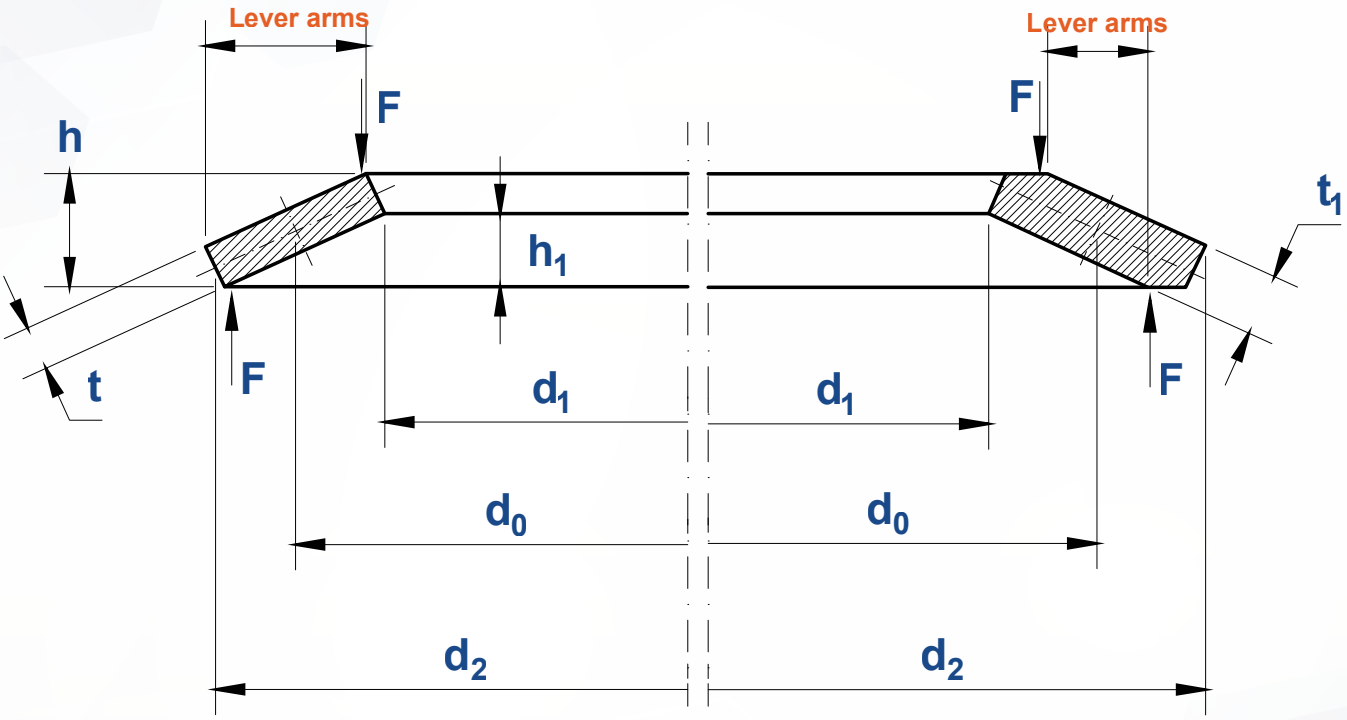
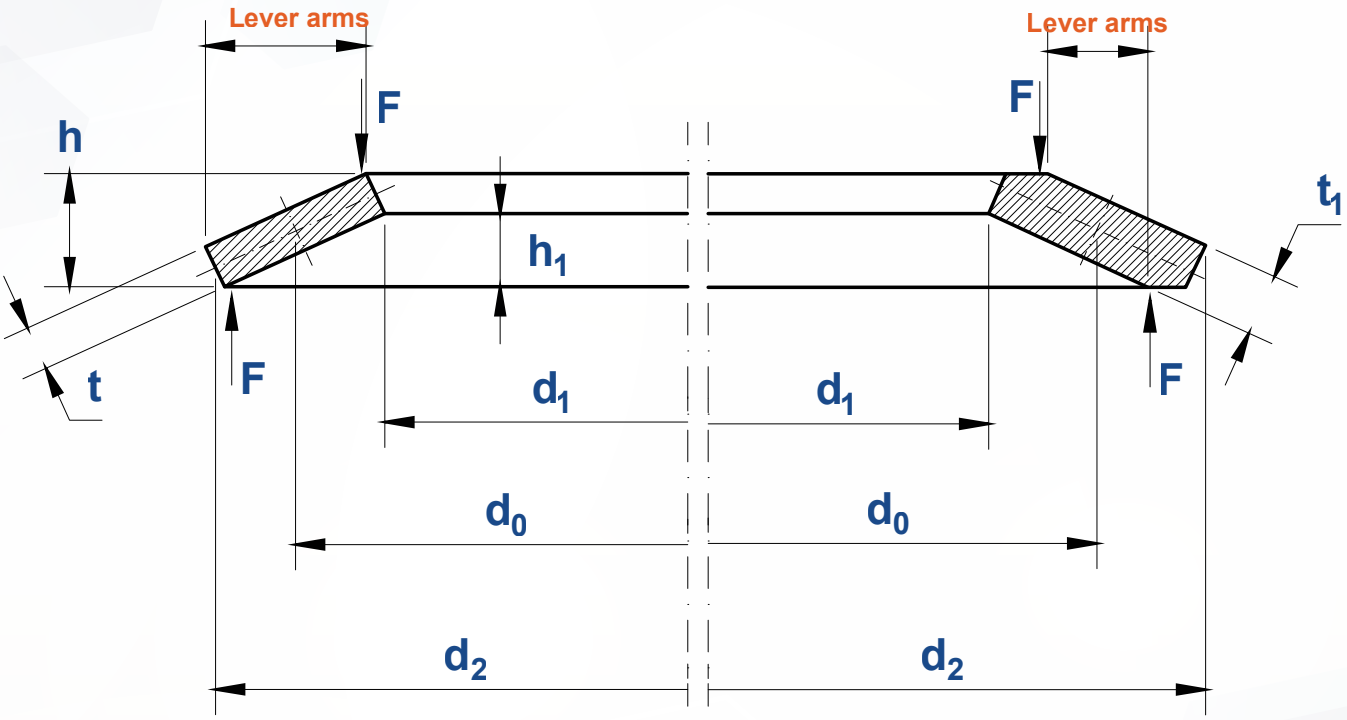


