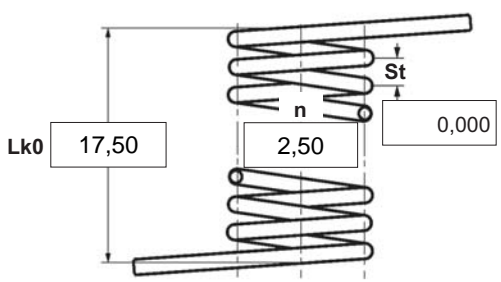



- $\alpha$  degree Unstressed leg position
- $\alpha 1$  degree Prestressed rotational angle
- $\alpha 2$  degree Loaded rotational angle
- $\alpha h$  degree Excursion
- $\alpha n$  degree Maximum rotational angle
- d mm Wire diameter
- Ddmin mm Min. possible mandrel diameter
- Ddmax mm Max. possible mandrel diameter
- De mm Outer coil diameter
- Di mm Inner coil diameter
- F1 N Prestressed spring force
- F2 N Loaded spring force
- Lk0 mm Length of spring body when relaxed
- LS mm Length of leg
- M1 Nmm Prestressed torque
- M2 Nmm Loaded torque
- Mn Nmm Maximum torque
- n pc. Active coils
- RH mm Distance power flow point from centre
- St mm Distance between coils (pitch)
- Weight g Weight of one spring in grammes



Spring test acc. to DIN ISO 2859/1 test level II

| <b>1 Coiling direction</b><br><input type="checkbox"/> left <input checked="" type="checkbox"/> right   | <b>5 Excursion <math>\alpha h</math></b> <input type="text"/> degr.   | <b>12 Tolerances to DIN 2194</b><br><table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Grade</th> <th>Di</th> <th>Lk0</th> <th>LSH,LSR</th> <th><math>\alpha, \alpha 1, \alpha 2</math></th> <th>M1, M2</th> <th>Wire diameter d to DIN 2076</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>2</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> </tr> <tr> <td>3</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table> | Grade                               | Di                                  | Lk0                                 | LSH,LSR                             | $\alpha, \alpha 1, \alpha 2$ | M1, M2   | Wire diameter d to DIN 2076 | 1        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          | 2  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |  | 3 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|---|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------|----------|-----------------------------|----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------|----|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| Grade   | Di  | Lk0   | LSH,LSR                             | $\alpha, \alpha 1, \alpha 2$        | M1, M2                              | Wire diameter d to DIN 2076         |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 1   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 2   | <input checked="" type="checkbox"/>   | <input checked="" type="checkbox"/>   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 3   | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| <b>2 Form of legs</b><br>tangential, straight, no bends *<br><br>*We can also supply torsion springs with any form of leg for an extra charge. | <b>6 Stress cyc. end. N</b> <input type="text"/>  | <b>7 Stress cycle frequ. n</b> <input type="text"/> /   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| <b>3 Fixing</b><br>Recumbent leg <input type="checkbox"/> Lever leg <input type="checkbox"/>  | <b>8 Application temp.</b> <input type="text"/> °C  | <b>9 Material</b><br>EN 10270-3-1.4310  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| <b>4 Load</b><br><input type="checkbox"/> in winding direction<br><input type="checkbox"/> against winding direction  | <b>10 Wire or rod surface</b><br><input checked="" type="checkbox"/> drawn <input type="checkbox"/> rolled <input type="checkbox"/> metal-cut | <b>13 Production compensation through</b><br>A spring torque and the associated swing angle $\alpha$ <input checked="" type="checkbox"/><br>A spring torque and the associated swing angle and $\alpha 0$ <input type="checkbox"/><br>Two spring resistances and the associated swing angle $\alpha, n, d$ <input type="checkbox"/><br>$\alpha, n, Di$ <input type="checkbox"/>   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| <b>11 Surface treatment</b><br><input type="text"/>   |   | <b>Prices</b><br><table style="width: 100%;"> <thead> <tr> <th>Cantidad progresiva</th> <th>Precio unidad [EUR]</th> </tr> </thead> <tbody> <tr><td>1</td><td>6,4400 €</td></tr> <tr><td>2</td><td>4,5400 €</td></tr> <tr><td>3</td><td>4,3300 €</td></tr> <tr><td>7</td><td>3,5700 €</td></tr> <tr><td>17</td><td>2,3000 €</td></tr> <tr><td>37</td><td>1,8300 €</td></tr> <tr><td>75</td><td>1,7400 €</td></tr> </tbody> </table>   | Cantidad progresiva                 | Precio unidad [EUR]                 | 1                                   | 6,4400 €                            | 2                            | 4,5400 € | 3                           | 4,3300 € | 7                        | 3,5700 €                 | 17                       | 2,3000 €                 | 37                       | 1,8300 € | 75 | 1,7400 €                            |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| Cantidad progresiva   | Precio unidad [EUR]   |   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 1   | 6,4400 €  |   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 2   | 4,5400 €  |   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 3   | 4,3300 €  |   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 7   | 3,5700 €  |   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 17  | 2,3000 €  |   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 37  | 1,8300 €  |   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |
| 75  | 1,7400 €  |   |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |

**Remarks**  
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