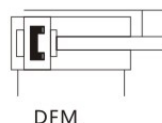




- 结构坚固、动作精确
- 带滑动轴承导轨或循环滚珠轴承导轨
- 可承受较大的扭矩和径向力
- 应用范围广
- 备件服务

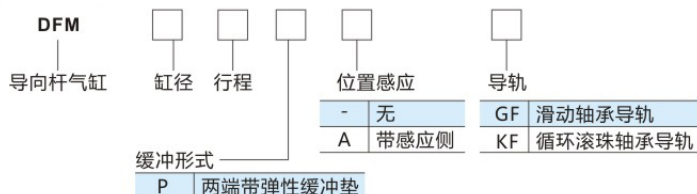
## ■ 符号



## ■ 技术参数 (双作用导向杆气缸DFM-...-P-A)

| 缸径(mm)            | 12                                           | 16          | 20       | 25         | 32         | 40          | 50           | 63            | 80            | 100           |
|-------------------|----------------------------------------------|-------------|----------|------------|------------|-------------|--------------|---------------|---------------|---------------|
| 气接口               | M5                                           | M5          | M5       | G1/8       | G1/8       | G1/8        | G1/4         | G1/4          | G3/8          | G3/8          |
| 抗扭转               | 带连接板的导杆，带滑动轴承导轨或循环滚柱轴承导轨                     |             |          |            |            |             |              |               |               |               |
| 缓冲形式              | 两端带弹性缓冲垫                                     |             |          |            |            |             |              |               |               |               |
| 6bar时的理论值，推进力 [N] | 68                                           | 121         | 188      | 295        | 482        | 754         | 1178         | 1870          | 3016          | 4712          |
| 6bar时的理论值，返回力 [N] | 51                                           | 90          | 141      | 247        | 415        | 686         | 1057         | 1750          | 2827          | 4418          |
| 最大有效负载作用力 [N]     | 19...28                                      | 24...72     | 35...110 | 84...123   | 112...188  | 109...180   | 168...257    | 168...257     | 220...352     | 332...568     |
| 负载扭矩 [Nm]         | 0.38...0.65                                  | 0.55...1.68 | 1.01...3 | 2.85...4.2 | 4.25...7.3 | 4.80...7.90 | 9.30...14.15 | 10.50...15.90 | 17.10...27.20 | 25.70...53.40 |
| 材料                | 壳体、该段：阳极氧化铝 连接板：镀锌钢<br>活塞杆、导杆：高质合金钢 密封件：丁腈橡胶 |             |          |            |            |             |              |               |               |               |
| 工作压力 [bar]        | 2...10                                       |             |          | 1.5...10   |            |             | 1...10       |               | 0.5...10      |               |
| 环境温度              | GF [°C]                                      | -20...+80   |          |            |            |             |              |               |               |               |
|                   | KF [°C]                                      | -5...+60    |          |            |            |             |              |               |               |               |

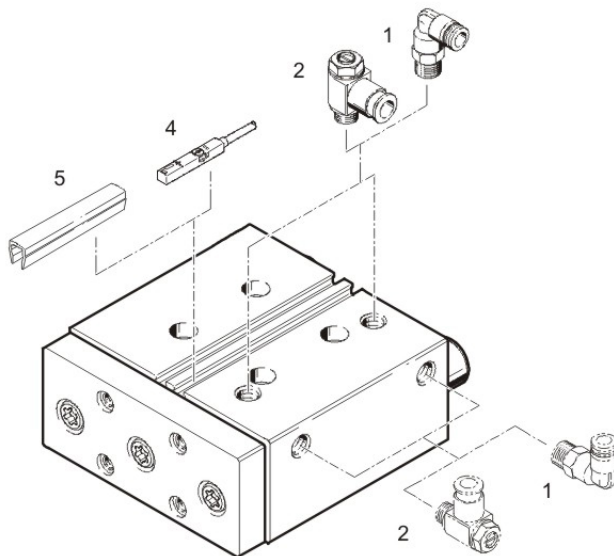
## ■ 型号表示方法



## ■ 行程

| 缸径(mm)          | 标准行程(mm)                          |
|-----------------|-----------------------------------|
| 12,16           | 10,20,25,30,40,50,80,100          |
| 20,25           | 20,25,30,40,50,80,100             |
| 32              | 20,25,30,40,50,80,100,125,160,200 |
| 40,50,63,80,100 | 25,50,80,100,125,160,200          |

