

图 38

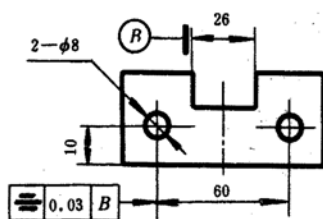


图 39

#### 4.9 尺寸公差与配合的注法

4.9.1 极限偏差书写：强调下偏差的数字必须与基本尺寸数字处在同一底线上，上下偏差数字行间距离约为极限偏差数字高度的三分之一，如  $\phi 20 \begin{smallmatrix} +0.020 \\ -0.033 \end{smallmatrix}$ 。

4.9.2 尺寸极限偏差中“0”的处理：当小数点为“0”时，应标出“0”。这个“0”为个位数，应与另一偏差小数点前的个位数对齐。但“0”前不加符号，“0”后不加小数点。上下偏差都不为“0”时，上下偏差小数点的位数必须相同，例如  $\phi 20 \begin{smallmatrix} +0.06 \\ -0.01 \end{smallmatrix}$ 、 $\phi 20 \begin{smallmatrix} +0.020 \\ -0.033 \end{smallmatrix}$  上下偏差位数对齐，上偏差后加“0”。  
 $\phi 20 \begin{smallmatrix} +0.06 \\ -0.01 \end{smallmatrix}$  上下偏差后的零允许省略。

### 5 公差与配合

#### 5.1 术语、符号、代号

对间隙配合  $X_{\min}$  —— 第 1 配合特性参数  
 $X_{\max}$  —— 第 2 配合特性参数  
 对过盈配合  $Y_{\min}$  —— 第 1 配合特性参数  
 $Y_{\max}$  —— 第 2 配合特性参数  
 对过渡配合  $X_{\max}$  —— 第 1 配合特性参数  
 $Y_{\max}$  —— 第 2 配合特性参数

$T_H$ ：孔公差；

$T_S$ ：轴公差；

$T_f$ ：配合公差。

#### 5.2 对公差的分配可按公式 (1) 计算：

$$T_f = T_H + T_S \quad \dots\dots\dots (1)$$

为贯彻工艺等价的原则，应使孔比轴的公差等级低一级或同级。表 5 及表 6 分别示出在基孔制与基轴制下的常用配合的孔与轴等级的选用表。

表 5

| 基准孔  | 轴 的 种 类 和 等 级 |   |   |     |   |     |   |         |     |     |                 |                 |                 |     |     |     |     |
|------|---------------|---|---|-----|---|-----|---|---------|-----|-----|-----------------|-----------------|-----------------|-----|-----|-----|-----|
|      | 间 隙 配 合       |   |   |     |   |     |   | 过 渡 配 合 |     |     | 过 盈 配 合         |                 |                 |     |     |     |     |
|      | b             | c | d | e   | f | g   | h | js      | k   | m   | n               | p               | r               | s   | t   | u   | x   |
| H 5  |               |   |   |     |   | 4   | 4 | 4       | 4   | 4   |                 |                 |                 |     |     |     |     |
| H 6  |               |   |   |     |   | 5   | 5 | 5       | 5   | 5   |                 |                 |                 |     |     |     |     |
|      |               |   |   |     | 6 | 6   | 6 | 6       | 6   | 6   | 6 <sup>1)</sup> | 6 <sup>1)</sup> |                 |     |     |     |     |
| H 7  |               |   |   | (6) | 6 | 6   | 6 | 6       | 6   | 6   | 6               | 6 <sup>1)</sup> | 6 <sup>1)</sup> | 6   | 6   | 6   | 6   |
|      |               |   |   | 7   | 7 | (7) | 7 | (7)     | (7) | (7) | (7)             | (7)             | (7)             | (7) | (7) | (7) | (7) |
| H 8  |               |   |   |     | 7 |     | 7 |         |     |     |                 |                 |                 |     |     |     |     |
|      |               |   |   | 8   | 8 |     | 8 |         |     |     |                 |                 |                 |     |     |     |     |
|      |               |   | 9 | 9   |   |     |   |         |     |     |                 |                 |                 |     |     |     |     |
| H 9  |               |   | 8 | 8   |   |     | 8 |         |     |     |                 |                 |                 |     |     |     |     |
|      |               | 9 | 9 | 9   |   |     | 9 |         |     |     |                 |                 |                 |     |     |     |     |
| H 10 | 9             | 9 | 9 |     |   |     |   |         |     |     |                 |                 |                 |     |     |     |     |

