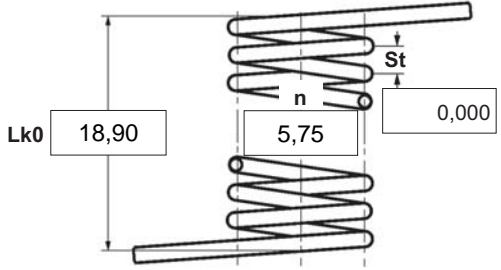



- $\alpha$  degree Unstressed leg position
- $\alpha 1$  degree Prestressed rotational angle
- $\alpha 2$  degree Loaded rotational angle
- $\alpha h$  degree Excursion
- $\alpha n$  degree Maximum rotational angle
- d mm Wire diameter
- Ddmin mm Min. possible mandrel diameter
- Ddmax mm Max. possible 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 checked="" type="checkbox"/> left <input 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>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>3 Fixing</b><br>Recumbent leg <input type="checkbox"/> Lever leg <input type="checkbox"/>  | <b>7 Stress cycle frequ. n</b> <input type="text"/> / <input type="text"/>  | <b>Prices</b><br><table style="width: 100%;"> <thead> <tr> <th>Quantity scale</th> <th>Single price [EUR]</th> </tr> </thead> <tbody> <tr><td>1</td><td>5,5300 €</td></tr> <tr><td>2</td><td>3,9000 €</td></tr> <tr><td>3</td><td>3,7100 €</td></tr> <tr><td>7</td><td>2,9000 €</td></tr> <tr><td>17</td><td>1,4300 €</td></tr> <tr><td>37</td><td>1,1000 €</td></tr> <tr><td>75</td><td>0,9400 €</td></tr> <tr><td>125</td><td>0,6511 €</td></tr> <tr><td>175</td><td>0,6135 €</td></tr> <tr><td>250</td><td>0,5760 €</td></tr> <tr><td>350</td><td>0,5306 €</td></tr> <tr><td>450</td><td>0,4927 €</td></tr> </tbody> </table>   | Quantity scale                      | Single price [EUR]                  | 1                                   | 5,5300 €                            | 2                            | 3,9000 € | 3                           | 3,7100 € | 7                        | 2,9000 €                 | 17                       | 1,4300 €                 | 37                       | 1,1000 € | 75 | 0,9400 €                            | 125                                 | 0,6511 €                            | 175                                 | 0,6135 €                            | 250 | 0,5760 € | 350                      | 0,5306 €                 | 450                      | 0,4927 €                 |                          |                                     |
| Quantity scale  | Single price [EUR]  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 1   | 5,5300 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 2   | 3,9000 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 3   | 3,7100 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 7   | 2,9000 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 17  | 1,4300 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 37  | 1,1000 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 75  | 0,9400 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 125   | 0,6511 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 175   | 0,6135 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 250   | 0,5760 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 350   | 0,5306 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| 450   | 0,4927 €  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| <b>4 Load</b><br><input type="checkbox"/> in winding direction<br><input type="checkbox"/> against winding direction  | <b>8 Application temp.</b> <input type="text"/> °C  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
| <b>Remarks</b><br>Country of origin: DE   Customs tariff number: 73202089   | <b>9 Material</b><br>EN 10270-3-1.4310  |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
|   | <b>10 Wire or rod surface</b><br><input checked="" type="checkbox"/> drawn <input type="checkbox"/> rolled <input type="checkbox"/> metal-cut |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |
|   | <b>11 Surface treatment</b><br><input type="text"/>   |  |                                     |                                     |                                     |                                     |                              |          |                             |          |                          |                          |                          |                          |                          |          |    |                                     |                                     |                                     |                                     |                                     |     |          |                          |                          |                          |                          |                          |                                     |