       | 50~500 | mm/sec             |        |
| Sensor switch          |       | RCA,   | RCM                |        |
|                        | BA20  | BA25   | BA32               | BA40   |
| Sensor switch band     | BGS20 | BGS25  | BGS32              | BGS40  |
|                        | BM20  | BM25   | BM32               | BM40   |

Senser switch band BM\*\* only for RCM.

Ν

•

ø

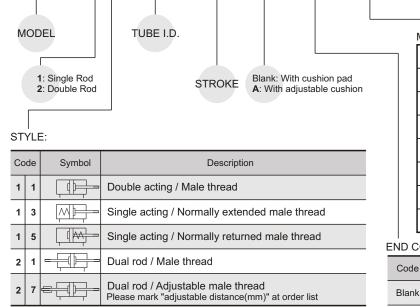
00

Standard type

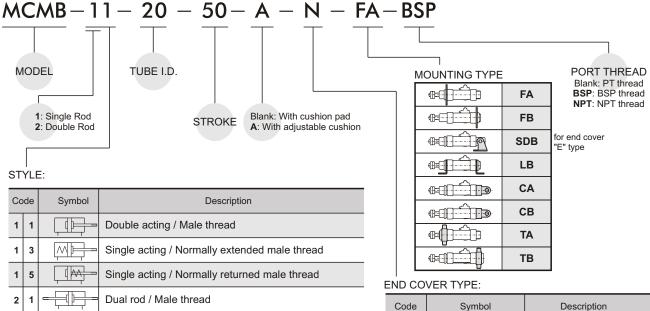
With pivot type

End -plain

#### Order example:



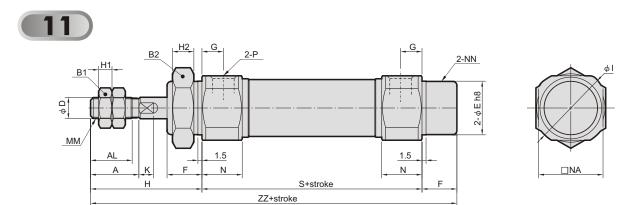
Single acting type: Please consult us.

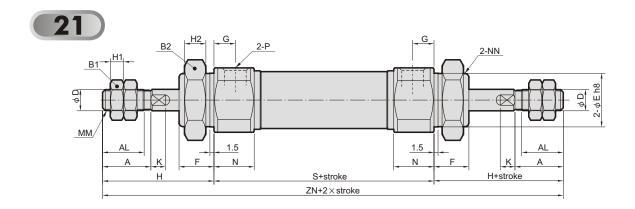


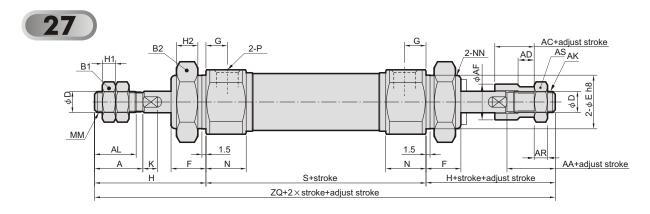
## MCMB Double acting $\phi 20 \sim \phi 40$



#### MINIATURE CYLINDERS







|                   |    |      |    |     |    |          |      |    |    |    |    |    |                   |    |    |    |    |    |      |     |          |      | ( mm ) |
|-------------------|----|------|----|-----|----|----------|------|----|----|----|----|----|-------------------|----|----|----|----|----|------|-----|----------|------|--------|
| Code<br>Tube I.D. | Α  | AA   | AC | AD  | AF | AK       | AL   | AR | AS | B1 | B2 | D  | Е                 | F  | G  | Н  | H1 | H2 | I    | K   | ММ       | N    | NA     |
| 20                | 18 | 17.5 | 15 | 9.5 | 16 | M8×1.25  | 15.5 | 5  | 13 | 13 | 26 | 8  | $20^{-0}_{-0.03}$ | 13 | 8  | 41 | 5  | 8  | 28   | 5   | M8×1.25  | 15   | 24     |
| 25                | 22 | 17.5 | 15 | 9.5 | 16 | M8×1.25  | 19.5 | 6  | 17 | 17 | 32 | 10 | $26_{-0.03}^{0}$  | 13 | 8  | 45 | 6  | 8  | 33.5 | 5.5 | M10×1.25 | 15   | 30     |
| 32                | 22 | 16   | 12 | 7   | 20 | M10×1.25 | 19.5 | 6  | 17 | 17 | 32 | 12 | $26_{-0.03}^{0}$  | 13 | 8  | 45 | 6  | 8  | 37.5 | 5.5 | M10×1.25 | 15   | 34.5   |
| 40                | 24 | 15.5 | 12 | 7   | 30 | M12×1.25 | 21   | 7  | 19 | 22 | 41 | 14 | $32_{-0.04}^{0}$  | 16 | 11 | 50 | 8  | 10 | 46.5 | 7   | M14×1.5  | 21.5 | 42.5   |

