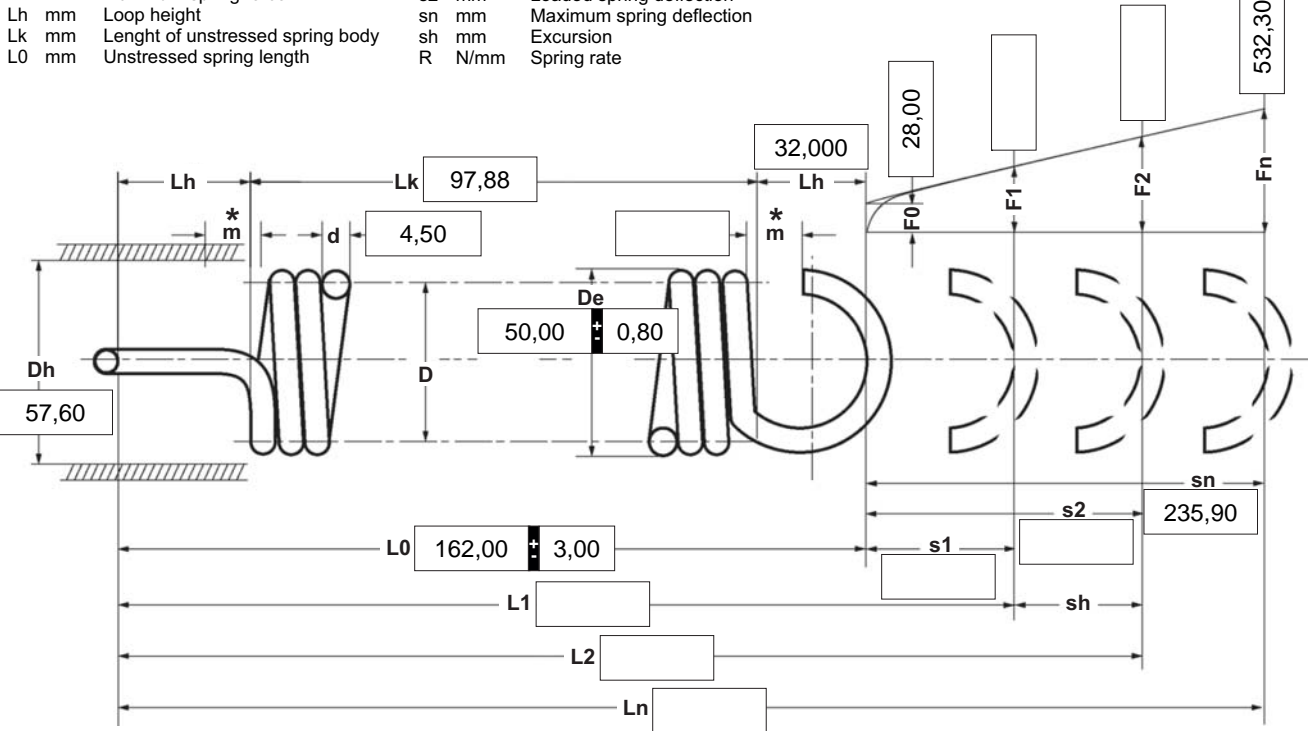


|       |                                  |        |                               |
|-------|----------------------------------|--------|-------------------------------|
| d mm  | Wire diameter                    | L1 mm  | Prestressed spring length     |
| D mm  | Mean coil diameter               | L2 mm  | Loaded spring length          |
| De mm | Outer coil diameter              | Ln mm  | Maximum spring length         |
| Dh mm | Minimum diameter of bush         | m mm   | Loop opening width            |
| F0 N  | Initial tension                  | n pc.  | Number of aktive coils        |
| F1 N  | Prestressed spring force         | nt pc. | Total number of coils         |
| F2 N  | Loaded spring force              | s1 mm  | Prestressed spring deflection |
| Fn N  | Maximum spring force             | s2 mm  | Loaded spring deflection      |
| Lh mm | Loop height                      | sn mm  | Maximum spring deflection     |
| Lk mm | Lenght of unstressed spring body | sh mm  | Excursion                     |
| L0 mm | Unstressed spring length         | R N/mm | Spring rate                   |

Weight g Weight of one spring

\*Loops are stocked without openings (m = 0,00). However it is possible to have an opening cut into the loop at an extra cost, without causing any delay.