注：① 表中带括号的尽量不用。

1) 为优先配合。

表 6

| 基准轴 | 孔 配 合 特 性 和 公 差 等 级 |    |    |     |   |     |   |         |     |     |                 |                 |     |     |   |   |   |
|-----|---------------------|----|----|-----|---|-----|---|---------|-----|-----|-----------------|-----------------|-----|-----|---|---|---|
|     | 间 隙 配 合             |    |    |     |   |     |   | 过 渡 配 合 |     |     | 过 盈 配 合         |                 |     |     |   |   |   |
|     | B                   | C  | D  | E   | F | G   | H | J s     | K   | M   | N               | P               | R   | S   | T | U | X |
| h 4 |                     |    |    |     |   |     | 5 | 5       | 5   | 5   |                 |                 |     |     |   |   |   |
| h 5 |                     |    |    |     |   |     | 6 | 6       | 6   | 6   | 6 <sup>1)</sup> | 6               |     |     |   |   |   |
| h 6 |                     |    |    |     | 6 | 6   | 6 | 6       | 6   | 6   | 6               | 6 <sup>1)</sup> |     |     |   |   |   |
|     |                     |    |    | (7) | 7 | 7   | 7 | 7       | 7   | 7   | 7               | 7 <sup>1)</sup> | 7   | 7   | 7 | 7 | 7 |
| h 7 |                     |    |    | 7   | 7 | (7) | 7 | (7)     | (7) | (7) | (7)             | (7)             | (7) | (7) |   |   |   |
|     |                     |    |    |     | 8 |     | 8 |         |     |     |                 |                 |     |     |   |   |   |
| h 8 |                     |    | 8  | 8   | 8 |     | 8 |         |     |     |                 |                 |     |     |   |   |   |
|     |                     |    | 9  | 9   |   |     | 9 |         |     |     |                 |                 |     |     |   |   |   |
| h 9 |                     |    | 8  | 8   |   |     | 8 |         |     |     |                 |                 |     |     |   |   |   |
|     |                     | 9  | 9  | 9   |   |     | 9 |         |     |     |                 |                 |     |     |   |   |   |
|     | 10                  | 10 | 10 |     |   |     |   |         |     |     |                 |                 |     |     |   |   |   |

注：① 表中带括号的尽量不用。

1) 为优先配合。

5.3 配合公差 $T_f$ 是配合特性参数的变动量,按公式(2)、公式(3)、公式(4)计算:

$$\text{间隙配合} \quad T_f = |X_{\max} - X_{\min}| \quad \dots\dots\dots (2)$$

$$\text{过渡配合} \quad T_f = |X_{\max} - Y_{\max}| \quad \dots\dots\dots (3)$$

$$\text{过盈配合} \quad T_f = |Y_{\max} - Y_{\min}| \quad \dots\dots\dots (4)$$

各配合特性参数按表7中所列出的因素决定之。

表7 决定因素

|            |                      |
|------------|----------------------|
| $X_{\min}$ | 按润滑理论计算最小间隙          |
| $X_{\max}$ | 按孔、轴之间定位精度确定最大间隙     |
| $Y_{\min}$ | 按孔、轴的传动力矩及连接强度计算最小过盈 |
| $Y_{\max}$ | 按孔、轴的材料强度计算最大过盈      |

5.4 按表8选择相应的配合。

表8

|      |                                     |
|------|-------------------------------------|
| 间隙配合 | 一般用于有相对运动,但有定心、定位的要求的无相对运动的一对偶件也可应用 |
| 过渡配合 | 一般用于无相对运动但对定心、定位要求较高,而且传递的力矩不大      |
| 过盈配合 | 一般用于孔、轴同时运动,并靠过盈量的大小来传递不同的力矩        |

5.5 配合种类确定后将按配合特性确定公差带,基准制及孔、轴的公差等级。对基准制应优先采用基孔制,只有在有明显经济效益的情况下才考虑基轴制。不论什么基准制其配合性质是一致的。在选用公差带时应优先采用优先公差带,其次是常用公差带,再次是一般公差带。