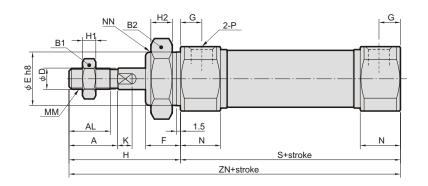
| Code<br>Tube I.D. | NN      | Р      | S  | ZM  | ZN  | ZQ  | ZZ  |
|-------------------|---------|--------|----|-----|-----|-----|-----|
| 20                | M20×1.5 | PT 1/8 | 62 | 144 | 144 | 141 | 116 |
| 25                | M26×1.5 | PT 1/8 | 62 | 152 | 152 | 146 | 120 |
| 32                | M26×1.5 | PT 1/8 | 64 | 154 | 154 | 145 | 122 |
| 40                | M32×2.0 | PT 1/4 | 88 | 188 | 188 | 198 | 154 |

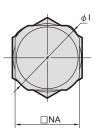
## MCMB Double acting $\phi$ 20~ $\phi$ 40







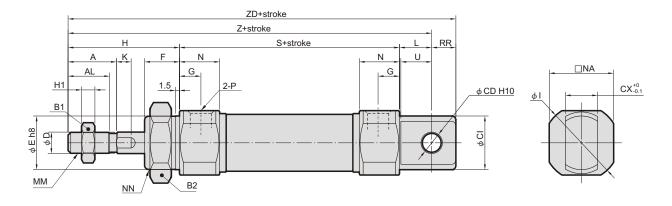




( mm )

| Code<br>Tube I.D. | Α  | AL   | B1 | B2 | D  | Е                | F  | G  | Н  | H1 | H2 | Ι    | K   | MM       | N    | NA   | NN      | Р      | S  | ZN  |
|-------------------|----|------|----|----|----|------------------|----|----|----|----|----|------|-----|----------|------|------|---------|--------|----|-----|
| 20                | 18 | 15.5 | 13 | 26 | 8  | $20_{-0.03}^{0}$ | 13 | 8  | 41 | 5  | 8  | 28   | 5   | M8×1.25  | 15   | 24   | M20×1.5 | PT 1/8 | 62 | 103 |
| 25                | 22 | 19.5 | 17 | 32 | 10 | $26_{-0.03}^{0}$ | 13 | 8  | 45 | 6  | 8  | 33.5 | 5.5 | M10×1.25 | 15   | 30   | M26×1.5 | PT 1/8 | 62 | 107 |
| 32                | 22 | 19.5 | 17 | 32 | 12 | 26 _0.03         | 13 | 8  | 45 | 6  | 8  | 37.5 | 5.5 | M10×1.25 | 15   | 34.5 | M26×1.5 | PT 1/8 | 64 | 109 |
| 40                | 24 | 21   | 22 | 41 | 14 | 32_0.04          | 16 | 11 | 50 | 8  | 10 | 46.5 | 7   | M14×1.5  | 21.5 | 42.5 | M32×2.0 | PT 1/4 | 88 | 138 |



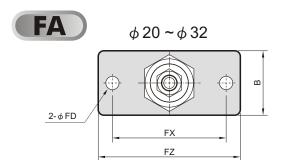


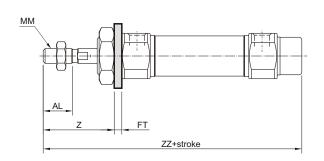
( mm )