## ■ 外围元件一览



DSN/ESN  
圆形气缸

DNC  
标准气缸

ADN/AEN  
紧凑型气缸

ADVC/AEVC  
短行程气缸

DSN  
圆形气缸

DFM  
导向杆气缸

ADNGF  
紧凑型气缸

FEN  
直线导向单元

DPZ  
导向杆气缸

ADVU  
紧凑型气缸

DMM/EMM  
安装气缸

DSBG  
标准气缸

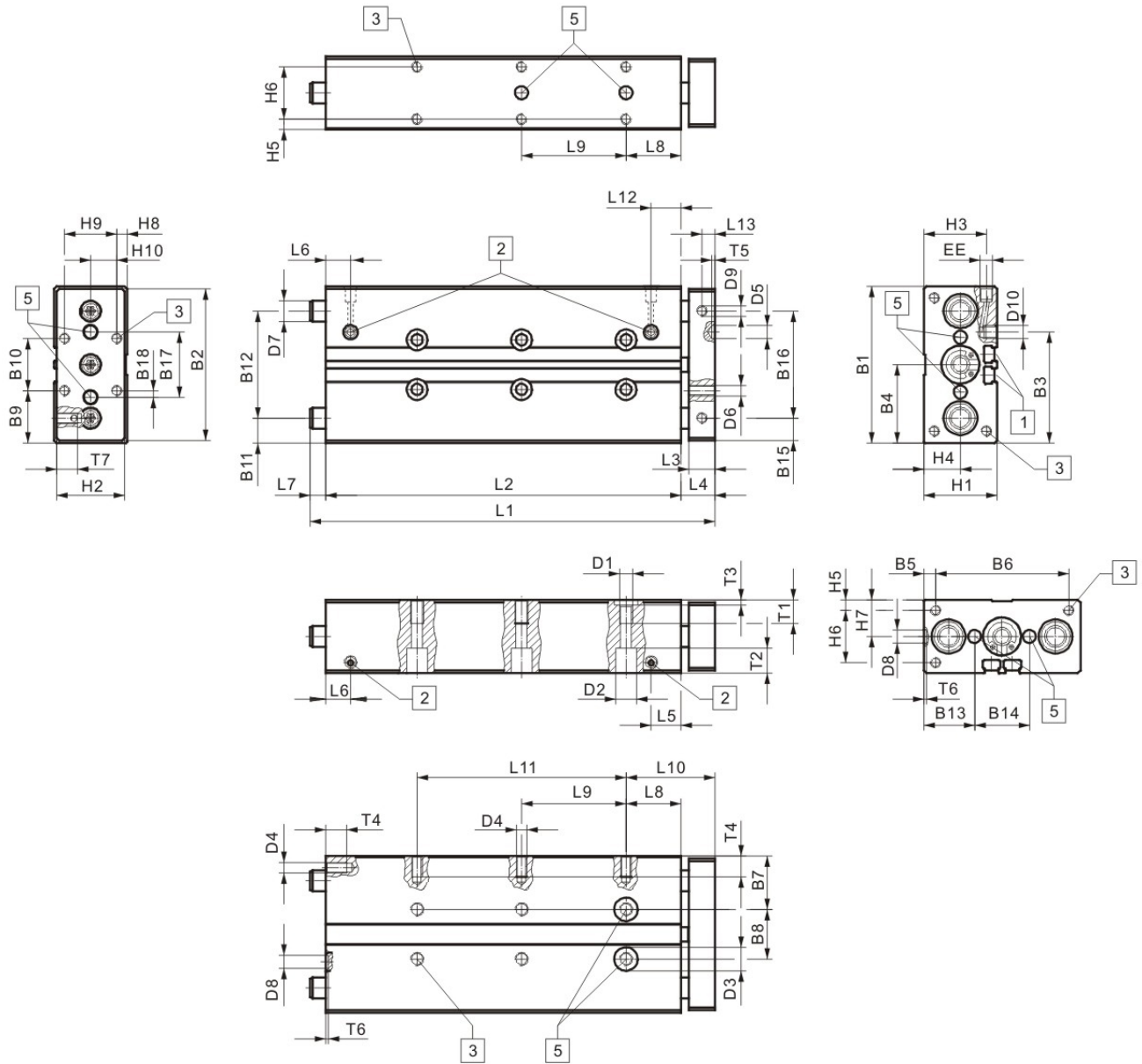
DSBC  
标准气缸



A

■ 外形尺寸图

$\Phi 12 \dots 16\text{mm}$



1 安装槽，用于接近开关  
SME/SMT-8

2 进气口可选侧面或顶部  
3 安装螺纹

5 定位孔间公差  $\pm 0.02\text{ mm}$



## 导向杆气缸

| Φ(mm) | B1 | B2 | B3   | B4   | B5  | B6 | B7   | B8 | B9   | B10 | B11  | B12 | B13  | B14  | B15 | B16 | B17 | B18 | D1 | D2<br>Φ |
|-------|----|----|------|------|-----|----|------|----|------|-----|------|-----|------|------|-----|-----|-----|-----|----|---------|
| 12    | 60 | 58 | 42.4 | 30   | 4.5 | 51 | 20.5 | 19 | 20   | 20  | 9.5  | 41  | 19.5 | 21   | 8.5 | 41  | 25  | 2.5 | M5 | 8       |
| 16    | 67 | 65 | 45.9 | 33.5 | 4.5 | 58 | 22   | 23 | 23.5 | 20  | 10.5 | 46  | 21.3 | 24.4 | -   | -   | 28  | 4   | M5 | 7.5     |

| Φ(mm) | D3<br>Φ<br>H7 | D4 | D5<br>Φ<br>H7 | D6 | D7<br>Φ |      | D8<br>Φ<br>H7 | D9 | D10 | EE | H1 | H2 | H3   | H4 | H5 | H6 | H7 | H8  | H9 | H10 |
|-------|---------------|----|---------------|----|---------|------|---------------|----|-----|----|----|----|------|----|----|----|----|-----|----|-----|
|       |               |    |               |    | GF      | KF   |               |    |     |    |    |    |      |    |    |    |    |     |    |     |
| 12    | 9             | M4 | 5             | M4 | 10h8    | 8h6  | 5             | M4 | M5  | M5 | 28 | 26 | 24   | 14 | 4  | 20 | 14 | 4   | 20 | 10  |
| 16    | 9             | M5 | 5             | M5 | 12h8    | 10h7 | 5             | -  | M5  | M5 | 32 | 30 | 26.5 | 16 | 4  | 24 | 16 | 7.4 | 20 | 10  |

