
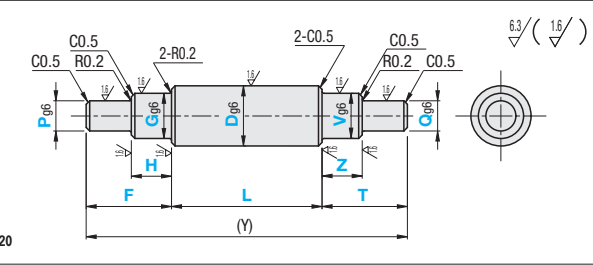


Rotary Shafts

Both Ends Double Stepped



| Type | Material | Surface Treatment |
|-------|-----------------|-------------------|
| SFRJ | S45C Equivalent | Black Oxide |
| SSFRJ | SUS304 | - |



RoHS 10

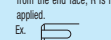
Ⓢ Circularity, Straightness, Perpendicularity, Concentricity P820

| Part Number | Type | Dg6 | 0.1mm Increment | | | 1mm Increment | | (Y) max. | |
|-------------|-------|------------|-----------------|--------------------|------------|---------------|------|----------|-----|
| | | | L | F, T | H, Z | G, V | P, Q | | |
| SFRJ | 6 | -0.004 | 20.0~296.0 | 2<F≤Px5 2<T≤Qx5 | 2≤H 2≤Z | 4~5 | 3~4 | 300 | |
| | 8 | -0.005 | 20.0~396.0 | | | 4~7 | 3~6 | 400 | |
| | 10 | -0.014 | 20.0~496.0 | | | 4~9 | 3~8 | 500 | |
| | 12 | -0.006 | 25.0~596.0 | | | 6~11 | 5~10 | 600 | |
| | 13 | | 25.0~596.0 | | | 6~12 | 5~11 | 700 | |
| | 15 | | 25.0~696.0 | | | 6~14 | 5~13 | 800 | |
| | 16 | | 25.0~796.0 | | | 6~15 | 5~14 | 800 | |
| | SSFRJ | 17 | -0.017 | | | 25.0~796.0 | 6~15 | 5~14 | 800 |
| | | 18 | -0.007 | | | 25.0~796.0 | 6~17 | 5~16 | 800 |
| | | 20 | | | | 30.0~796.0 | 6~19 | 5~18 | 800 |
| 22 | | 30.0~796.0 | | 6~21 | 5~20 | 800 | | | |
| 25 | | 30.0~796.0 | | 11~24 | 10~23 | 800 | | | |
| 30 | | -0.020 | 30.0~796.0 | 11~29 | 10~28 | 800 | | | |

Ⓢ When D-G(V)≤2 and G(V)-P(Q)≤2, chamfer C at the step is 0.2 or less. Ⓢ P<G<D, Q<V<D

Ordering Example: Part Number - L - F - H - G - P - T - Z - V - Q
SFRJ10 - 400 - F25 - H20 - G8 - P6 - T20 - Z10 - V8 - Q6

Alterations Example: Part Number - L - F - H - G - P - T - Z - V - Q - (KC, WKC, FC--etc.)
SFRJ20 - 300 - F30 - H20 - G15 - P12 - T25 - Z15 - V15 - Q12 - SC10


