

07.2025

d	mm	Wire diameter
D	mm	Mean coil diameter
De	mm	Diameter of mandrel
Dd	mm	Outer coil diameter
Dh	mm	Diameter of bush
e1	mm	Perm.dev. perpendicular line
e2	mm	Perm.dev. parallel line
F1	N	Prestressed spring force
F2	N	Loaded spring force

F _n	N	Maximum force in static use
F _c	N	Theoretic maximum force at L _c
L ₀	mm	Length of unstressed spring
L ₁	mm	Prestressed spring length
L ₂	mm	Loaded spring length
L _k	mm	Buckling length
L _n	mm	Minimum length in static use
L _c	mm	Block length
n	pc.	Active coils

nt	pc.	Total coils	07.
R	N/mm	Spring rate	
S	mm	Pitch (distance between coils)	
s1	mm	Prestressed spring deflection	
s2	mm	Loaded spring deflection	
sh	mm	Maximum stroke in static use	
sn	mm	Maximum spring deflection in static use	
Weight	g	Weight of one spring in grammes	
Fndyn	N	Maximum force in dynamic force	
Fndtol	N	(+/-) tolerance of maximum dynamic force	
Lndyn	mm	Minimum length in dynamic use	
shdyn	mm	Maximum stroke in dynamic use	

* The spring data for the dynamic applications is relevant only for springs having a shot peened hardened surface !

L_{ndyn} mm Minimum length in dynamic use
 s_{hdyn} mm Maximum stroke in dynamic use

* The spring data for the dynamic applications is relevant only for springs having a shot peened hardened surface !

Form 1: Spring ends closed and ground
 Dimensions: Dd 0,30, $e1$, $e2$, S , De 0,60 $\pm$ 0,04, D 0,50, Dh 0,80, d , 0,10
 Forces: $F1$, $F2$, F_n 0,64 $\pm$ 0,03, F_c
 Displacements: $s1$, $s2$, s_n 1,45, $L0$ 3,90 $\pm$ 0,18, $L1$, $L2$, L_n 2,45, Lc
 Form 2: Spring ends closed

Form 1: Spring ends closed and ground
 Dimensions: n 18,50, nt , R 0,441, **Weight** 0,002

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

1 Coiling direction ☐ left ☒ right	7 Guidance and seat to DIN EN 13906-1 ☐ mandrel ☐ bush Buckling length L_k at v=0,5 / Bild 5 3,09 mm	12 Tolerances to DIN EN 15800 <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Grade</th> <th>De,Di,D</th> <th>L0</th> <th>F1,F2</th> <th>e1,e2</th> <th>Wire diameter d to DIN 2076</th> </tr> </thead> <tbody> <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> </tbody> </table>	Grade	De,Di,D	L0	F1,F2	e1,e2	Wire diameter d to DIN 2076	1	☐	☐	☐	☐	☒	2	☒	☒	☒	☒	3	☐	☐	☐	☐				
Grade	De,Di,D	L0	F1,F2	e1,e2	Wire diameter d to DIN 2076																							
1	☐	☐	☐	☐	☒																							
2	☒	☒	☒	☒																								
3	☐	☐	☐	☐																								
2 Dynamic load * <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Fndyn</td> <td> 0,58 </td> </tr> <tr> <td>Fndtol</td> <td> 0,03 </td> </tr> <tr> <td>Lndyn</td> <td> 2,58 </td> </tr> <tr> <td>shdyn</td> <td> 0,45 </td> </tr> </table>	Fndyn	0,58	Fndtol	0,03	Lndyn	2,58	shdyn	0,45	8 Material EN 10270-1	13 Prouction compensation through <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">A spring resistance and associated length of tensed spring</td> <td>L0 ☐</td> </tr> <tr> <td>A spring resistance, associated length of tensed spring and L0</td> <td>n, d ☒ n, De, Di ☐</td> </tr> <tr> <td>Two spring resistances and associated lengths of tensed spring</td> <td>L0, n, d ☐ L0,n,De,Di ☐</td> </tr> </table>	A spring resistance and associated length of tensed spring	L0 ☐	A spring resistance, associated length of tensed spring and L0	n, d ☒ n, De, Di ☐	Two spring resistances and associated lengths of tensed spring	L0, n, d ☐ L0,n,De,Di ☐												
Fndyn	0,58																											
Fndtol	0,03																											
Lndyn	2,58																											
shdyn	0,45																											
A spring resistance and associated length of tensed spring	L0 ☐																											
A spring resistance, associated length of tensed spring and L0	n, d ☒ n, De, Di ☐																											
Two spring resistances and associated lengths of tensed spring	L0, n, d ☐ L0,n,De,Di ☐																											
3 Excursion sh mm	9 Wire or rod surface ☒ drawn ☐ rolled ☐ metal-cut	14 Setting springs All springs which show setting tendency because of their size are pre-set within the production process.																										
4 Stress cyc. end. N	10 Springs deburred ☐ inside ☐ outside	Prices <table style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Cantidad progresiva</th> <th style="text-align: left;">Precio unidad [EUR]</th> </tr> </thead> <tbody> <tr><td>1</td><td>4,8500 €</td></tr> <tr><td>2</td><td>3,4200 €</td></tr> <tr><td>3</td><td>3,2600 €</td></tr> <tr><td>7</td><td>1,8400 €</td></tr> <tr><td>17</td><td>0,8300 €</td></tr> <tr><td>37</td><td>0,5200 €</td></tr> <tr><td>75</td><td>0,3400 €</td></tr> <tr><td>125</td><td>0,2817 €</td></tr> <tr><td>175</td><td>0,2192 €</td></tr> <tr><td>250</td><td>0,1878 €</td></tr> <tr><td>350</td><td>0,1452 €</td></tr> <tr><td>450</td><td>0,1264 €</td></tr> </tbody> </table>	Cantidad progresiva	Precio unidad [EUR]	1	4,8500 €	2	3,4200 €	3	3,2600 €	7	1,8400 €	17	0,8300 €	37	0,5200 €	75	0,3400 €	125	0,2817 €	175	0,2192 €	250	0,1878 €	350	0,1452 €	450	0,1264 €
Cantidad progresiva	Precio unidad [EUR]																											
1	4,8500 €																											
2	3,4200 €																											
3	3,2600 €																											
7	1,8400 €																											
17	0,8300 €																											
37	0,5200 €																											
75	0,3400 €																											
125	0,2817 €																											
175	0,2192 €																											
250	0,1878 €																											
350	0,1452 €																											
450	0,1264 €																											
5 Stress cycle frequ. n /	11 Surface treatment ☐ shot peened 																											
6 Application temp. °C	Remarks País de origen: DE Número de arancel aduanero: 73202081																											