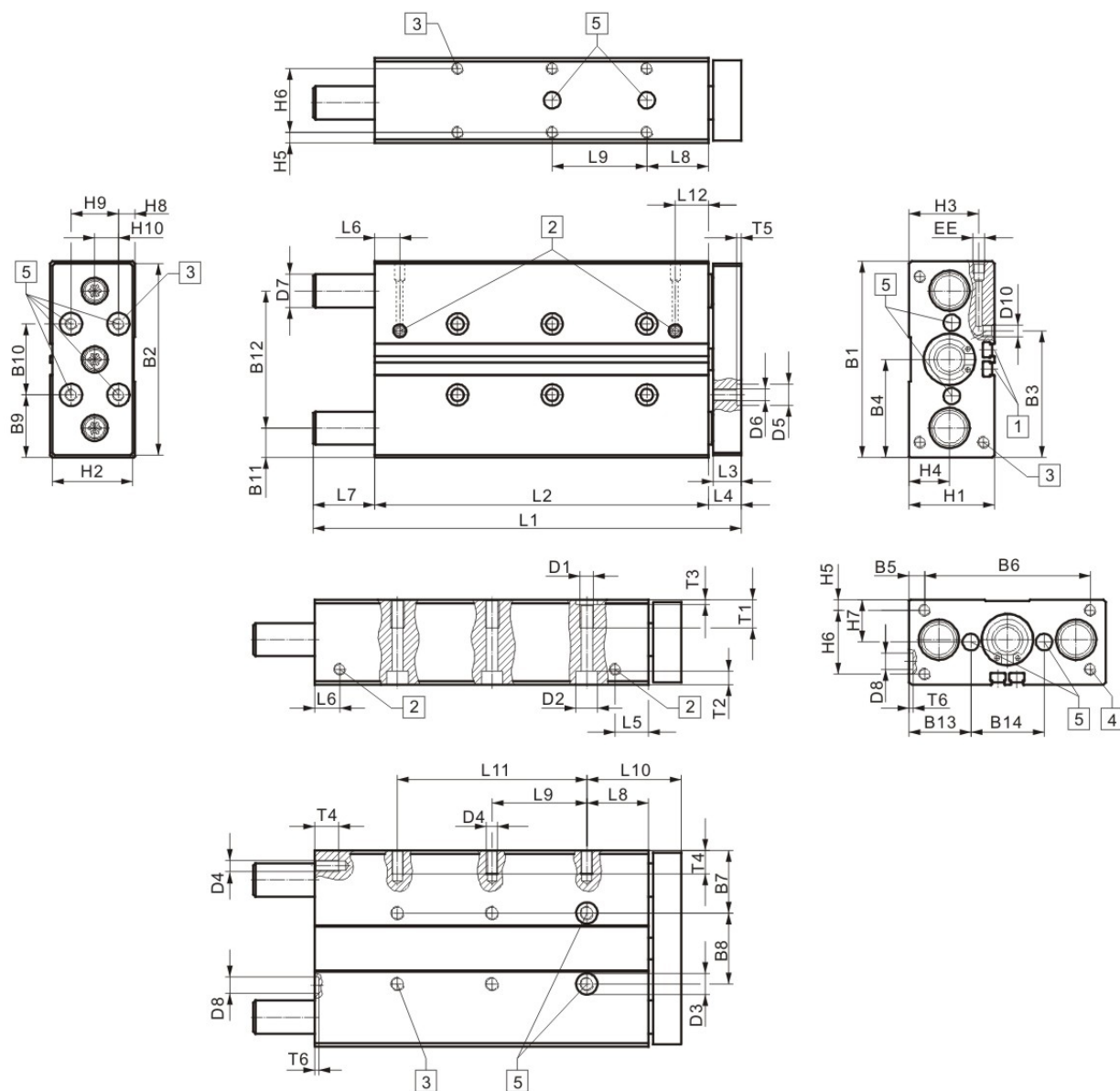
| Φ(mm) | 行程  | L1  | L2  | L3 | L4 | L5   | L6   | L7 | L8 | L9 | L10 |
|-------|-----|-----|-----|----|----|------|------|----|----|----|-----|
| 12    | 10  | 59  | 46  | 10 | 13 | 11.4 | 9.5  | -  | 21 | -  | 34  |
|       | 20  | 69  | 56  |    |    |      |      | -  |    | -  |     |
|       | 25  | 74  | 61  |    |    |      |      | -  |    | 20 |     |
|       | 30  | 79  | 66  |    |    |      |      | -  |    | 20 |     |
|       | 40  | 95  | 76  |    |    |      |      | 6  |    | 20 |     |
|       | 50  | 105 | 86  |    |    |      |      | 6  |    | 40 |     |
|       | 80  | 135 | 116 |    |    |      |      | 6  |    | 40 |     |
|       | 100 | 155 | 136 |    |    |      |      | 6  |    | 40 |     |
| 16    | 10  | 60  | 48  | 10 | 12 | 11.9 | 10.6 | -  | 22 | -  | 34  |
|       | 20  | 70  | 58  |    |    |      |      | -  |    | -  |     |
|       | 25  | 75  | 63  |    |    |      |      | -  |    | 20 |     |
|       | 30  | 80  | 68  |    |    |      |      | -  |    | 20 |     |
|       | 40  | 107 | 78  |    |    |      |      | 17 |    | 20 |     |
|       | 50  | 117 | 88  |    |    |      |      | 17 |    | 40 |     |
|       | 80  | 147 | 118 |    |    |      |      | 17 |    | 40 |     |
|       | 100 | 167 | 138 |    |    |      |      | 17 |    | 40 |     |