基孔制常用配合时的配合特性参数选择按表9。

基轴制常用配合时的配合特性参数选择按表10。

表 9 基孔制常用配合表

| 尺寸分段<br>mm |     | H 5        |     | 基准孔 H 5 与所配合的轴 |          |          |          |          |          |          |          |          |          | H 6        |     | 基准孔 H 6 与所配合的轴 |          |    |     |          |     | μm |
|------------|-----|------------|-----|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-----|----------------|----------|----|-----|----------|-----|----|
|            |     | 上偏差<br>(+) | 下偏差 | g              |          | h        |          | js       |          | k        |          | m        |          | 上偏差<br>(+) | 下偏差 | f              |          | g  |     | 最小<br>间隙 |     |    |
|            |     |            |     | 最大<br>间隙       | 最小<br>间隙 | 最大<br>间隙 | 最小<br>间隙 | 最大<br>过盈 | 最小<br>过盈 | 最大<br>过盈 | 最小<br>过盈 | 最大<br>间隙 | 最小<br>间隙 |            |     | 最大<br>间隙       | 最小<br>间隙 |    |     |          |     |    |
|            |     |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          | g4 | h4  |          | js4 |    |
| >          | <   | 4          |     | 9              | 2        | 7        |          | 5.5      | 1.5      | 4        | 3        | 2        | 5        | 6          |     | 18             | 6        | 12 | 14  | 2        |     |    |
| 3          | 6   | 5          |     | 13             | 4        | 9        |          | 7        | 2        | 5        | 5        | 1        | 8        | 8          |     | 26             | 10       | 17 | 20  | 4        |     |    |
| 6          | 10  | 6          |     | 15             | 5        | 10       |          | 8        | 2        | 5        | 5        | 0        | 10       | 9          |     | 31             | 13       | 20 | 23  | 5        |     |    |
| 10         | 14  | 8          |     | 19             | 6        | 13       |          | 10.5     | 2.5      | 7        | 6        | 1        | 12       | 11         |     | 38             | 16       | 25 | 28  | 6        |     |    |
| 14         | 18  |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 18         | 24  | 9          |     | 22             | 7        | 15       |          | 12       | 3        | 7        | 8        | 1        | 14       | 13         |     | 46             | 20       | 29 | 33  | 7        |     |    |
| 24         | 30  |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 30         | 40  | 11         |     | 27             | 9        | 18       |          | 14.5     | 3.5      | 9        | 9        | 2        | 16       | 16         |     | 57             | 25       | 36 | 41  | 9        |     |    |
| 40         | 50  |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 50         | 65  | 13         |     | 31             | 10       | 21       |          | 17       | 4        | 11       | 10       | 2        | 19       | 19         |     | 68             | 30       | 42 | 48  | 10       |     |    |
| 65         | 80  |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 80         | 100 | 15         |     | 37             | 12       | 25       |          | 20       | 5        | 12       | 13       | 2        | 23       | 22         |     | 80             | 36       | 49 | 56  | 12       |     |    |
| 100        | 120 |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 120        | 140 |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 140        | 160 | 18         |     | 44             | 14       | 30       |          | 24       | 6        | 15       | 15       | 3        | 27       | 25         |     | 93             | 43       | 57 | 64  | 14       |     |    |
| 160        | 180 |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 180        |     |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 200        | 225 | 20         |     | 49             | 15       | 34       |          | 27       | 7        | 16       | 18       | 3        | 31       | 29         |     | 108            | 50       | 64 | 73  | 15       |     |    |
| 225        | 250 |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 250        | 280 | 23         |     | 56             | 17       | 39       |          | 31       | 8        | 19       | 20       | 3        | 36       | 32         |     | 120            | 56       | 72 | 81  | 17       |     |    |
| 280        | 315 |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 315        | 355 | 25         |     | 61             | 18       | 43       |          | 34       | 9        | 21       | 22       | 4        | 39       | 36         |     | 134            | 62       | 79 | 90  | 18       |     |    |
| 355        | 400 |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |
| 400        | 450 | 27         |     | 67             | 20       | 47       |          | 37       | 10       | 22       | 25       | 4        | 43       | 40         |     | 148            | 68       | 87 | 100 | 20       |     |    |
| 450        | 500 |            |     |                |          |          |          |          |          |          |          |          |          |            |     |                |          |    |     |          |     |    |