| Alterations | Keyway | Keyway on Shaft End | Set Screw Flat | 2 Set Screw Flats (Angle Specified) | Slit Cam Groove | Wrench Flats | L Dimension Tolerance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|--|--|-----------------|--------------|-----------------------|-----|-------|---|--|---|---|----|---|---|---|---|---|---|----|---|---|----|----|---|---|---|---|----|---|---|---|---|---|---|----|---|----|--------|----|----|--------|----|----|--------|----|----|--------|----|----|----|----|----|----|----|----|--|---|---|---|---|---|---|----|---|---|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|
| | Code | KC, WKC | PKC, QKC | FC, WFC | KFC | UC | SC | LKC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spec. | <p>KC: Adds a keyway. Ordering Code: KC50-A10</p> <p>WKC: Adds two keyways. Ordering Code: WKC50-C8-K40-E10</p> <p>Ⓢ KC, A, WKC, C, K, E = 1mm Increment</p> <p>Ⓢ A, E, Cs100</p> <p>Ⓢ For Keyway Details, refer to P820</p> <p>Ⓢ If 3 keyways are required, use both KC and WKC.</p> <p>Ⓢ When the keyway position is less than 1mm away from the end face, R is not applied.</p> <p>Ex. </p> | <p>Adds a keyway on the shaft end (P, Q).</p> <p>Ordering Code: PKC10(QKC10)</p> <p>Ⓢ PKC, QKC = 1mm Increment</p> <p>Ⓢ PKC, QKC≤50</p> <p>Ⓢ PKC(QKC)≤F(T)</p> <p>Ⓢ Keyway Details P820</p> <p>Ⓢ Not applicable to P (Q)=5 or less.</p> | <p>FC: Adds 1 set screw flat. Ordering Code: FC10-G3</p> <p>WFC: Adds 2 set screw flats. Ordering Code: WFC10-J3-W10-V3</p> <p>Ⓢ FC, G, WFC, J, W, V = 1mm Increment</p> <p>Ⓢ G, J, Vs50</p> | <p>Adds a set screw flat at any desired angle besides the datum plane (P).</p> <p>KFC, G = 1mm Increment</p> <p>AG = 15° Increment</p> <p>Ⓢ G≤50</p> <p>Ordering Code: KFC10-G3-AG90</p> <table border="1"> <tr><th>D</th><th>H</th></tr> <tr><td>6-15</td><td>1</td></tr> <tr><td>16-30</td><td>2</td></tr> </table> <p>Ⓢ When combined with other alterations, ±2 degree phase differential may occur.</p> | D | H | 6-15 | 1 | 16-30 | 2 | <p>Adds a slit cam groove.</p> <p>UC = 1mm Increment</p> <p>Ordering Code: UC10</p> <p>Ⓢ UC+δ1≤L</p> <p>Ⓢ UC≥1</p> <p>Ⓢ Not applicable to D13 or more.</p> <table border="1"> <tr><th>D</th><th>d</th><th>δ1</th></tr> <tr><td>6</td><td>5</td><td>1</td></tr> <tr><td>8</td><td>7</td><td>4</td></tr> <tr><td>10</td><td>8</td><td>5</td></tr> <tr><td>12</td><td>10</td><td>5</td></tr> </table> | D | d | δ1 | 6 | 5 | 1 | 8 | 7 | 4 | 10 | 8 | 5 | 12 | 10 | 5 | <p>Adds a wrench flat.</p> <p>SC = 1mm Increment</p> <p>Ⓢ SC+δ2≤L</p> <p>Ⓢ SC=0 or SC≥1</p> <table border="1"> <tr><th>D</th><th>W</th><th>δ2</th></tr> <tr><td>6</td><td>5</td><td>8</td></tr> <tr><td>8</td><td>7</td><td>8</td></tr> <tr><td>10</td><td>8</td><td>10</td></tr> <tr><td>12, 13</td><td>10</td><td>10</td></tr> <tr><td>15, 16</td><td>13</td><td>10</td></tr> <tr><td>17, 18</td><td>14</td><td>10</td></tr> <tr><td>20, 22</td><td>17</td><td>10</td></tr> <tr><td>25</td><td>22</td><td>10</td></tr> <tr><td>30</td><td>27</td><td>15</td></tr> </table> <p>Ⓢ When combined with other alterations, ±2 degree phase differential may occur.</p> | D | W | δ2 | 6 | 5 | 8 | 8 | 7 | 8 | 10 | 8 | 10 | 12, 13 | 10 | 10 | 15, 16 | 13 | 10 | 17, 18 | 14 | 10 | 20, 22 | 17 | 10 | 25 | 22 | 10 | 30 | 27 | 15 | <p>Changes L dimension tolerance.</p> <p>Ordering Code: LKC</p> <p>Ⓢ L<500→L±0.05</p> <p>Ⓢ L≥500→L±0.1</p> <table border="1"> <tr><th>D</th><th>W</th><th>δ</th><th>D</th><th>W</th><th>δ</th></tr> <tr><td>10</td><td>8</td><td>8</td><td>30</td><td>27</td><td>15</td></tr> <tr><td>12</td><td>10</td><td>8</td><td>35</td><td>30</td><td>15</td></tr> <tr><td>15</td><td>13</td><td>10</td><td>40</td><td>36</td><td>20</td></tr> <tr><td>20</td><td>17</td><td>10</td><td>50</td><td>41</td><td>20</td></tr> <tr><td>25</td><td>22</td><td>10</td><td></td><td></td><td></td></tr> </table> | D | W | δ | D | W | δ | 10 | 8 | 8 | 30 | 27 | 15 | 12 | 10 | 8 | 35 | 30 | 15 | 15 | 13 | 10 | 40 | 36 | 20 | 20 | 17 | 10 | 50 | 41 | 20 | 25 | 22 | 10 | | | |
| D | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6-15 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16-30 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | d | δ1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 7 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 8 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 10 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | W | δ2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 5 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 7 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 8 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12, 13 | 10 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15, 16 | 13 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17, 18 | 14 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20, 22 | 17 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 22 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 27 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | W | δ | D | W | δ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 8 | 8 | 30 | 27 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 10 | 8 | 35 | 30 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 13 | 10 | 40 | 36 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 17 | 10 | 50 | 41 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 22 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Ⓢ Keyway(s) and set screw flats are added in the same plane. When the distance of the alterations are over 500mm, ±2 degree phase differential may occur.