| Φ(mm) | 行程  | L11 | L12  | L13 | T1 | T2  | T3  | T4 | T5  | T6 | T7 |
|-------|-----|-----|------|-----|----|-----|-----|----|-----|----|----|
| 12    | 10  | -   | 11.4 | 5   | 9  | 9.4 | 2.1 | 8  | 1.2 | 1  | 8  |
|       | 20  | -   |      |     |    |     |     |    |     |    |    |
|       | 25  | -   |      |     |    |     |     |    |     |    |    |
|       | 30  | -   |      |     |    |     |     |    |     |    |    |
|       | 40  | -   |      |     |    |     |     |    |     |    |    |
|       | 50  | -   |      |     |    |     |     |    |     |    |    |
|       | 80  | -   |      |     |    |     |     |    |     |    |    |
|       | 100 | 80  |      |     |    |     |     |    |     |    |    |
| 16    | 10  | -   | 11.9 | -   | 9  | 4.6 | 2.1 | 10 | 1.2 | 1  | -  |
|       | 20  | -   |      |     |    |     |     |    |     |    |    |
|       | 25  | -   |      |     |    |     |     |    |     |    |    |
|       | 30  | -   |      |     |    |     |     |    |     |    |    |
|       | 40  | -   |      |     |    |     |     |    |     |    |    |
|       | 50  | -   |      |     |    |     |     |    |     |    |    |
|       | 80  | -   |      |     |    |     |     |    |     |    |    |
|       | 100 | 80  |      |     |    |     |     |    |     |    |    |

DSN/ESN  
圆形气缸DNC  
标准气缸ADN/AEN  
紧凑型气缸ADVC/AEVC  
短行程气缸DSN  
圆形气缸DFM  
导向杆气缸ADNGF  
紧凑型气缸FEN  
直线导向单元DPZ  
导向杆气缸ADVU  
紧凑型气缸DMM/EMM  
安装气缸DSBG  
标准气缸DSBC  
标准气缸



Φ20...25mm



1 安装槽，用于接近开关  
SME-/SMT-8

2 进气口可选侧面或顶部

3 安装螺纹  
4 安装螺纹  
(不适用于Φ20)

5 定位孔间公差±0.02mm





## 导向杆气缸

| Φ (mm) | B1 | B2 | B3   | B4   | B5   | B6 | B7   | B8 | B9   | B10 | B11  | B12 | B13 | B14 | D1 | D2<br>Φ | D3<br>Φ<br>H7 | D4 |
|--------|----|----|------|------|------|----|------|----|------|-----|------|-----|-----|-----|----|---------|---------------|----|
| 20     | 83 | 81 | 53.6 | 41.5 | 6.5  | 70 | 26.5 | 30 | 26.5 | 30  | 12.5 | 58  | 26  | 31  | M6 | 9       | 9             | M5 |
| 25     | 95 | 93 | 70   | 47.5 | 15.5 | 64 | 30   | 35 | 27.5 | 40  | 13.5 | 68  | 29  | 37  | M6 | 9       | 9             | M6 |

| Φ (mm) | D5<br>Φ<br>H7 | D6 | D7<br>Φ |      | D8<br>Φ<br>H7 | EE   | H1 | H2 | H3   | H4 | H5  | H6 | H7 | H8 | H9 | H10 |
|--------|---------------|----|---------|------|---------------|------|----|----|------|----|-----|----|----|----|----|-----|
| 20     | 9             | M5 | GF      | KF   | 7             | M5   | 36 | 34 | 29.5 | 17 | 4.5 | 27 | 18 | 7  | 20 | 10  |
| 25     | 9             | M6 | 14h8    | 12h7 | 7             | G1/8 | 44 | 42 | 34.8 | 19 | 4.5 | 35 | 22 | 12 | 20 | 10  |