$\mu\text{m}$ 

续表 9

| 尺寸分段<br>mm |     | 基 准 孔 H6 与 所 配 合 的 轴 |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
|------------|-----|----------------------|-----|----------|----------|----------|------|----|----------|------|----|----------|----------|----|-----|----|--|
|            |     | h                    |     | js       |          |          |      | k  |          | m    |    | n        |          | p  |     |    |  |
|            |     |                      |     | 最大<br>间隙 | 最大<br>过盈 | 最大<br>间隙 | 最大过盈 |    | 最大<br>间隙 | 最大过盈 |    | 最小<br>过盈 | 最大<br>过盈 |    |     |    |  |
|            |     | js5                  | js6 |          |          |          | k5   | k6 |          | m5   | m6 |          |          |    |     |    |  |
| >          | <   | h5                   | h6  | 8        | 2        | 9        | 3    | 4  | 6        | 6    | 8  | -2       | 10       | 0  | 12  | p6 |  |
| —          | 3   | 10                   | 12  | 10.5     | 2.5      | 12       | 4    | 6  | 9        | 4    | 9  | 0        | 16       | 4  | 20  |    |  |
| 3          | 6   | 13                   | 16  | 12       | 3        | 13.5     | 4.5  | 7  | 10       | 3    | 12 | 15       | 19       | 6  | 24  |    |  |
| 6          | 10  | 15                   | 18  | 15       | 4        | 16.5     | 5.5  | 9  | 12       | 4    | 15 | 18       | 23       | 7  | 29  |    |  |
| 10         | 14  | 19                   | 22  | 17.5     | 4.5      | 19.5     | 6.5  | 11 | 15       | 5    | 17 | 21       | 28       | 9  | 35  |    |  |
| 14         | 18  | 22                   | 26  | 21.5     | 5.5      | 24       | 8    | 13 | 18       | 7    | 20 | 25       | 33       | 10 | 42  |    |  |
| 18         | 24  | 27                   | 32  | 25.5     | 6.5      | 28.5     | 9.5  | 15 | 21       | 8    | 24 | 30       | 39       | 13 | 51  |    |  |
| 24         | 30  | 32                   | 38  | 29.5     | 7.5      | 33       | 11   | 18 | 25       | 9    | 28 | 35       | 45       | 15 | 59  |    |  |
| 30         | 40  | 37                   | 44  | 34       | 9        | 37.5     | 12.5 | 21 | 28       | 10   | 33 | 40       | 52       | 18 | 68  |    |  |
| 40         | 50  | 43                   | 50  | 39       | 10       | 43.5     | 14.5 | 24 | 33       | 12   | 37 | 46       | 60       | 21 | 79  |    |  |
| 50         | 65  | 49                   | 58  | 43.5     | 11.5     | 48       | 16   | 27 | 36       |      | 43 | 52       | 66       | 24 | 88  |    |  |
| 65         | 80  | 55                   | 64  | 48.5     | 12.5     | 54       | 18   | 29 | 40       | 15   | 46 | 57       | 73       | 26 | 98  |    |  |
| 80         | 100 | 61                   | 72  | 53.5     | 13.5     | 60       | 20   | 32 | 45       | 17   | 50 | 63       | 80       | 28 | 108 |    |  |
| 100        | 120 | 67                   | 80  |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 120        | 140 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 140        | 160 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 160        | 180 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 180        | 200 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 200        | 225 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 225        | 250 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 250        | 280 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 280        | 315 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 315        | 355 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 355        | 400 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 400        | 450 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |
| 450        | 500 |                      |     |          |          |          |      |    |          |      |    |          |          |    |     |    |  |