| D | SFRJ | | | | | | | | SSFRJ | | | | | | | |
|----|--------|-------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|
| | Min. L | L50.1 | L100.1 | L150.1 | L200.1 | L300.1 | L400.1 | L600.1 | Min. L | L50.1 | L100.1 | L150.1 | L200.1 | L300.1 | L400.1 | L600.1 |
| 6 | 50.0 | 100.0 | 150.0 | 200.0 | 300.0 | 400.0 | 600.0 | 796.0 | 50.0 | 100.0 | 150.0 | 200.0 | 300.0 | 400.0 | 600.0 | 796.0 |
| 8 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | |

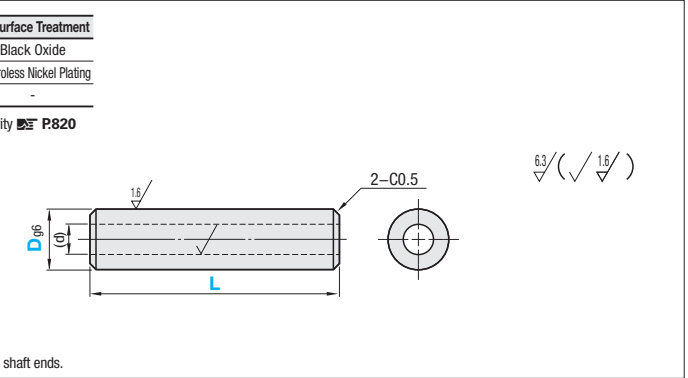
Hollow Rotary Shafts

Lightweight, Straight



| Type | Material | Surface Treatment |
|------|----------|----------------------------|
| PFR | S45C | Black Oxide |
| PPFR | S45C | Electroless Nickel Plating |
| SPFR | SUS304 | - |

Ⓢ Circularity, Straightness, Perpendicularity P820



RoHS 10

Ⓢ Surface treatment is not applied to the shaft ends.

| Part Number | Type | Dg6 | L | |
|-------------|------|--------|-----------------|------|
| | | | 0.1mm Increment | (d) |
| PFR | 10 | -0.005 | 20.0~500.0 | 6 |
| | 12 | -0.006 | 30.0~600.0 | 6 |
| | 15 | -0.017 | 30.0~600.0 | 10 |
| | 20 | -0.007 | 40.0~600.0 | 11.7 |
| | 25 | -0.020 | 50.0~600.0 | 15.2 |
| | 30 | -0.025 | 60.0~600.0 | 16 |
| | 35 | -0.009 | 70.0~600.0 | 20.1 |
| | 40 | -0.025 | 80.0~600.0 | 22.7 |
| | 50 | -0.025 | 100.0~600.0 | 24 |