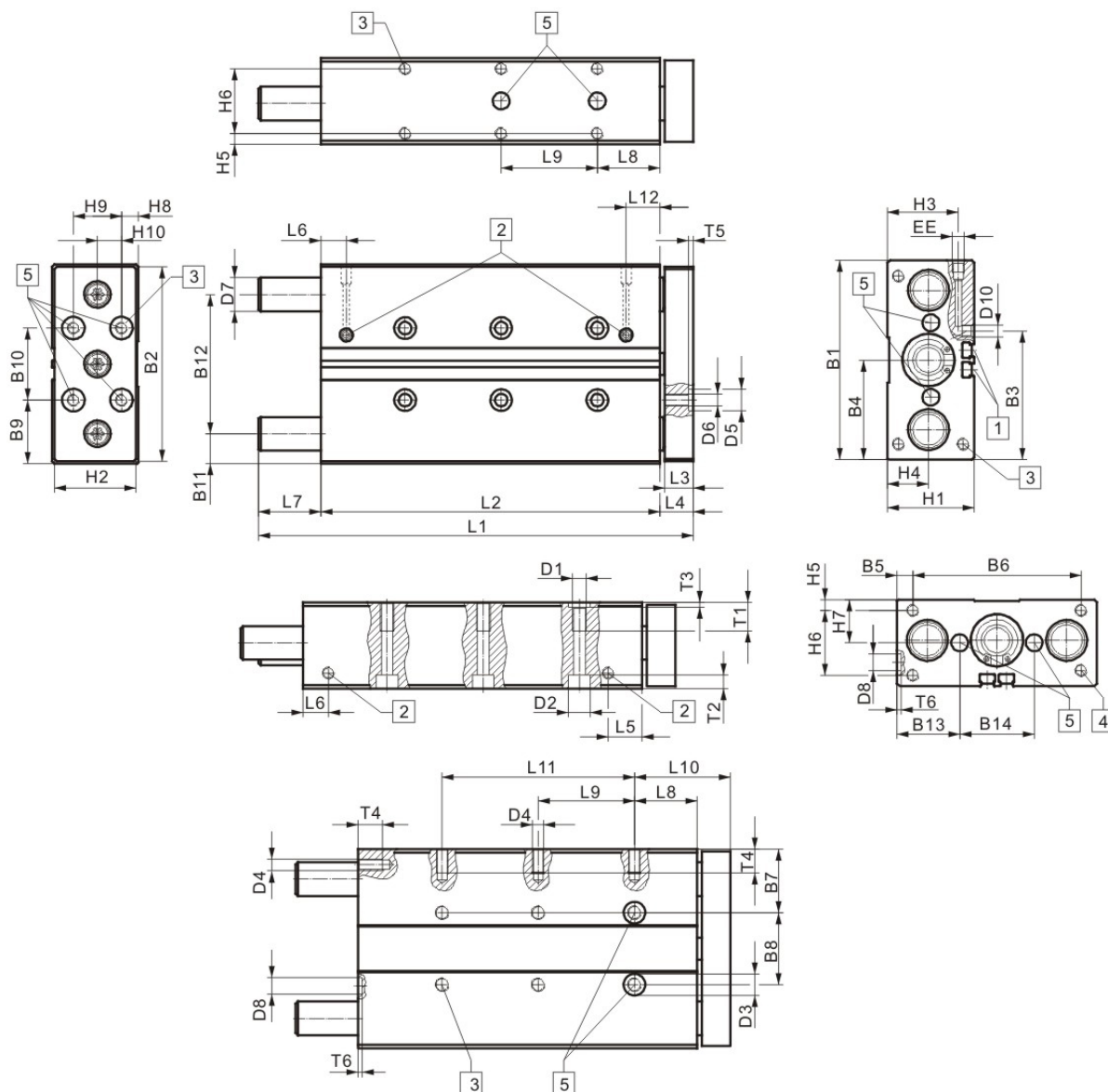
| Φ (mm) | 行程  | L1  | L2    | L3 | L4 | L5   | L6   | L7   | L8 | L9 |
|--------|-----|-----|-------|----|----|------|------|------|----|----|
| 20     | 20  | 75  | 61    | 12 | 14 | 14   | 10.5 | -    | 21 | -  |
|        | 25  | 80  | 66    |    |    |      |      | -    |    | 20 |
|        | 30  | 85  | 71    |    |    |      |      | -    |    | 20 |
|        | 40  | 121 | 81    |    |    |      |      | 26   |    | 20 |
|        | 50  | 131 | 91    |    |    |      |      | 26   |    | 40 |
|        | 80  | 161 | 121   |    |    |      |      | 26   |    | 40 |
|        | 100 | 181 | 141   |    |    |      |      | 26   |    | 40 |
| 25     | 20  | 93  | 65.6  | 12 | 14 | 17.5 | 9.5  | 13.4 | 22 | -  |
|        | 25  | 98  | 70.6  |    |    |      |      | 13.4 |    | 20 |
|        | 30  | 103 | 75.6  |    |    |      |      | 13.4 |    | 20 |
|        | 40  | 123 | 85.6  |    |    |      |      | 23.4 |    | 20 |
|        | 50  | 133 | 95.6  |    |    |      |      | 23.4 |    | 40 |
|        | 80  | 163 | 125.6 |    |    |      |      | 23.4 |    | 40 |
|        | 100 | 183 | 145.6 |    |    |      |      | 23.4 |    | 40 |

| Φ (mm) | 行程  | L10 | L11 | L12 | T1 | T2  | T3  | T4 | T5  | T6  |
|--------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|
| 20     | 20  | 40  | -   | 14  | 12 | 5.7 | 2.1 | 10 | 2.1 | 1.6 |
|        | 25  |     | -   |     |    |     |     |    |     |     |
|        | 30  |     | -   |     |    |     |     |    |     |     |
|        | 40  |     | -   |     |    |     |     |    |     |     |
|        | 50  |     | -   |     |    |     |     |    |     |     |
|        | 80  |     | -   |     |    |     |     |    |     |     |
|        | 100 |     | 80  |     |    |     |     |    |     |     |
| 25     | 20  | 40  | -   | 15  | 14 | 5.7 | 2.1 | 12 | 2.1 | 1.6 |
|        | 25  |     | -   |     |    |     |     |    |     |     |
|        | 30  |     | -   |     |    |     |     |    |     |     |
|        | 40  |     | -   |     |    |     |     |    |     |     |
|        | 50  |     | -   |     |    |     |     |    |     |     |
|        | 80  |     | -   |     |    |     |     |    |     |     |
|        | 100 |     | 80  |     |    |     |     |    |     |     |

DSN/ESN  
圆形气缸DNC  
标准气缸ADN/AEN  
紧凑型气缸ADVC/AEVC  
短行程气缸DSN  
圆形气缸DFM  
导向杆气缸ADNGF  
紧凑型气缸FEN  
直线导向单元DPZ  
导向杆气缸ADVU  
紧凑型气缸DMM/EMM  
安装气缸DSBG  
标准气缸DSBC  
标准气缸