续表 9 基 准 孔 H7 和 所 配 合 的 轴

| 尺寸分段<br>mm |     | 基准 孔 H7 和 所 配 合 的 轴 |     |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |  |  |  |  |  |
|------------|-----|---------------------|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|--|--|
|            |     | k                   |     | m        |          | n        |          | p        |          | r        |          | s        |          | t        |          | u        |          | x        |          |  |  |  |  |  |
|            |     | 最大<br>过盈            |     | 最大<br>过盈 | 最大<br>间隙 | 最大<br>过盈 | 最小<br>过盈 | 最大<br>过盈 | 最小<br>过盈 | 最大<br>过盈 | 最小<br>过盈 | 最大<br>过盈 | 最小<br>过盈 | 最大<br>过盈 | 最小<br>过盈 | 最大<br>过盈 | 最小<br>过盈 | 最大<br>过盈 | 最小<br>过盈 |  |  |  |  |  |
| >          | <   | k6                  | m6  | n6       | p6       | r6       | s6       | t6       | u6       | x6       |          |          |          |          |          |          |          |          |          |  |  |  |  |  |
| —          | 3   | 6                   | 8   | 10       | -4       | 0        | 16       | —        | 8        | 24       | 10       | 26       |          |          |          |          |          |          |          |  |  |  |  |  |
| 3          | 6   | 9                   | 12  | 16       | 20       | 3        | 23       | —        | 11       | 31       | 16       | 36       |          |          |          |          |          |          |          |  |  |  |  |  |
| 6          | 10  | 10                  | 15  | 19       | 24       | 4        | 28       | —        | 13       | 37       | 19       | 43       |          |          |          |          |          |          |          |  |  |  |  |  |
| 10         | 14  | 12                  | 18  | 23       | 29       | 5        | 34       | —        | 15       | 44       | 22       | 51       |          |          |          |          |          |          |          |  |  |  |  |  |
| 14         | 18  | 15                  | 21  | 28       | 35       | 7        | 41       | —        | 20       | 54       | 33       | 67       |          |          |          |          |          |          |          |  |  |  |  |  |
| 18         | 24  | 18                  | 25  | 33       | 42       | 9        | 50       | —        | 23       | 62       | 35       | 76       |          |          |          |          |          |          |          |  |  |  |  |  |
| 30         | 40  | 21                  | 30  | 39       | 51       | 11       | 60       | —        | 29       | 70       | 45       | 86       |          |          |          |          |          |          |          |  |  |  |  |  |
| 40         | 50  | 25                  | 35  | 45       | 59       | 16       | 73       | —        | 36       | 85       | 57       | 106      |          |          |          |          |          |          |          |  |  |  |  |  |
| 50         | 65  | 28                  | 40  | 52       | 68       | 25       | 90       | —        | 45       | 94       | 72       | 121      |          |          |          |          |          |          |          |  |  |  |  |  |
| 65         | 80  | 33                  | 45  | 60       | 79       | 34       | 109      | —        | 56       | 113      | 89       | 146      |          |          |          |          |          |          |          |  |  |  |  |  |
| 80         | 100 | 38                  | 57  | 73       | 98       | 42       | 126      | —        | 69       | 126      | 109      | 166      |          |          |          |          |          |          |          |  |  |  |  |  |
| 100        | 120 | 40                  | 63  | 80       | 108      | 46       | 130      | —        | 82       | 107      | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 120        | 140 | 45                  | 68  | 88       | 117      | 51       | 151      | —        | 94       | 159      | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 140        | 160 | 48                  | 72  | 96       | 125      | 56       | 159      | —        | 106      | 171      | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 160        | 180 | 52                  | 76  | 104      | 133      | 60       | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 180        | 200 | 56                  | 80  | 112      | 141      | 66       | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 200        | 225 | 60                  | 88  | 120      | 151      | 72       | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 225        | 250 | 66                  | 98  | 132      | 169      | 80       | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 250        | 280 | 72                  | 108 | 144      | 188      | 90       | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 280        | 315 | 80                  | 120 | 160      | 208      | 100      | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 315        | 355 | 90                  | 132 | 180      | 225      | 110      | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 355        | 400 | 100                 | 144 | 200      | 250      | 120      | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 400        | 450 | 110                 | 160 | 220      | 280      | 130      | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |
| 450        | 500 | 120                 | 180 | 240      | 300      | 140      | 169      | —        | —        | —        | —        | —        |          |          |          |          |          |          |          |  |  |  |  |  |

