



- $\alpha$  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

| <p><b>1 Coiling direction</b></p> <p><input checked="" type="checkbox"/>  left    <input type="checkbox"/>  right</p> | <p><b>5 Excursion <math>\alpha h</math></b> <input type="text"/> degr.</p> <p><b>6 Stress cyc. end. <math>N</math></b> <input type="text"/></p> <p><b>7 Stress cycle frequ. <math>n</math></b> <input type="text"/> / <input type="text"/></p> <p><b>8 Application temp.</b> <input type="text"/> °C</p> <p><b>9 Material</b><br/>EN 10270-3-1.4310</p> <p><b>10 Wire or rod surface</b><br/><input checked="" type="checkbox"/> drawn    <input type="checkbox"/> rolled    <input type="checkbox"/> metal-cut</p> <p><b>11 Surface treatment</b><br/><input type="text"/></p> | <p><b>12 Tolerances to DIN 2194</b></p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <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> <p><b>13 Production compensation through</b></p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td>A spring torque and the associated swing angle</td> <td><math>\alpha</math></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>A spring torque and the associated swing angle and <math>\alpha 0</math></td> <td><math>n, d</math></td> <td><input type="checkbox"/></td> </tr> <tr> <td></td> <td><math>n, Di</math></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Two spring resistances and the associated swing angle</td> <td><math>\alpha, n, d</math></td> <td><input type="checkbox"/></td> </tr> <tr> <td></td> <td><math>\alpha, n, Di</math></td> <td><input type="checkbox"/></td> </tr> </table> <p><b>Prices</b></p> <table style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td style="text-align: left;">Desconto por quantidade</td> <td style="text-align: left;">Preço individual</td> </tr> <tr> <td></td> <td>[EUR]</td> </tr> <tr> <td>1</td> <td>6,3100 €</td> </tr> <tr> <td>2</td> <td>4,4500 €</td> </tr> <tr> <td>3</td> <td>4,2400 €</td> </tr> <tr> <td>7</td> <td>3,4500 €</td> </tr> <tr> <td>17</td> <td>2,2200 €</td> </tr> <tr> <td>37</td> <td>1,7500 €</td> </tr> <tr> <td>75</td> <td>1,6000 €</td> </tr> </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"/> | A spring torque and the associated swing angle | $\alpha$ | <input checked="" type="checkbox"/> | A spring torque and the associated swing angle and $\alpha 0$ | $n, d$ | <input type="checkbox"/> |  | $n, Di$ | <input type="checkbox"/> | Two spring resistances and the associated swing angle | $\alpha, n, d$ | <input type="checkbox"/> |  | $\alpha, n, Di$ | <input type="checkbox"/> | Desconto por quantidade | Preço individual |  | [EUR] | 1 | 6,3100 € | 2 | 4,4500 € | 3 | 4,2400 € | 7 | 3,4500 € | 17 | 2,2200 € | 37 | 1,7500 € | 75 | 1,6000 € |
|---|---|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------|--------|-----------------------------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--|----------|-------------------------------------|---|--------|--------------------------|--|---------|--------------------------|---|----------------|--------------------------|--|-----------------|--------------------------|-------------------------|------------------|--|-------|---|----------|---|----------|---|----------|---|----------|----|----------|----|----------|----|----------|
| 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"/> |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| A spring torque and the associated swing angle  | $\alpha$  | <input checked="" type="checkbox"/>   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| A spring torque and the associated swing angle and $\alpha 0$   | $n, d$  | <input type="checkbox"/>  |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
|   | $n, Di$   | <input type="checkbox"/>  |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| Two spring resistances and the associated swing angle   | $\alpha, n, d$  | <input type="checkbox"/>  |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
|   | $\alpha, n, Di$   | <input type="checkbox"/>  |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| Desconto por quantidade   | Preço individual  |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
|   | [EUR]   |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| 1   | 6,3100 €  |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| 2   | 4,4500 €  |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| 3   | 4,2400 €  |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| 7   | 3,4500 €  |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| 17  | 2,2200 €  |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| 37  | 1,7500 €  |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |
| 75  | 1,6000 €  |   |                                     |                                     |                                     |                                     |                              |        |                             |   |                          |                          |                          |                          |                          |  |   |                                     |                                     |                                     |                                     |                                     |  |   |                          |                          |                          |                          |                          |                                     |  |          |                                     |   |        |                          |  |         |                          |   |                |                          |  |                 |                          |                         |                  |  |       |   |          |   |          |   |          |   |          |    |          |    |          |    |          |

**Remarks**

País de origem: DE | Número de tarifa alfandegária: 73202089