Φ32...63mm



1 安装槽，用于接近开关  
SME-/SMT-8

2 进气口可选侧面或顶部  
3 安装螺纹

4 安装螺纹  
5 定位孔间公差±0.02mm

注意

对于具有40mm及更长行程的导向杆气缸DFM-25...100，当该单元回缩到终端位置时，导杆会凸出到基本缸体外。如果将导向杆气缸安装到其端面上(一面贴着端盖)，那么该端面应具有一个凹槽使导杆通过。



## 导向杆气缸

| Φ (mm) | B1  | B2  | B3    | B4 | B5 | B6  | B7   | B8 | B9 | B10 | B11  | B12 | B13  | B14 | D1  | D2<br>Φ | D3<br>Φ<br>H7 |
|--------|-----|-----|-------|----|----|-----|------|----|----|-----|------|-----|------|-----|-----|---------|---------------|
| 32     | 110 | 108 | 81    | 55 | 20 | 70  | 33.5 | 43 | 35 | 40  | 16   | 78  | 32.5 | 45  | M8  | 11      | 12            |
| 40     | 120 | 118 | 94    | 60 | 15 | 90  | 34.5 | 51 | 35 | 50  | 16   | 88  | 32.5 | 55  | M8  | 11      | 12            |
| 50     | 148 | 146 | 116.5 | 74 | 19 | 110 | 42   | 64 | 44 | 60  | 19   | 110 | 40   | 68  | M8  | 11      | 12            |
| 63     | 162 | 160 | 139   | 81 | 9  | 144 | 41   | 80 | 41 | 80  | 18.5 | 125 | 39.5 | 83  | M10 | 15      | 12            |

| Φ (mm) | D4  | D5<br>Φ<br>H7 | D6 | D7<br>Φ |      | D8<br>Φ<br>H7 | EE   | H1 | H2 | H3   | H4   | H5 | H6 | H7   | H8  | H9 | H10 |
|--------|-----|---------------|----|---------|------|---------------|------|----|----|------|------|----|----|------|-----|----|-----|
|        |     |               |    | GF      | KF   |               |      |    |    |      |      |    |    |      |     |    |     |
| 32     | M6  | 9             | M6 | 20h8    | 16h7 | 9             | G1/8 | 49 | 47 | 38.5 | 22   | 6  | 37 | 24.5 | 8.5 | 30 | 15  |
| 40     | M8  | 9             | M6 | 20h8    | 16h7 | 9             | G1/8 | 54 | 52 | 40.5 | 24   | 6  | 42 | 27   | 10  | 30 | 15  |
| 50     | M8  | 12            | M8 | 25h8    | 20h7 | 12            | G1/4 | 64 | 62 | 50.5 | 29.5 | 7  | 50 | 32   | 12  | 40 | 20  |
| 63     | M10 | 12            | M8 | 25h8    | 20h7 | 12            | G1/4 | 78 | 76 | 55   | 32   | 9  | 60 | 39   | 19  | 40 | 20  |