续表 9

| 尺寸分段<br>mm |     | H 8 |          | 基 准 孔 H 8 与 所 配 合 的 轴 |      |          |     |      |          |      |      |          |            | H 9 |     | 基 准 孔 H 9 和<br>所 配 合 的 轴 |          |          |      |  |          |  |  |
|------------|-----|-----|----------|-----------------------|------|----------|-----|------|----------|------|------|----------|------------|-----|-----|--------------------------|----------|----------|------|--|----------|--|--|
|            |     |     |          | 上偏差<br>(+)            |      | 下偏差      |     | d    |          | e    |      |          | f          |     |     |                          |          | h        |      |  |          |  |  |
|            |     |     |          |                       |      |          |     |      |          | 最大间隙 |      | 最小<br>间隙 | 最大间隙       |     |     |                          |          | 最小<br>间隙 | 最大间隙 |  | 最小<br>间隙 |  |  |
|            |     |     |          |                       |      |          |     |      |          |      |      |          |            |     |     |                          |          |          |      |  |          |  |  |
| >          | <   | d9  | 最小<br>间隙 | e8                    | 最大间隙 | 最小<br>间隙 | f7  | 最大间隙 | 最小<br>间隙 | h7   | 最大间隙 | 最小<br>间隙 | 上偏差<br>(+) | 下偏差 | e9  | 最大<br>间隙                 | 最小<br>间隙 |          |      |  |          |  |  |
| —          | 3   | 14  |          | 59                    | 42   | 53       | 14  | 30   | 34       | 24   | 28   |          | 25         |     | 110 | 60                       |          |          |      |  |          |  |  |
| 3          | 6   | 18  |          | 78                    | 56   | 68       | 20  | 40   | 46       | 30   | 36   |          | 30         |     | 130 | 70                       |          |          |      |  |          |  |  |
| 6          | 10  | 22  |          | 98                    | 69   | 83       | 25  | 50   | 57       | 37   | 44   |          | 36         |     | 152 | 80                       |          |          |      |  |          |  |  |
| 10         | 14  | 27  |          | 120                   | 86   | 102      | 32  | 61   | 70       | 45   | 54   |          | 43         |     | 181 | 95                       |          |          |      |  |          |  |  |
| 14         | 18  |     |          |                       |      |          |     |      |          |      |      |          |            |     |     |                          |          |          |      |  |          |  |  |
| 18         | 24  | 33  |          | 150                   | 106  | 125      | 40  | 74   | 86       | 54   | 66   |          | 52         |     | 214 | 110                      |          |          |      |  |          |  |  |
| 24         | 30  |     |          |                       |      |          |     |      |          |      |      |          |            |     |     |                          |          |          |      |  |          |  |  |
| 30         | 40  | 39  |          | 181                   | 128  | 151      | 50  | 89   | 103      | 64   | 78   |          | 62         |     | 244 | 120                      |          |          |      |  |          |  |  |
| 40         | 50  |     |          |                       |      |          |     |      |          |      |      |          |            |     | 254 | 130                      |          |          |      |  |          |  |  |
| 50         | 65  | 46  |          | 220                   | 152  | 180      | 60  | 106  | 122      | 76   | 92   |          | 74         |     | 288 | 140                      |          |          |      |  |          |  |  |
| 65         | 80  |     |          |                       |      |          |     |      |          |      |      |          |            |     | 298 | 150                      |          |          |      |  |          |  |  |
| 80         | 100 | 54  |          | 261                   | 180  | 213      | 72  | 125  | 144      | 89   | 108  |          | 87         |     | 344 | 170                      |          |          |      |  |          |  |  |
| 100        | 120 |     |          |                       |      |          |     |      |          |      |      |          |            |     | 354 | 180                      |          |          |      |  |          |  |  |
| 120        | 140 | 63  |          | 308                   | 211  | 278      | 85  | 146  | 169      | 103  | 126  |          | 100        |     | 400 | 200                      |          |          |      |  |          |  |  |
| 140        | 160 |     |          |                       |      |          |     |      |          |      |      |          |            |     | 410 | 210                      |          |          |      |  |          |  |  |
| 160        | 180 |     |          |                       |      |          |     |      |          |      |      |          |            |     | 430 | 230                      |          |          |      |  |          |  |  |
| 180        | 200 | 72  |          | 357                   | 244  | 287      | 100 | 168  | 194      | 118  | 144  |          | 115        |     | 470 | 240                      |          |          |      |  |          |  |  |
| 200        | 225 |     |          |                       |      |          |     |      |          |      |      |          |            |     | 490 | 260                      |          |          |      |  |          |  |  |
| 225        | 250 |     |          |                       |      |          |     |      |          |      |      |          |            |     | 510 | 280                      |          |          |      |  |          |  |  |
| 250        | 280 | 81  |          | 401                   | 272  | 321      | 110 | 189  | 218      | 133  | 162  |          | 130        |     | 560 | 300                      |          |          |      |  |          |  |  |
| 280        | 315 |     |          |                       |      |          |     |      |          |      |      |          |            |     | 570 | 330                      |          |          |      |  |          |  |  |
| 315        | 355 | 89  |          | 439                   | 308  | 354      | 125 | 208  | 240      | 146  | 178  |          | 140        |     | 640 | 360                      |          |          |      |  |          |  |  |
| 355        | 400 |     |          |                       |      |          |     |      |          |      |      |          |            |     | 680 | 400                      |          |          |      |  |          |  |  |
| 400        | 450 | 97  |          | 482                   | 329  | 367      | 135 | 228  | 262      | 160  | 194  |          | 155        |     | 750 | 440                      |          |          |      |  |          |  |  |
| 450        | 500 |     |          |                       |      |          |     |      |          |      |      |          |            |     | 790 | 480                      |          |          |      |  |          |  |  |