n  nt  R 2,140 Weight 404,482

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>4 Stress cyc. end. N</b> <input type="text"/>   |                                     | <b>10 Tolerances to DIN 2097</b>  |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
|---|-------------------------------------|--|-------------------------------------|---|-------------------------------------|--|------------------------|-------------------------------------|--|----------|-----------------------------|---|--------------------------|--------------------------|---|--------------------------|--------------------------|----|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--|----------|
| <b>2 Loop shape and loop position</b><br>Loop shape: <input type="text" value="1/1 German loop"/><br>Loops offset to one another by <input type="text" value="270,0"/> $\pm$ <input type="text" value="28,0"/> degrees (in the dir. of the right helix) |                                     | <b>5 Stress cycle frequ. n</b> <input type="text"/> / <input type="text"/>   |                                     | <table border="1"> <thead> <tr> <th>Grade</th> <th>De,Di,D</th> <th>L0</th> <th>F0-Fn</th> <th>Loops</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> </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> </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 checked="" type="checkbox"/></td> </tr> </tbody> </table> |                                     | Grade  | De,Di,D                | L0                                  | F0-Fn  | Loops    | 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 checked="" type="checkbox"/> |  |          |
| Grade   | De,Di,D                             | L0   | F0-Fn                               | Loops   | 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 checked="" type="checkbox"/> |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| <b>3 Excursion sh</b> <input type="text"/> mm   |                                     | <b>6 Application temp.</b> <input type="text"/> °C   |                                     | <b>11 Production compensation through</b>   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| <b>7 Material</b><br><input type="text" value="EN 10270-1"/>  |                                     | <b>8 Wire or rod surface</b><br><input checked="" type="checkbox"/> drawn <input type="checkbox"/> rolled <input type="checkbox"/> metal-cut |                                     | <table border="1"> <tr> <td>A spring resistance, associated length of tensed spring and L0</td> <td>F0, D</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>A spring resistance, associated length of tensed spring and F0</td> <td>L0, n, d</td> <td><input type="checkbox"/></td> </tr> <tr> <td></td> <td>L0, D</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Two spring resistances and associated length of tensed spring</td> <td>L0, n, d</td> <td><input type="checkbox"/></td> </tr> <tr> <td></td> <td>F0,D</td> <td><input type="checkbox"/></td> </tr> </table>  |                                     | A spring resistance, associated length of tensed spring and L0 | F0, D                  | <input checked="" type="checkbox"/> | A spring resistance, associated length of tensed spring and F0 | L0, n, d | <input type="checkbox"/>    |   | L0, D                    | <input type="checkbox"/> | Two spring resistances and associated length of tensed spring | L0, n, d                 | <input type="checkbox"/> |    | F0,D                                | <input type="checkbox"/>            |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| A spring resistance, associated length of tensed spring and L0  | F0, D                               | <input checked="" type="checkbox"/>  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| A spring resistance, associated length of tensed spring and F0  | L0, n, d                            | <input type="checkbox"/>   |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
|   | L0, D                               | <input type="checkbox"/>   |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| Two spring resistances and associated length of tensed spring   | L0, n, d                            | <input type="checkbox"/>   |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
|   | F0,D                                | <input type="checkbox"/>   |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| <b>9 Surface treatment</b> <input type="text"/>   |                                     | <b>Prices</b>  |                                     | <table border="1"> <thead> <tr> <th>Grupa ilociowa</th> <th>Cena jednostkowa [EUR]</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td>13,8800 €</td></tr> <tr><td>3</td><td>11,0500 €</td></tr> <tr><td>7</td><td>6,5900 €</td></tr> <tr><td>17</td><td>4,6100 €</td></tr> <tr><td>37</td><td>2,9500 €</td></tr> <tr><td>75</td><td>2,4600 €</td></tr> <tr><td>125</td><td>2,3800 €</td></tr> <tr><td>175</td><td>2,3621 €</td></tr> <tr><td>250</td><td>2,3490 €</td></tr> <tr><td>350</td><td>2,3059 €</td></tr> <tr><td></td><td>2,2597 €</td></tr> </tbody> </table>  |                                     | Grupa ilociowa   | Cena jednostkowa [EUR] | 1                                   |  | 2        | 13,8800 €                   | 3 | 11,0500 €                | 7                        | 6,5900 €  | 17                       | 4,6100 €                 | 37 | 2,9500 €                            | 75                                  | 2,4600 €                            | 125                                 | 2,3800 €                            | 175 | 2,3621 €                 | 250                      | 2,3490 €                 | 350                      | 2,3059 €                            |  | 2,2597 € |
| Grupa ilociowa  | Cena jednostkowa [EUR]              |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 1   |                                     |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 2   | 13,8800 €                           |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 3   | 11,0500 €                           |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 7   | 6,5900 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 17  | 4,6100 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 37  | 2,9500 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 75  | 2,4600 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 125   | 2,3800 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 175   | 2,3621 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 250   | 2,3490 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
| 350   | 2,3059 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |
|   | 2,2597 €                            |  |                                     |   |                                     |  |                        |                                     |  |          |                             |   |                          |                          |   |                          |                          |    |                                     |                                     |                                     |                                     |                                     |     |                          |                          |                          |                          |                                     |  |          |

**Remarks**  
 Kraj pochodzenia: DE | Numer taryfy celnej: 73202085