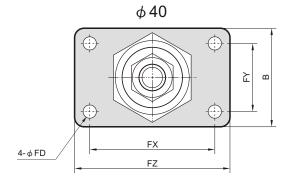
| Code<br>Tube I.D. | Α  | AL   | B1 | B2 | CD | СХ | C1 | D  | Е                | F  | G  | Н  | H1 | 1    | K   | L  | ММ       | N    | NA   | NN      | Р     | RR | S  | U    | Z   | ZD  |
|-------------------|----|------|----|----|----|----|----|----|------------------|----|----|----|----|------|-----|----|----------|------|------|---------|-------|----|----|------|-----|-----|
| 20                | 18 | 15.5 | 13 | 26 | 8  | 12 | 20 | 8  | $20_{-0.03}^{0}$ | 13 | 8  | 41 | 5  | 28   | 5   | 12 | M8×1.25  | 15   | 24   | M20×1.5 | PT1/8 | 9  | 62 | 11.5 | 115 | 124 |
| 25                | 22 | 19.5 | 17 | 32 | 8  | 12 | 22 | 10 | $26_{-0.03}^{0}$ | 13 | 8  | 45 | 6  | 33.5 | 5.5 | 12 | M10×1.25 | 15   | 30   | M26×1.5 | PT1/8 | 9  | 62 | 11.5 | 119 | 128 |
| 32                | 22 | 19.5 | 17 | 32 | 10 | 20 | 27 | 12 | $26_{-0.03}^{0}$ | 13 | 8  | 45 | 6  | 37.5 | 5.5 | 15 | M10×1.25 | 15   | 34.5 | M26×1.5 | PT1/8 | 12 | 64 | 14.5 | 124 | 136 |
| 40                | 24 | 21   | 22 | 41 | 10 | 20 | 33 | 14 | $32_{-0.04}^{0}$ | 16 | 11 | 50 | 8  | 46.5 | 7   | 15 | M14×1.5  | 21.5 | 42.5 | M32×2.0 | PT1/4 | 12 | 88 | 14.5 | 153 | 165 |

# **///**✓ windman

#### MINIATURE CYLINDERS

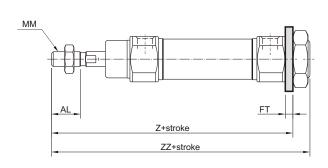


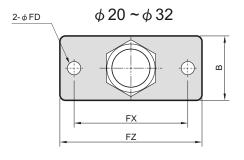




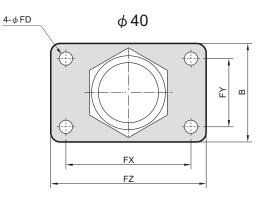
|   |                   |      |    |    |    |    |    |    |          |    | (mm) |
|---|-------------------|------|----|----|----|----|----|----|----------|----|------|
|   | Code<br>Tube I.D. | AL   | В  | FD | FT | FX | FY | FZ | MM       | Z  | ZZ   |
|   | 20                | 15.5 | 34 | 7  | 4  | 60 | -  | 75 | M8×1.25  | 37 | 116  |
| Ī | 25                | 19.5 | 40 | 7  | 4  | 60 | -  | 75 | M10×1.25 | 41 | 120  |
|   | 32                | 19.5 | 40 | 7  | 4  | 60 | -  | 75 | M10×1.25 | 41 | 122  |
|   | 40                | 21   | 52 | 7  | 5  | 66 | 36 | 82 | M14×1.5  | 45 | 154  |