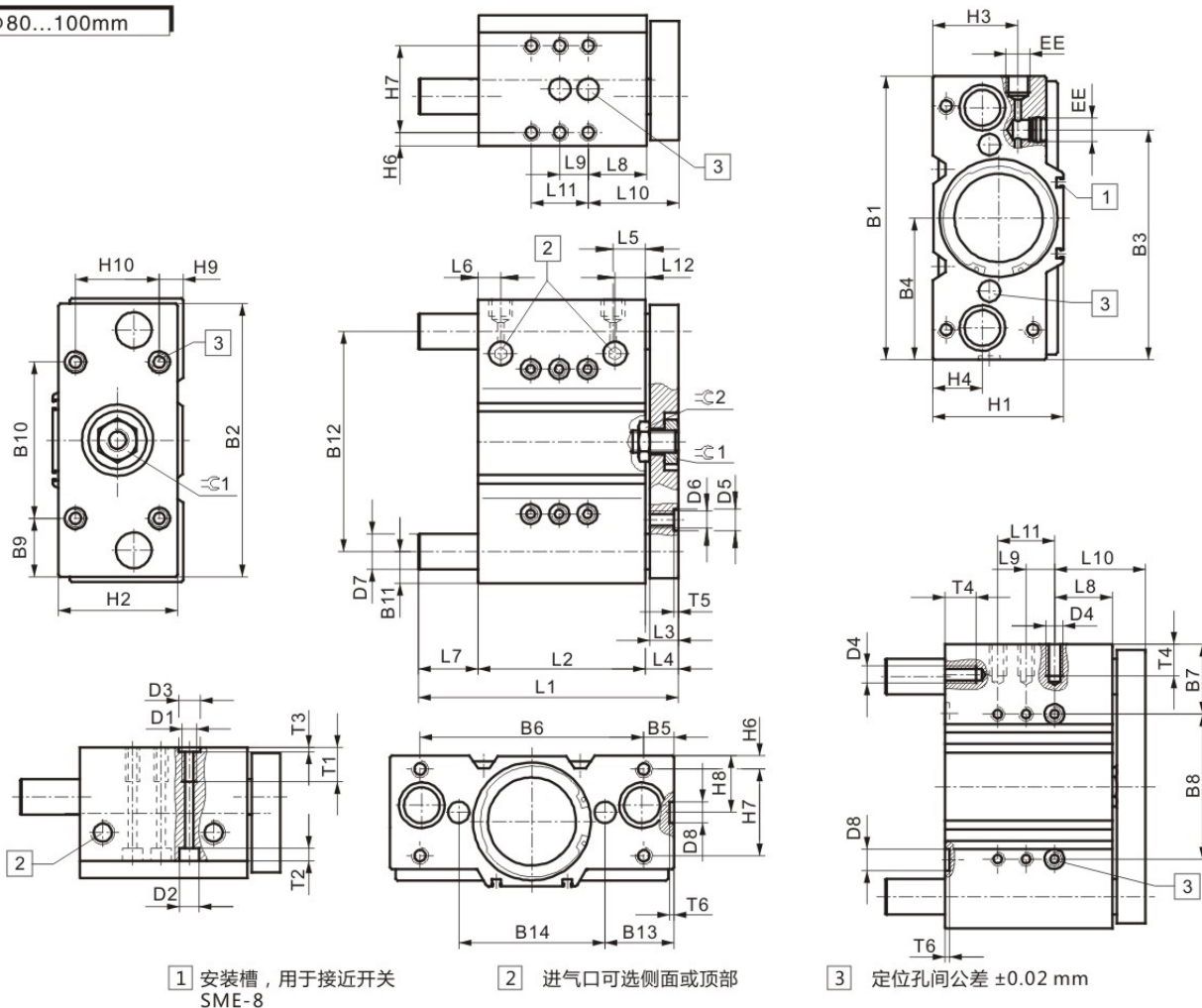
| Φ (mm) | 行程  | L1  | L2  | L3 | L4 | L5   | L6   | L7 | L8 | L9 | L10<br>±0.1 | L11 | L12  | T1 | T2  | T3  | T4 | T5  | T6  |
|--------|-----|-----|-----|----|----|------|------|----|----|----|-------------|-----|------|----|-----|-----|----|-----|-----|
| 32     | 20  | 101 | 68  | 14 | 16 | 17   | 12   | 17 | 29 | -  | 45          | -   | 17   | 15 | 6.8 | 2.6 | 12 | 2.1 | 2.1 |
|        | 25  | 106 | 73  |    |    |      |      | 17 |    | 20 |             | -   |      |    |     |     |    |     |     |
|        | 30  | 111 | 78  |    |    |      |      | 17 |    | 20 |             | -   |      |    |     |     |    |     |     |
|        | 40  | 121 | 88  |    |    |      |      | 17 |    | 20 |             | -   |      |    |     |     |    |     |     |
|        | 50  | 131 | 98  |    |    |      |      | 17 |    | 40 |             | -   |      |    |     |     |    |     |     |
|        | 80  | 179 | 128 |    |    |      |      | 35 |    | 40 |             | -   |      |    |     |     |    |     |     |
|        | 100 | 199 | 148 |    |    |      |      | 35 |    | 40 |             | 80  |      |    |     |     |    |     |     |
|        | 125 | 244 | 173 |    |    |      |      | 55 |    | 40 |             | 80  |      |    |     |     |    |     |     |
|        | 160 | 279 | 208 |    |    |      |      | 55 |    | 40 |             | 120 |      |    |     |     |    |     |     |
|        | 200 | 319 | 248 |    |    |      |      | 55 |    | 40 |             | 160 |      |    |     |     |    |     |     |
| 40     | 25  | 106 | 76  | 14 | 16 | 17.8 | 13.1 | 14 | 29 | 20 | 45          | -   | 17.8 | 15 | 6.8 | 2.6 | 16 | 2.1 | 2.1 |
|        | 50  | 131 | 101 |    |    |      |      | 14 |    | 40 |             | -   |      |    |     |     |    |     |     |
|        | 80  | 179 | 131 |    |    |      |      | 32 |    | 40 |             | -   |      |    |     |     |    |     |     |
|        | 100 | 199 | 151 |    |    |      |      | 32 |    | 40 |             | 80  |      |    |     |     |    |     |     |
|        | 125 | 244 | 176 |    |    |      |      | 52 |    | 40 |             | 80  |      |    |     |     |    |     |     |
|        | 160 | 279 | 211 |    |    |      |      | 52 |    | 40 |             | 120 |      |    |     |     |    |     |     |
|        | 200 | 319 | 251 |    |    |      |      | 52 |    | 40 |             | 160 |      |    |     |     |    |     |     |
| 50     | 25  | 118 | 77  | 16 | 18 | 17.8 | 14.2 | 23 | 32 | 20 | 50          | -   | 17.8 | 15 | 6.8 | 2.6 | 16 | 2.6 | 2.6 |
|        | 50  | 143 | 102 |    |    |      |      | 23 |    | 40 |             | -   |      |    |     |     |    |     |     |
|        | 80  | 194 | 132 |    |    |      |      | 44 |    | 40 |             | -   |      |    |     |     |    |     |     |
|        | 100 | 214 | 152 |    |    |      |      | 44 |    | 40 |             | 80  |      |    |     |     |    |     |     |
|        | 125 | 259 | 177 |    |    |      |      | 64 |    | 40 |             | 80  |      |    |     |     |    |     |     |
|        | 160 | 294 | 212 |    |    |      |      | 64 |    | 40 |             | 120 |      |    |     |     |    |     |     |
|        | 200 | 334 | 252 |    |    |      |      | 64 |    | 40 |             | 160 |      |    |     |     |    |     |     |
| 63     | 25  | 118 | 83  | 16 | 18 | 18.5 | 14.8 | 17 | 32 | 20 | 50          | -   | 18.5 | 20 | 9   | 2.6 | 20 | 2.6 | 2.6 |
|        | 50  | 143 | 108 |    |    |      |      | 17 |    | 40 |             | -   |      |    |     |     |    |     |     |
|        | 80  | 194 | 138 |    |    |      |      | 38 |    | 40 |             | 80  |      |    |     |     |    |     |     |
|        | 100 | 214 | 158 |    |    |      |      | 38 |    | 40 |             | 80  |      |    |     |     |    |     |     |
|        | 125 | 259 | 183 |    |    |      |      | 58 |    | 40 |             | 120 |      |    |     |     |    |     |     |
|        | 160 | 294 | 218 |    |    |      |      | 58 |    | 40 |             | 160 |      |    |     |     |    |     |     |
|        | 200 | 334 | 258 |    |    |      |      | 58 |    | 40 |             | 200 |      |    |     |     |    |     |     |

