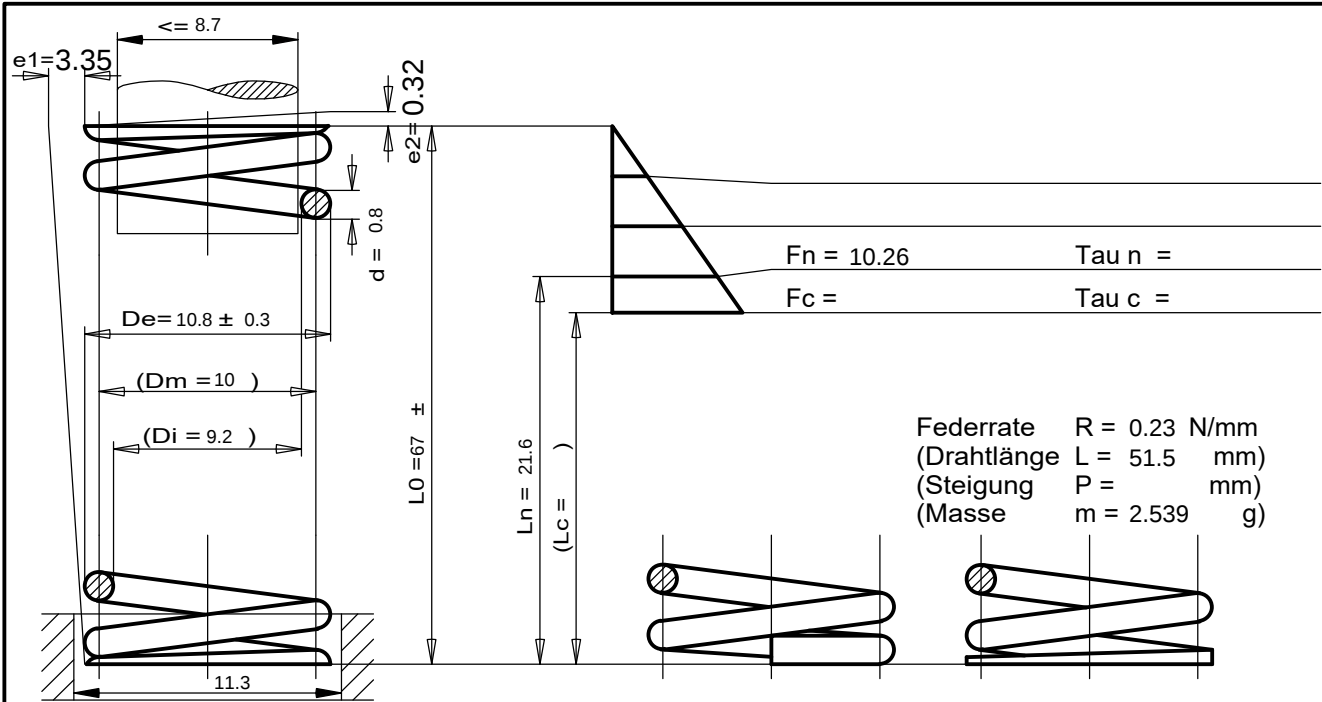


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| Form 1. Federenden angelegt und geschliffen <input checked="" type="checkbox"/> |                                                                                                                                                                                                                | Form 2. Federenden angelegt <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Form 3. Federenden angelegt, geschmiedet und geschliffen <input type="checkbox"/> |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|---|---|---|----------|--------|--------------------------|-------------------------------------|--------------------------|--------------------------|----|--------------------------|-------------------------------------|--------------------------|--------------------------|----|--------------------------|-------------------------------------|--------------------------|--------------------------|----|--------------------------|--------------------------|--------------------------|--------------------------|----|--------------------------|-------------------------------------|--------------------------|--------------------------|----|--------------------------|-------------------------------------|--------------------------|--------------------------|---|--|--|--|--|
| 1                                                                               | Anzahl der federnden Windungen $n = 18.5$<br>Gesamtanzahl der Windungen $nt = 20.5$                                                                                                                            |                                                      | 10 Zulässige Abweichungen nach EN 15800 Gütegrad<br><table><thead><tr><th></th><th>1</th><th>2</th><th>3</th><th>DIN 2096</th></tr></thead><tbody><tr><td>De, Di</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>L0</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>F1</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>F2</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>e1</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>e2</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>d</td><td></td><td></td><td></td><td></td></tr></tbody></table> |                                                                                   |  |  | 1 | 2 | 3 | DIN 2096 | De, Di | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | L0 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | F1 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | F2 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | e1 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | e2 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | d |  |  |  |  |
|                                                                                 | 1                                                                                                                                                                                                              | 2                                                    | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DIN 2096                                                                          |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| De, Di                                                                          | <input type="checkbox"/>                                                                                                                                                                                       | <input checked="" type="checkbox"/>                  | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>                                                          |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| L0                                                                              | <input type="checkbox"/>                                                                                                                                                                                       | <input checked="" type="checkbox"/>                  | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>                                                          |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| F1                                                                              | <input type="checkbox"/>                                                                                                                                                                                       | <input checked="" type="checkbox"/>                  | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>                                                          |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| F2                                                                              | <input type="checkbox"/>                                                                                                                                                                                       | <input type="checkbox"/>                             | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>                                                          |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| e1                                                                              | <input type="checkbox"/>                                                                                                                                                                                       | <input checked="" type="checkbox"/>                  | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>                                                          |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| e2                                                                              | <input type="checkbox"/>                                                                                                                                                                                       | <input checked="" type="checkbox"/>                  | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>                                                          |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| d                                                                               |                                                                                                                                                                                                                |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| 2                                                                               | Windungsrichtung rechts <input checked="" type="checkbox"/><br>links <input type="checkbox"/>                                                                                                                  |                                                      | 11 Fertigungsausgleich durch:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| 3                                                                               | Entgraten der Federenden nicht <input checked="" type="checkbox"/><br>innen <input type="checkbox"/><br>aussen <input type="checkbox"/>                                                                        |                                                      | a) wenn eine Federkraft und die zugehörige Länge vorgeschrieben sind $L_0$ <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| 4                                                                               | Arbeitsweg (Hub)                                                                                                                                                                                               |                                                      | b) wenn eine Federkraft, die zugehörige Länge und $L_0$ vorgeschrieben sind $n$ und $d$ <input checked="" type="checkbox"/><br>$n$ und $De, Di$ <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| 5                                                                               | Lastspielfrequenz                                                                                                                                                                                              |                                                      | c) wenn zwei Federkräfte und die zugehörigen Längen vorgeschrieben sind $L_0, n$ und $d$ <input type="checkbox"/><br>$L_0, n$ und $De, Di$ <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| 6                                                                               | Arbeitstemperaturbereich von 0 bis 80 °C                                                                                                                                                                       |                                                      | 12 Prüffedern setzen !<br>übrige Federn gesetzt <input type="checkbox"/><br>ungesetzt <input type="checkbox"/> liefern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| 7                                                                               | Draht- oder Staboberfläche gezogen <input checked="" type="checkbox"/><br>gewalzt <input type="checkbox"/><br>spitzenlos geschliffen <input type="checkbox"/><br>Feder kugelgestrahlt <input type="checkbox"/> |                                                      | Ungesetzt zu liefernde Federn dürfen länger sein als $L_0$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| 8                                                                               | Oberflächenschutz :                                                                                                                                                                                            |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |
| 9                                                                               | Werkstoff: SH/DH                                                                                                                                                                                               |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                   |  |  |   |   |   |          |        |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |    |                          |                          |                          |                          |    |                          |                                     |                          |                          |    |                          |                                     |                          |                          |   |  |  |  |  |

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|-------|----------|-------|------|-------------------------|------|------------|
|       |          |       |      | Datum                   | Name | Druckfeder |
|       |          |       |      | Bearb.                  |      |            |
|       |          |       |      | Gepr.                   |      |            |
|       |          |       |      | Norm                    |      |            |
|       |          |       |      | ZILLER PRÄZISIONSFEDERN |      | D-08037-01 |
| Zust. | Änderung | Datum | Name | ZILLER Böhmenkirch      |      |            |