### FB





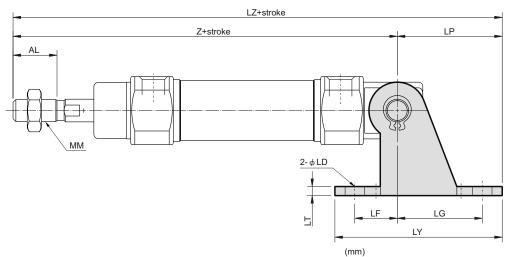
|                   |      |    |    |    |    |    |    |          |     | (mm) |
|-------------------|------|----|----|----|----|----|----|----------|-----|------|
| Code<br>Tube I.D. | AL   | В  | FD | FT | FX | FY | FZ | MM       | Z   | ZZ   |
| 20                | 15.5 | 34 | 7  | 4  | 60 | -  | 75 | M8×1.25  | 107 | 116  |
| 25                | 19.5 | 40 | 7  | 4  | 60 | -  | 75 | M10×1.25 | 111 | 120  |
| 32                | 19.5 | 40 | 7  | 4  | 60 | -  | 75 | M10×1.25 | 113 | 122  |
| 40                | 21   | 52 | 7  | 5  | 66 | 36 | 82 | M14×1.5  | 143 | 154  |

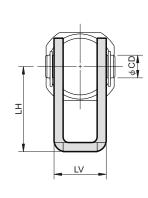






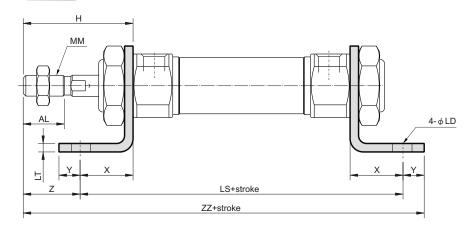
## SDB

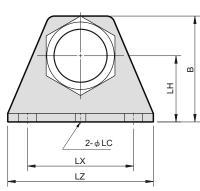




|                   |      |    |     |    |    |    |    |     |      |    |     |          |      | ()  |
|-------------------|------|----|-----|----|----|----|----|-----|------|----|-----|----------|------|-----|
| Code<br>Tube I.D. | AL   | CD | LD  | LF | LG | LH | LP | LT  | LV   | LY | LZ  | MM       | N    | Z   |
| 20                | 15.5 | 8  | 6.8 | 15 | 30 | 30 | 37 | 3.2 | 18.4 | 59 | 152 | M8×1.25  | 15   | 115 |
| 25                | 19.5 | 8  | 6.8 | 15 | 30 | 30 | 37 | 3.2 | 18.4 | 59 | 156 | M10×1.25 | 15   | 119 |
| 32                | 19.5 | 10 | 9   | 15 | 40 | 40 | 50 | 4   | 28   | 75 | 174 | M10×1.25 | 15   | 124 |
| 40                | 21   | 10 | 9   | 15 | 40 | 40 | 50 | 4   | 28   | 75 | 203 | M14×1.5  | 21.5 | 153 |

## LB



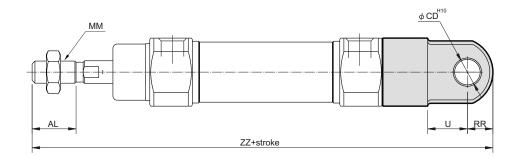


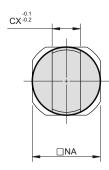
|                   |      |    |    |    |     |    |     |     |    |    |          |    |    |    | (mm) |
|-------------------|------|----|----|----|-----|----|-----|-----|----|----|----------|----|----|----|------|
| Code<br>Tube I.D. | AL   | В  | Н  | LC | LD  | LH | LS  | LT  | LX | LZ | MM       | Х  | Υ  | Z  | ZZ   |
| 20                | 15.5 | 40 | 41 | 4  | 6.8 | 25 | 102 | 3.2 | 40 | 55 | M8×1.25  | 20 | 8  | 21 | 131  |
| 25                | 19.5 | 47 | 45 | 4  | 6.8 | 28 | 102 | 3.2 | 40 | 55 | M10×1.25 | 20 | 8  | 25 | 135  |
| 32                | 19.5 | 47 | 45 | 4  | 6.8 | 28 | 104 | 3.2 | 40 | 55 | M10×1.25 | 20 | 8  | 25 | 137  |
| 40                | 21   | 54 | 50 | 4  | 7   | 30 | 134 | 3.2 | 55 | 75 | M14×1.5  | 23 | 10 | 27 | 171  |





