

07.2025

Symbol	Unit	Description	Value
F_n	N	Maximum spring force	137,00
L_h	mm	Loop height	7,150
L_k	mm	Length of unstressed spring body	45,90
L_0	mm	Unstressed spring length	60,20
s_2	mm	Loaded spring deflection	35,68
s_n	mm	Maximum spring deflection	11,00
sh	mm	Excursion	0,30
R	N/mm	Spring rate	12,00

The technical drawing illustrates a spring assembly with the following dimensions and parameters:

- Dimensions:**
 - L_h : Loop height (7,150 mm)
 - L_k : Length of unstressed spring body (45,90 mm)
 - L_0 : Unstressed spring length (60,20 mm)
 - L_1 , L_2 , L_n : Additional length parameters
 - d : Wire diameter (1,80 mm)
 - De : Mean coil diameter (12,00 mm)
 - sh : Excursion (0,30 mm)
 - s_1 , s_2 : Spring deflections
 - s_n : Maximum spring deflection (35,68 mm)
 - $15,00$: Dimension for the first loop
 - $11,00$: Dimension for the second loop
- Force-Displacement Curve:**
 - The curve shows the relationship between force (F) and displacement (s).
 - Key points on the curve include F_0 , F_1 , F_2 , and F_n .
 - The maximum force F_n is 137,00 N.
 - The maximum displacement s_n is 35,68 mm.

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

1 Coiling direction ☐  left ☒  right	4 Stress cyc. end. N	10 Tolerances to DIN 2097 <table><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><tr><td>1</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td rowspan="3">☐</td></tr><tr><td>2</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td></tr><tr><td>3</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr></table>		Grade	De,Di,D	L0	F0-Fn	Loops	Wire diameter d to DIN 2076	1	☐	☐	☐	☐	☐	2	☒	☒	☒	☒	3	☐	☐	☐	☐				
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3	☐	☐	☐	☐																									
2 Loop shape and loop position Loop shape 1/1 German loop Loops offset to one another by 180,0 ☒ 27,0 degrees  (in the dir. of the right helix)	6 Application temp. °C	11 Production compensation through <table><tr><td>A spring resistance, associated length of tensed spring and L0</td><td>F0, D</td><td>☒</td></tr><tr><td>A spring resistance, associated length of tensed spring and F0</td><td>L0, n, d</td><td>☐</td></tr><tr><td></td><td>L0, D</td><td>☐</td></tr><tr><td>Two spring resistances and associated length of tensed spring</td><td>L0, n, d</td><td>☐</td></tr><tr><td></td><td>F0,D</td><td>☐</td></tr></table>		A spring resistance, associated length of tensed spring and L0	F0, D	☒	A spring resistance, associated length of tensed spring and F0	L0, n, d	☐		L0, D	☐	Two spring resistances and associated length of tensed spring	L0, n, d	☐		F0,D	☐											
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3 Excursion sh mm	7 Material 1.4310	Prices <table><tr><th>Cantidad progresiva</th><th>Precio unidad [EUR]</th></tr><tr><td>1</td><td>6,5600 €</td></tr><tr><td>2</td><td>4,1300 €</td></tr><tr><td>3</td><td>2,9300 €</td></tr><tr><td>7</td><td>2,5000 €</td></tr><tr><td>17</td><td>1,2300 €</td></tr><tr><td>37</td><td>0,9300 €</td></tr><tr><td>75</td><td>0,7600 €</td></tr><tr><td>125</td><td>0,7108 €</td></tr><tr><td>175</td><td>0,6967 €</td></tr><tr><td>250</td><td>0,6533 €</td></tr><tr><td>350</td><td>0,6276 €</td></tr><tr><td>450</td><td>0,5960 €</td></tr></table>		Cantidad progresiva	Precio unidad [EUR]	1	6,5600 €	2	4,1300 €	3	2,9300 €	7	2,5000 €	17	1,2300 €	37	0,9300 €	75	0,7600 €	125	0,7108 €	175	0,6967 €	250	0,6533 €	350	0,6276 €	450	0,5960 €
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8 Wire or rod surface ☒ drawn ☐ rolled ☐ metal-cut																													
9 Surface treatment 																													
Remarks País de origen: DE Número de arancel aduanero: 73202085																													