a) without flat bearings: Group 1 Group 2 b) with flat bearings: Group 3

Nominal Diameter		8	10	12.5	14	16	18	20	22.5	25	28	31.5	35.5	40	45	50
group		1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
d_2	max=nominal size (h12)	8	10	12.5	14	16	18	20	22.5	25	28	31.5	35.5	40	45	50
	min	7.85	9.85	12.32	13.82	15.82	17.82	19.79	22.29	24.79	27.79	31.25	35.25	39.75	44.75	49.75
d_1	min=nominal size (H12)	4.2	5.2	6.2	7.2	8.2	9.2	10.2	11.2	12.2	14.2	16.3	18.3	20.4	22.4	25.4
	max	4.32	5.32	6.35	7.35	8.35	9.35	10.38	11.38	12.38	14.38	16.48	18.51	20.61	22.61	25.61
t		0.2	0.25	0.35	0.35	0.4	0.45	0.5	0.6	0.7	0.8	0.8	0.9	1	1.25	1.25
t_1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
h_1		0.25	0.3	0.45	0.45	0.5	0.6	0.65	0.8	0.9	1	1.05	1.15	1.3	1.6	1.6
h		0.45	0.55	0.8	0.8	0.9	1.05	1.15	1.4	1.6	1.8	1.85	2.05	2.3	2.85	2.85

①, Material:
a) Made from steel as specified in EN 10083, EN 10089, or EN 10132-4. Carbon steel shall only be used for the manufacture of group 1 springs. steel as above shall be based on a modulus of elasticity E of 206,000 MPa.
b) The modulus of elasticity and strength property of other materials (e.g., stainless steel for springs in accordance with EN 10151, copper alloys (spring bronze) in accordance with EN 1654) will likely be different. In this case, we recommend that you contact the spring manufacturer.



a) without flat bearings: Group 1 Group 2 b) with flat bearings: Group 3

Nominal Diameter		56	63	71	80	90	100	112	125	140	160	180	200	225	250
group		2	2	2	2	2	2	2	2	2	2	2	2	3	3
d_2	max=nominal size (h12)	56	63	71	80	90	100	112	125	140	160	180	200	225	250
	min	55.7	62.7	70.7	79.7	89.65	99.65	111.65	124.6	139.6	159.6	179.6	199.54	224.54	249.54
d_1	min=nominal size (H12)	28.5	31	36	41	46	51	57	64	72	82	92	102	112	127
	max	28.71	31.25	36.25	41.25	46.25	51.3	57.3	64.3	72.3	82.35	92.35	102.35	112.35	127.4
t		1.5	1.8	2	2.25	2.5	2.7	3	3.5	3.8	4.3	4.8	5.5	6.5	7
t_1		-	-	-	-	-	-	-	-	-	-	-	-	6.2	6.7
h_1		1.95	2.35	2.6	2.95	3.2	3.5	3.9	4.5	4.9	5.6	6.2	7	7.1	7.8
h		3.45	4.15	4.6	5.2	5.7	6.2	6.9	8	8.7	9.9	11	12.5	13.6	14.8

①, Material:
a) Made from steel as specified in EN 10083, EN 10089, or EN 10132-4. Carbon steel shall only be used for the manufacture of group 1 springs. steel as above shall be based on a modulus of elasticity E of 206,000 MPa.
b) The modulus of elasticity and strength property of other materials (e.g., stainless steel for springs in accordance with EN 10151, copper alloys (spring bronze) in accordance with EN 1654) will likely be different. In this case, we recommend that you contact the spring manufacturer.