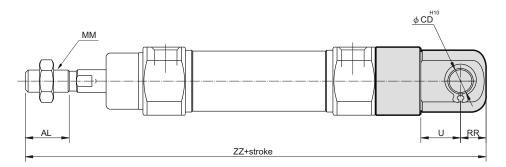


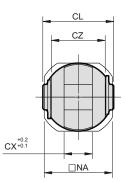




|                   |      |    |    |          |      |    |    | (mm) |
|-------------------|------|----|----|----------|------|----|----|------|
| Code<br>Tube I.D. | AL   | CD | СХ | MM       | NA   | RR | U  | ZZ   |
| 20                | 15.5 | 9  | 10 | M8×1.25  | 24   | 9  | 14 | 142  |
| 25                | 19.5 | 9  | 10 | M10×1.25 | 30   | 9  | 14 | 146  |
| 32                | 19.5 | 9  | 10 | M10×1.25 | 34.5 | 9  | 14 | 148  |
| 40                | 21   | 10 | 15 | M14×1.5  | 42.5 | 11 | 18 | 188  |

## CB



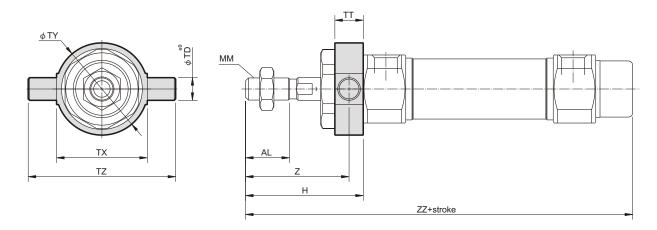


|    |                  |      |    |      |    |    |          |      |    |    | (mm) |
|----|------------------|------|----|------|----|----|----------|------|----|----|------|
| Ti | Code<br>ube I.D. | AL   | CD | CL   | СХ | CZ | MM       | NA   | RR | U  | ZZ   |
|    | 20               | 15.5 | 9  | 25   | 10 | 19 | M8×1.25  | 24   | 9  | 14 | 142  |
|    | 25               | 19.5 | 9  | 25   | 10 | 19 | M10×1.25 | 30   | 9  | 14 | 146  |
|    | 32               | 19.5 | 9  | 25   | 10 | 19 | M10×1.25 | 34.5 | 9  | 14 | 148  |
|    | 40               | 21   | 10 | 41.2 | 15 | 30 | M14×1.5  | 42.5 | 11 | 18 | 188  |



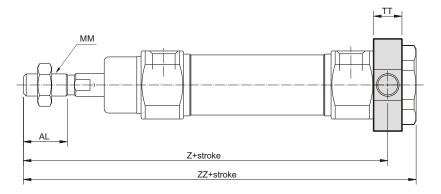


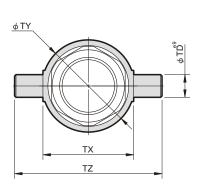




| (I                |      |    |          |    |    |    |      |    |      | (mm) |
|-------------------|------|----|----------|----|----|----|------|----|------|------|
| Code<br>Tube I.D. | AL   | Н  | MM       | TD | TT | TX | TY   | TZ | Z    | ZZ   |
| 20                | 15.5 | 41 | M8×1.25  | 8  | 10 | 32 | 32.5 | 52 | 36   | 118  |
| 25                | 19.5 | 45 | M10×1.25 | 9  | 10 | 40 | 40.5 | 60 | 40   | 122  |
| 32                | 19.5 | 45 | M10×1.25 | 9  | 10 | 40 | 40.5 | 60 | 40   | 124  |
| 40                | 21   | 50 | M14×1.5  | 10 | 11 | 53 | 53.5 | 77 | 44.5 | 154  |

## TB





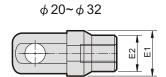
|                   |      |          |    |    |    |      |    |       | (mm) |
|-------------------|------|----------|----|----|----|------|----|-------|------|
| Code<br>Tube I.D. | AL   | ММ       | TD | TT | TX | TY   | TZ | Z     | ZZ   |
| 20                | 15.5 | M8×1.25  | 8  | 10 | 32 | 32.5 | 52 | 108   | 118  |
| 25                | 19.5 | M10×1.25 | 9  | 10 | 40 | 40.5 | 60 | 112   | 122  |
| 32                | 19.5 | M10×1.25 | 9  | 10 | 40 | 40.5 | 60 | 114   | 124  |
| 40                | 21   | M14×1.5  | 10 | 11 | 53 | 53.5 | 77 | 143.5 | 154  |

