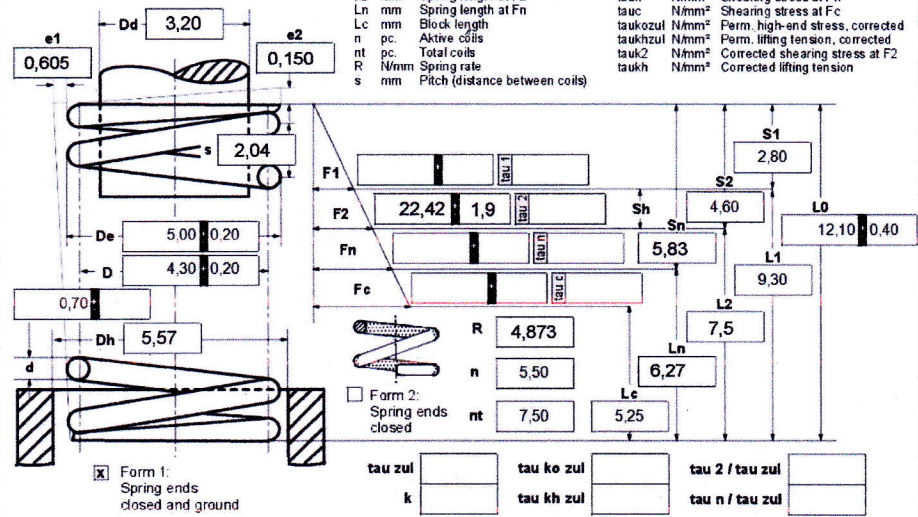


d mm Wire diameter
 D mm Mean coil diameter
 Dd mm Diameter of mandrel
 De mm Outer coil diameter
 Dh mm Diameter of bush
 e1 mm Perm. dev. perpendicular line
 e2 mm Perm. dev. parallel line
 F1 N Prestressed spring force
 F2 N Loaded spring force
 Fn N Maximum force in static use
 Fc N Theoretic maximum force at Lc
 k --- Stress coefficient
 L0 mm Length of unstressed spring
 L1 mm Spring length at F1
 L2 mm Spring length at F2
 Ln mm Spring length at Fn
 Lc mm Block length
 n pc. Active coils
 nt pc. Total coils
 R N/mm Spring rate
 s mm Pitch (distance between coils)
 S1 mm Spring deflection at F1
 S2 mm Spring deflection at F2
 Sh mm Excursion
 Sn mm Spring deflection at Fn
 tauzul N/mm² Permitted shearing strength
 tau1 N/mm² Shearing stress at F1
 tau2 N/mm² Shearing stress at F2
 tau n N/mm² Shearing stress at Fn
 tau c N/mm² Shearing stress at Fc
 tau kozul N/mm² Perm. high-end stress, corrected
 tau khzul N/mm² Perm. lifting tension, corrected
 tau k2 N/mm² Corrected shearing stress at F2
 tau kh N/mm² Corrected lifting tension



1 Coiling direction <input type="checkbox"/> left <input checked="" type="checkbox"/> right	7 Guidance and seat to DIN EN 13906-1 <input type="checkbox"/> mandrel <input type="checkbox"/> bush Buckling length in mm at pic. 1 v=2,0 pic. 2 v=1,0 pic. 3 v=1,0 pic. 4 v=0,7 pic. 5 v=0,5	11 Surface treatment <input type="checkbox"/> shot peened																																								
2 Dynamic load <input type="checkbox"/> tau k2 tau kh tau k2 / tau ko zul tau kh / tau kh zul	8 Material EN 10270-3-1.4571 Shearing modulus G Elasticity modulus E	12 Tolerances to DIN EN 15800 <table border="1"> <tr> <th>Grade</th> <th>De</th> <th>Di</th> <th>D</th> <th>L0</th> <th>F1</th> <th>F2</th> <th>e1</th> <th>e2</th> <th>Wire diameter d to DIN 2076</th> </tr> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></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><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></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Grade	De	Di	D	L0	F1	F2	e1	e2	Wire diameter d to DIN 2076	1										2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3									
Grade	De	Di	D	L0	F1	F2	e1	e2	Wire diameter d to DIN 2076																																	
1																																										
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																	
3																																										
3 Excursion Sh _____ mm 4 Stress cyc. end. N _____ 5 Stress cycle frequ. 1 / _____ 6 Application temp. _____ °C	9 Wire or rod surface <input checked="" type="checkbox"/> drawn <input type="checkbox"/> rolled <input type="checkbox"/> metal-cut	13 Production compensation through A spring resistance and associated length of tensed spring L0 <input type="checkbox"/> A spring resistance, associated length of tensed spring and L0 n, d <input type="checkbox"/> Two spring resistances and associated lengths of tensed spring L0, n, d <input type="checkbox"/>																																								
10 Springs deburred <input type="checkbox"/> inside <input type="checkbox"/> outside	14 Wind test springs ! LS _____ mm Rest springs <input type="checkbox"/> wound <input type="checkbox"/> not wound Not wound springs may be longer than L0 !																																									

P/N = PM-SPRING12-0789 *Handwritten signature* 23/10/2019

Deutsch / english 00 000 BLATT / SHEET INDEX / INDEX ALLGEMEINTOLERANZEN NACH / GENERAL TOLERANCE: TOLERIERUNG NACH / FUNDAMENTAL TOLERANCING PRINCIPLE: ISO 8015 SCHUTZVERMERKE NACH / PROTECTION NOTICES ISO 16016 PROJ. METHODE / PROJ. METHOD : ORIGINAL / DRAWING DIN A4 DATEI / FILE: -	Zeichnung erstellt / drawing drawn ART DER AENDERUNG / TYPE OF REVISION TAG / DAY NAME GEPR. / CHECK: NICHT BEMASSTE GEOMETRIEN DEM DATENSATZ ENTNEHMEN / REFER TO CAD MODEL FOR UNDIMENSIONED DETAILS 	05.06.19 Gontianer DATUM / DATE NAME / NAME ROHTEIL / RAW PART: - WERKSTOFF / MATERIAL: EN 10270-1 DH / 1.4310 OBERFL. BEH. / SURFACE: - Volume approx: cm ³ weight approx: kg BEZ. / TITLE: pressure spring FUER / FOR: L-Boxx Micro ZEICH.-NR. / DRAWING NUMBER MASSTAB / SCALE BLATT / SHEET 12-0789 1:1 1 VON / OF 1
--	--	---

SKWJ007024
 CO2 set 26/7/19
 sample of Ban set
 20/10/2019