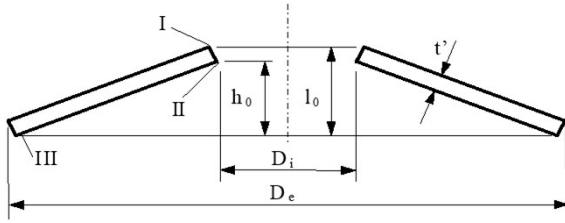
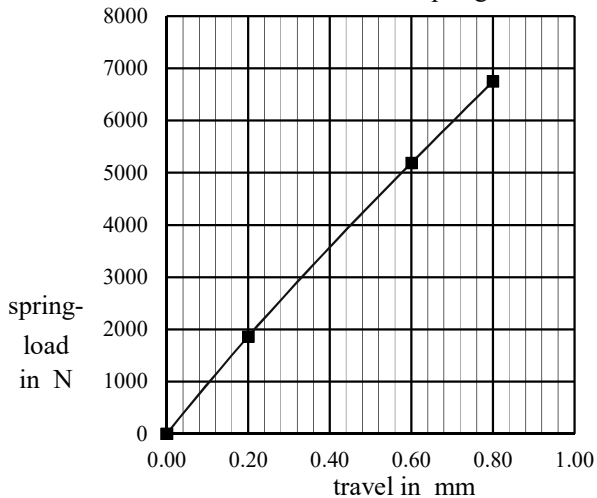


Mubea		Disc Springs, Data Sheet										
		group 2										
Stand 31.10.08		part./drawing no.: 18 0022										
		customer:										
1/15/2018 MVK		Mubea Disc Springs, 8212 Dixie Hwy, Florence, KY 41042 Phone: 859-746-2155, Fax: 859-746-2243										
		characteristic of spring 										
dimensions outer diam.: $D_e = 35.500$ mm inner diam.: $D_i = 18.300$ mm thickness: $t = 2.000$ mm red. thickness: $t' = 2.000$ mm spring height: $l_0 = 2.800$ mm												
1 spring		1										
data $h_0/t = 0.400$ $h_0' = 0.800$ mm $h_0'/t' = 0.400$ $D_e/D_i = 1.940$		Wire centered springs wire diameter: 0.00 mm groove depth: 0.00 mm										
load points of one spring			calculated stresses	load points of one spring								
load-point	height l mm	travel s mm	load F N	σ_I	σ_{II}	σ_{III}	σ_{OM}	height l mm	travel s mm	load F N		
				MPa								
0	2.800							2.800				
1	2.600	0.200	1864	-749	393	409	-403	2.600	0.200	1864		
2	2.200	0.600	5187	-2095	1332	1128	-1208	2.200	0.600	5187		
Flat	2.000	0.800	6747	-2692	1878	1439	-1611	2.000	0.800	6747		
specification		material: 1.8159 (51 CrV 4)		Youngs-modulus: 206000 MPa		temperature: 20 °C		surface finish: shot peening				
		corrosion prot.: phosphated and oiled										
fatigue life of Mubea springs										please contact Mubea!		
upper stress too high!												
travel: 0.40 mm		between l 1 : 2.60 mm		and l 2 : 2.20 mm								
remarks												
Load tolerance:		+15 / -7,5% at 75% of h0 of one spring										
tolerance inner diam.:		18.300 mm		to		18.510 mm						
tolerance outer diam.:		35.250 mm		to		35.500 mm						