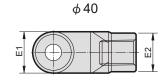
## MCMB - Accessories

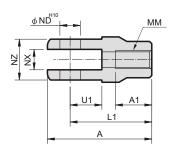


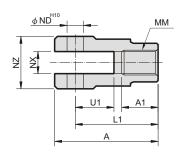


#### Y connector



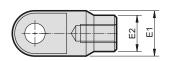


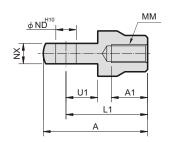




|                   |    |            |     |     |    |          |    |                    |    | (mm) |
|-------------------|----|------------|-----|-----|----|----------|----|--------------------|----|------|
| Code<br>Tube I.D. | Α  | <b>A</b> 1 | E1  | E2  | L1 | MM       | ND | NX                 | NZ | U1   |
| 20                | 46 | 16         | φ20 | φ16 | 36 | M8×1.25  | 9  | 9 +0.2             | 18 | 14   |
| 25, 32            | 46 | 16         | φ20 | Φ16 | 36 | M10×1.25 | 9  | 9 + 0.2            | 18 | 14   |
| 40                | 68 | 25         | 26  | Φ24 | 55 | M14×1.5  | 12 | $16^{+0.3}_{+0.1}$ | 38 | 25   |

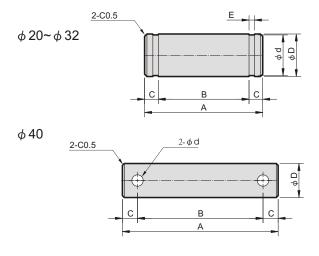
### I connector



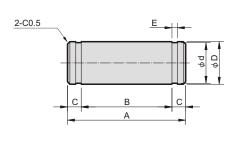


|                   |    |            |     |     |    |          |    |                                    | (mm) |
|-------------------|----|------------|-----|-----|----|----------|----|------------------------------------|------|
| Code<br>Tube I.D. | Α  | <b>A</b> 1 | E1  | E2  | L1 | MM       | ND | NX                                 | U1   |
| 20                | 46 | 16         | φ20 | φ16 | 36 | M8×1.25  | 9  | 9 +0.1                             | 14   |
| 25, 32            | 46 | 16         | Φ20 | Φ16 | 36 | M10×1.25 | 9  | 9 + 0.1                            | 14   |
| 40                | 69 | 22         | φ24 |     | 55 | M14×1.5  | 12 | 16 <sup>+0.1</sup> <sub>+0.2</sub> | 20   |

#### Pin for CB & Y connector



#### Pin for SDB



#### for CB & Y connector

| Code<br>Tube I.D. | Α    | В    | С   | φ <b>D</b> <sup>d9</sup> | φ <b>d</b>        | E                     | Snap ring<br>Split pin |
|-------------------|------|------|-----|--------------------------|-------------------|-----------------------|------------------------|
| 20~32-CB, Y       | 25   | 19.2 | 2.9 | 9 -0.04                  | $8.6_{-0.06}^{0}$ | 1.15 <sup>+0.14</sup> | STW-9                  |
| 40-CB             | 41.2 | 33.2 | 4   | 10 -0.04                 | 3                 |                       | φ 3.2×20L              |
| 40-Y              | 49 7 | 417  | 4   | 12 -0.05                 | 3                 |                       | 432×201                |

#### for SDB

| Code<br>Tube I.D. | Α    | В    | С   | φ <b>D</b> <sup>d9</sup> | φ <b>d</b>        | Е                     | Snap ring |
|-------------------|------|------|-----|--------------------------|-------------------|-----------------------|-----------|
| 20~25             | 24.5 | 19.5 | 2.5 | 8 -0.04                  | $7.6_{-0.06}^{0}$ | 0.9 +0.10 0.          | STW-8     |
| 32-40             | 34   | 29   | 2.5 | 10 -0.04                 | $9.6_{-0.09}^{0}$ | 1.15 <sup>+0.14</sup> | STW-9     |