DSN/ESN  
圆形气缸DNC  
标准气缸ADN/AEN  
紧凑型气缸ADVC/AEVC  
短行程气缸DSN  
圆形气缸DFM  
导向杆气缸ADNGF  
紧凑型气缸FEN  
直线导向单元DPZ  
导向杆气缸ADVU  
紧凑型气缸DMM/EMM  
安装气缸DSBG  
标准气缸DSBC  
标准气缸



A

Φ80...100mm



| Φ(mm) | B1  | B2  | B3    | B4  | B5   | B6  | B7   | B8  | B9 | B10 | B11  | B12 | B13  | B14 | D1  | D2<br>Φ | D3<br>Φ<br>H7 |
|-------|-----|-----|-------|-----|------|-----|------|-----|----|-----|------|-----|------|-----|-----|---------|---------------|
| 80    | 200 | 192 | 162.5 | 100 | 21.5 | 157 | 48.5 | 103 | 41 | 110 | 22.5 | 155 | 48.5 | 103 | M10 | 15      | 12            |
| 100   | 240 | 232 | 201   | 120 | 21   | 198 | 54   | 132 | 56 | 120 | 26   | 188 | 57   | 126 | M12 | 18      | 15            |

| Φ(mm) | D4  | D5<br>Φ<br>H7 | D6  | D7<br>Φ |      | D8<br>Φ<br>H7 | EE   | H1  | H2  | H3 | H4   | H6 | H7 | H8 | H9 | H10 |
|-------|-----|---------------|-----|---------|------|---------------|------|-----|-----|----|------|----|----|----|----|-----|
|       |     |               |     | GF      | KF   |               |      |     |     |    |      |    |    |    |    |     |
| 80    | M10 | 12            | M10 | 30h8    | 25h6 | 12            | G3/8 | 92  | 84  | 61 | 35   | 9  | 62 | 40 | 16 | 60  |
| 100   | M12 | 15            | M12 | 35h8    | 30h6 | 15            | G3/8 | 112 | 104 | 66 | 39.5 | 10 | 68 | 44 | 16 | 80  |

| Φ(mm) | 行程  | L1  | L2  | L3 | L4 | L5 | L6 | L7 | L8 | L9 | L10<br>±0.1 | L11 | L12 | T1 | T2 | T3  | T4 | T5  | T6  | 1  | 2  |
|-------|-----|-----|-----|----|----|----|----|----|----|----|-------------|-----|-----|----|----|-----|----|-----|-----|----|----|
| 80    | 25  | 137 | 93  |    |    |    |    | 21 |    | 20 |             | -   |     |    |    |     |    |     |     |    |    |
|       | 50  | 183 | 118 |    |    |    |    | 42 |    | 40 |             | -   |     |    |    |     |    |     |     |    |    |
|       | 80  | 243 | 148 |    |    |    |    | 72 |    | 40 |             | -   |     |    |    |     |    |     |     |    |    |
|       | 100 | 263 | 168 | 20 | 23 | 23 | 16 | 72 | 41 | 40 | 64          | 80  | 23  | 20 | 9  | 2.6 | 20 | 2.6 | 2.6 | 27 | 30 |
|       | 125 | 288 | 193 |    |    |    |    | 72 |    | 40 |             | 80  |     |    |    |     |    |     |     |    |    |
|       | 160 | 323 | 228 |    |    |    |    | 72 |    | 40 |             | 120 |     |    |    |     |    |     |     |    |    |
|       | 200 | 363 | 268 |    |    |    |    | 72 |    | 40 |             | 160 |     |    |    |     |    |     |     |    |    |
| 100   | 25  | 150 | 109 |    |    |    |    | 18 |    | 40 |             | -   |     |    |    |     |    |     |     |    |    |
|       | 50  | 197 | 134 |    |    |    |    | 40 |    | 40 |             | 80  |     |    |    |     |    |     |     |    |    |
|       | 80  | 257 | 164 |    |    |    |    | 70 |    | 40 |             | 80  |     |    |    |     |    |     |     |    |    |
|       | 100 | 277 | 184 | 20 | 23 | 29 | 20 | 70 | 13 | 40 | 36          | 120 | 29  | 25 | 11 | 3.1 | 24 | 3.1 | 3.1 | 32 | 30 |
|       | 125 | 302 | 209 |    |    |    |    | 70 |    | 40 |             | 160 |     |    |    |     |    |     |     |    |    |
|       | 160 | 337 | 244 |    |    |    |    | 70 |    | 40 |             | 160 |     |    |    |     |    |     |     |    |    |
|       | 200 | 377 | 284 |    |    |    |    | 70 |    | 40 |             | 200 |     |    |    |     |    |     |     |    |    |