Ordering Example: Part Number - L
PFR20 - 300

Alterations Example: Part Number - L - (KC, WKC, FC--etc.)
SPFR30 - 150 - SC10

| Alterations | Keyway | Set Screw Flat | Wrench Flats | L Dimension Tolerance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--|--|--------------|-----------------------|-------|---|-------|---|----|---|--|---|---|---|---|---|---|----|---|---|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|---|---|---|---|---|---|----|---|---|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|
| | Code | KC, WKC | FC, WFC | SC | LKC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spec. | <p>KC: Adds a keyway. Ordering Code: KC50-A10</p> <p>WKC: Adds two keyways. Ordering Code: WKC50-C8-K40-E10</p> <p>Ⓢ Applicable when D≥30.</p> <p>Ⓢ KC, A, WKC, C, K, E = 1mm Increment</p> <p>Ⓢ KC, WKC, Cs2</p> <p>Ⓢ WKC+C+K+E+6≤L</p> <p>Ⓢ A, E, Cs100</p> <p>Ⓢ If 3 keyways are required, use both KC and WKC.</p> | <p>FC: Adds 1 set screw flat. Ordering Code: FC10-G3</p> <p>WFC: Adds 2 set screw flats. Ordering Code: WFC10-J3-W10-V3</p> <p>Ⓢ FC, G, WFC, J, W, V = 1mm Increment</p> <p>Ⓢ FC, WFC, Ws2</p> <p>Ⓢ FC+G+4≤L</p> <p>Ⓢ WFC+J+W+6≤L</p> <p>Ⓢ G, J, Vs50</p> <table border="1"> <tr><th>D</th><th>H</th></tr> <tr><td>10-15</td><td>1</td></tr> <tr><td>20-40</td><td>2</td></tr> <tr><td>50</td><td>3</td></tr> </table> | D | H | 10-15 | 1 | 20-40 | 2 | 50 | 3 | <p>Adds a wrench flat.</p> <p>SC = 1mm Increment</p> <p>Ⓢ SC+δ+4≤L</p> <p>Ⓢ W-M (N)≥2 for SC≤M(N)×3</p> <table border="1"> <tr><th>D</th><th>W</th><th>δ</th><th>D</th><th>W</th><th>δ</th></tr> <tr><td>10</td><td>8</td><td>8</td><td>30</td><td>27</td><td>15</td></tr> <tr><td>12</td><td>10</td><td>8</td><td>35</td><td>30</td><td>15</td></tr> <tr><td>15</td><td>13</td><td>10</td><td>40</td><td>36</td><td>20</td></tr> <tr><td>20</td><td>17</td><td>10</td><td>50</td><td>41</td><td>20</td></tr> <tr><td>25</td><td>22</td><td>10</td><td></td><td></td><td></td></tr> </table> | D | W | δ | D | W | δ | 10 | 8 | 8 | 30 | 27 | 15 | 12 | 10 | 8 | 35 | 30 | 15 | 15 | 13 | 10 | 40 | 36 | 20 | 20 | 17 | 10 | 50 | 41 | 20 | 25 | 22 | 10 | | | | <p>Changes L dimension tolerance.</p> <p>Ordering Code: LKC</p> <p>Ⓢ L<500→L±0.05</p> <p>Ⓢ L≥500→L±0.1</p> <table border="1"> <tr><th>D</th><th>W</th><th>δ</th><th>D</th><th>W</th><th>δ</th></tr> <tr><td>10</td><td>8</td><td>8</td><td>30</td><td>27</td><td>15</td></tr> <tr><td>12</td><td>10</td><td>8</td><td>35</td><td>30</td><td>15</td></tr> <tr><td>15</td><td>13</td><td>10</td><td>40</td><td>36</td><td>20</td></tr> <tr><td>20</td><td>17</td><td>10</td><td>50</td><td>41</td><td>20</td></tr> <tr><td>25</td><td>22</td><td>10</td><td></td><td></td><td></td></tr> </table> | D | W | δ | D | W | δ | 10 | 8 | 8 | 30 | 27 | 15 | 12 | 10 | 8 | 35 | 30 | 15 | 15 | 13 | 10 | 40 | 36 | 20 | 20 | 17 | 10 | 50 | 41 | 20 | 25 | 22 | 10 | | | |
| D | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10-15 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20-40 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | W | δ | D | W | δ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 8 | 8 | 30 | 27 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 10 | 8 | 35 | 30 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 13 | 10 | 40 | 36 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 17 | 10 | 50 | 41 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 22 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | W | δ | D | W | δ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 8 | 8 | 30 | 27 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 10 | 8 | 35 | 30 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 13 | 10 | 40 | 36 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 17 | 10 | 50 | 41 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 22 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| D | PFR | | | | | | | PPFR | | | | | | | SPFR | | | | | | | |
|----|--------|-------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--|
| | Min. L | L50.1 | L100.1 | L150.1 | L200.1 | L300.1 | L400.1 | Min. L | L50.1 | L100.1 | L150.1 | L200.1 | L300.1 | L400.1 | Min. L | L50.1 | L100.1 | L150.1 | L200.1 | L300.1 | L400.1 | |
| 10 | 50.0 | 100.0 | 150.0 | 200.0 | 300.0 | 400.0 | 600.0 | 50.0 | 100.0 | 150.0 | 200.0 | 300.0 | 400.0 | 600.0 | 50.0 | 100.0 | 150.0 | 200.0 | 300.0 | 400.0 | 600.0 | |
| 12 | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | | | | | | | | |