Materiale
Filo di acciaio armonico speciale per molle, trattamento superficiale zincatura bianca, classe C, secondo norme DIN 17223-1. Tolleranza sul Ø del filo secondo norme DIN 2076

Es. d'Ord: TR+ N. pos.= TR1

molle a trazione standard 81 *standard tension springs*

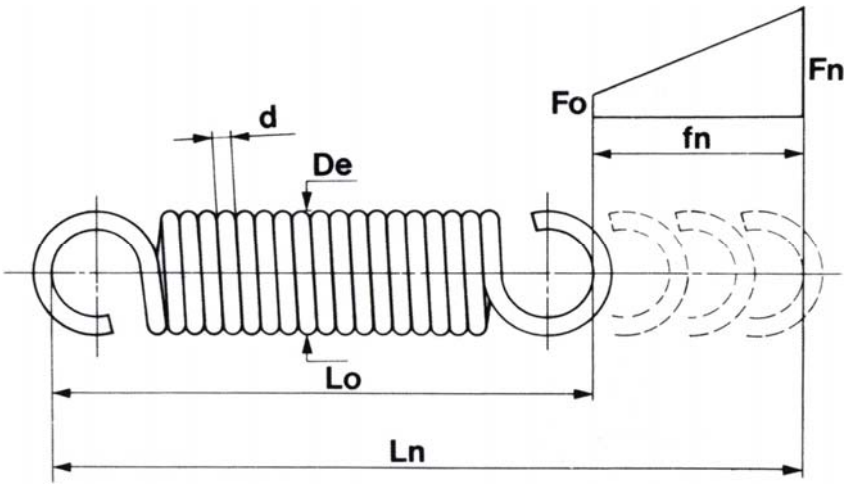
N. pos.	N. dis.	d	De	Fo	Fn	Lo	Ln	fn	Rg	i
1	TRZ 094	0.50	4.50	0.08	1.11	19.0	43.81	24.81	0.04	23.5
2	TRZ 095	0.60	4.80	0.14	1.76	35.0	72.15	37.15	0.04	40
3	TRZ 084	1.30	8.50	0.71	9.00	34.5	51.80	17.30	0.47	16
4	TRZ 085	1.50	9.50	0.93	11.66	31.5	43.43	11.93	0.89	11
* 5	TRZ 097	1.20	6.20	0.74	9.33	40.0	48.00	8.00	1.07	15.5
* 6	TRZ 099	1.50	7.00	1.20	14.93	35.0	39.96	4.96	2.76	11
7	TRZ 100	1.20	7.80	0.61	7.70	26.0	37.80	11.80	0.60	12
8	TRZ 096	0.70	5.00	0.20	2.53	40.0	74.80	34.80	0.06	45
9	TRZ 098	0.90	6.50	0.33	4.15	60.0	117.30	57.30	0.06	56
10	TRZ 076	2.00	10.20	1.91	24.00	33.0	39.30	6.30	3.51	8.25
11	TRZ 079	1.00	9.50	0.30	3.85	24.5	43.00	18.50	0.19	8.5
12	TRZ 057	1.50	7.80	1.10	13.75	30.0	36.20	6.20	2.02	10
13	TRZ 137	1.00	8.00	0.36	4.52	25.0	43.60	18.60	0,22	13
14	TRZ 131	1.00	6.00	0.46	5.85	52.0	78.60	26.60	0.20	39.5
15	TRZ 133	1.00	7.00	0.40	5.11	26.0	41.25	15.25	0.30	15
*16	TRZ 134	1.20	7.10	0.66	8.35	53.0	75.10	22.10	0.34	29
17	TRZ 136	1.00	7.80	0.37	4.63	46.0	90.90	44.90	0.09	33.5
*18	TRZ 081	1.20	8.00	0.60	7.53	38.0	54.30	16.30	0.42	15.5
*19	TRZ 132	1.20	6.70	0.70	8.76	63.0	78.20	15.20	0.53	23.5
20	TRZ 135	1.50	7.30	1.15	14.47	45.0	55.25	10.25	1.29	20
21	TRZ 140	1.50	8.80	0.99	12.45	37.0	50.20	13.20	0.86	15
22	TRZ 062	1.40	10.00	0.77	9.63	34.5	53.60	19.10	0.46	13
23	TRZ 061	1.00	9.50	0.30	3.85	41.0	93.34	52.34	0.06	24
*24	TRZ 078	1.50	10.00	0.89	11.14	46.5	63.30	16.80	0.61	13.5
25	TRZ 077	1.00	5.50	0.81	10.22	62.0	77.90	15.90	0.59	44
*26	TRZ 149	1.20	12.60	0.39	4.94	30.0	72.30	42.30	0.10	13
27	TRZ 142	2.00	10.20	2.19	27.47	40.0	47.90	7.90	3.18	11.5
28	TRZ 143	2.50	11.80	3.18	39.77	46.0	55.00	9.00	4.04	12
29	TRZ 047	2.00	14.40	1.64	20.59	63.2	97.65	34.45	0.55	19
30	TRZ 067	1.50	14.50	0.63	7.92	63.0	137.40	74.40	0.09	23.5
*31	TRZ 139	2.00	8.70	2.15	26.96	60.0	66.50	6.50	3.79	14
*32	TRZ 068	2.50	13.00	2.95	36.92	79.5	100.10	20.60	1.64	20.5
*33	TRZ 086	2.50	14.50	2.70	33.76	66.5	89.20	22.70	1.37	16.5
34	TRZ 151	2.20	15.20	1.79	22.45	68.0	106.75	38.75	0.53	20
*35	TRZ 150	2.20	14.20	1.90	23.85	84.0	107.50	23.50	0.93	14.5
*36	TRZ 147	2.20	12.50	2.12	26.60	80.0	100.55	20.55	1.19	18
*37	TRZ 144	1.50	12.00	0.75	9.45	78.0	131.70	53.70	0.16	27
*38	TRZ 145	2.00	12.50	1.62	20.27	70.0	97.00	27.00	0.69	20
39	TRZ 088	2.00	14.50	1.42	17.77	87.0	147.90	60.90	0.26	30.5
*40	TRZ 146	2.00	12.50	1.62	20.27	82.0	109.00	27.00	0.69	20
*41	TRZ 148	2.50	12.50	3.04	38.07	75.0	89.35	14.35	2.44	16
*42	TRZ 152	2.50	14.20	2.74	34.36	68.0	88.70	20.70	1.52	16
43	TRZ 138	1.20	7.70	0.62	7.78	55.0	88.20	33.20	0.21	35
44	TRZ 075	0.90	9.00	0.24	3.06	65.0	122.30	57.30	0.04	25
*45	TRZ 087	1.50	26.50	0.35	4.42	34.0	115.80	81.80	0.04	6.5
*46	TRZ 071	2.50	20.50	1.98	24.81	85.0	148.10	63.10	0.36	18.5
47	TRZ 065	2.80	16.50	3.07	38.42	73.5	97.90	24.40	1.44	16.5
*48	TRZ 159	2.00	27.00	0.79	9.88	53.0	192.90	139.90	0.06	15.75
49	TRZ 158	3.00	22.80	2.81	35.23	115.0	194.20	79.20	0.40	25.5
*50	TRZ 155	2.00	14.80	1.39	17.44	115.0	188.70	73.70	0.21	35
51	TRZ 056	1.50	12.00	0.75	9.45	74.0	134.70	60.70	0.14	34.5
52	TRZ 153	1.70	12.00	1.08	13.60	80.0	137.30	57.30	0.21	35
53	TRZ 156	2.20	16.00	1.71	21.44	80.0	133.10	53.10	0.37	24
54	TRZ 157	2.60	18.00	2.30	28.78	80.0	122.30	42.30	0.62	20

* Molle con occhielli allungati o accorciati

66050 San Salvo (CH) Zona industriale All. "B" Tel 0873/342319-342592 Fax 0873/342792
www.pavonearticolitecnici.it *e-mail: remo@pavonearticolitecnici.it*

Significato dei Simboli

d: diametro del filo
De: diam esterno della molla, mm
Lo: lunghezza libera (della molla non sottoposta a carico), misurata all'interno degli occhielli, in mm
Fo: Precarica della molla, in Kgf
Fn: Carico massimo al quale può essere sottoposta la molla, in Kgf
Ln: Lunghezza della molla quando è sottoposta al carico Fn, in mm.
Fn: freccia (allungamento) della molla sottoposta al carico Fn, in mm
Rg: l'allungamento della molla (rapporto tra l'aumento del carico e l'allungamento corrispondente della molla)



molle a trazione standard

N. pos.	N. dis.	d	De	Fo	Fn	Lo	Ln	fn	Rg	i
55	TR 158	0.60	6	0.14	1,75	25	48.1	0.880	0.777	25
56	TR 159	0.60	5	14	2.09	50	85.3	1.270	0.008	70
57	TR 160	0.60	7	11	1.44	55	97.2	0.400	0.006	72
58	TR 161	1	8	0.31	3.68	70	105.3	3.120	0.299	55
59	TR 162	1	7	0.35	4.46	90	135.8	3.650	0.143	78
60	TR 163	1	10	0.27	3.09	105	168.2	0.850	0.036	89
61	TR 164	1	11	0.24	3.04	130	210.5	1.400	0.034	11 3
62	TR 165	1.20	11	0.44	5.62	43	81.0	39.2	0.131	18.5
63	TR 166	1.20	14	0.37	4 64	62	152.2	94.1	0.045	29.5
64	TR 167	1.60	15	0.69	8.74	68	133.3	65.9	0.122	27
65	TR 168	1.60	13	1.45	17.20	105	170.0	28.1	0.356	52
66	TR 169	1.80	15	0.90	12.60	160	220.5	60.5	0.210	75
67	TR 170	2	18	1.07	13.30	70	125.3	58.3	0.211	18.5
68	TR 171	2	16	1.20	14.30	93	150.3	81.3	0.310	33.5
69	TR 172	2.2	16	1.79	22.45	73	106.75	38.75	0.530	20
70	TR 173	2.50	15	2.40	30.1	93	129.4	38.2	0.727	28.5
71	TR 174	2.50	18	2.30	28.78	80	122.30	42.30	0.62	20
72	TR 175	2.80	16	3.07	38.42	70	97.90	24.40	1.44	16.5
73	TR 176	3.20	20	3.55	44.4	90	117.5	29.5	1.384	19
74	TR 177	3.20	22	3.01	37.6	120	197.4	72.6	0.456	28
75	TR 178	3.20	23	3.01	37.6	80	109.8	33	1.084	14
76	TR 179	3.20	28	2.51	31.4	95	172.8	79.8	0.362	16
77	TR 180	3.20	35	2.04	25.5	100	192.4	91.6	0.256	13.5
78	TR 181	3.20	43	1.67	20.9	100	204	100	0.192	8
Molle con occhielli inglesi e tedeschi										

Per determinare la lunghezza interna degli occhielli la formula è:
Lg= Lo – d (i+1) : 2 (Lg=lunghezza di ciascun anello)
Per le altre molle la lunghezza Lg degli occhielli è approssimativamente uguale al diametro interno della molla, Di=De-2d.

Materiale
Filo di acciaio armonico speciale per molle, trattamento superficiale zincatura bianca, classe C, secondo norme DIN 17223-1. Tolleranza sul Ø del filo secondo norme DIN 2076

Es. d'Ord: CO+ N. pos.= CO1

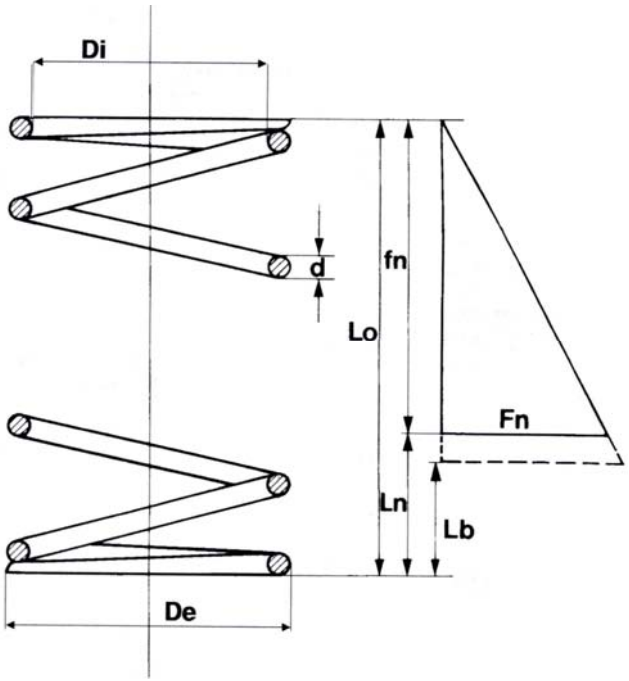
molle a compressione standard
standard compression springs

N. pos.	N. dis.	d	De	DI	Fn	Lo	Ln	fn	Rg	i_t
1	CO.MO 164	0.60	4.1	2.9	1.53	10.5	7.2	3.3	0.465	8.5
2	CO.MO 162	0.40	2.5	1.7	0.68	60.0	29.0	31.0	0.022	70
3	CO.MO 078	0.60	4.5	3.3	1.68	21.0	15.6	5.4	0.312	9
4	CO.MO 079	0.70	5.0	3.6	1.73	35.0	21.5	13.5	0.128	25.5
5	CO.MO 247	1.00	6.8	4.8	5.59	37.0	25.0	12.0	0.465	13
6	CO.MO 250	1.40	8.5	5.7	11.63	35.0	24.7	10.3	1.129	11.5
7	CO.MO 166	0.70	6.0	4.6	2.23	18.0	9.7	8.3	0.268	8
8	CO.MO 167	0.80	7.0	5.4	2.70	32.0	14.7	17.3	0.156	13
9	CO.MO 170	0.80	13.3	11.7	0.44	15.0	7.6	7.4	0.059	5.5
10	CO.MO 169	1.50	9.3	6.3	11.52	10.5	7.8	2.7	4.267	4.5
11	CO.MO 062	0.90	8.5	6.7	3.49	38.0	19.3	18.7	0.186	10
12	CO.MO 168	0.70	9.3	7.9	0.61	22.0	8.6	13.4	0.045	8
13	CO.MO 083	1.30	9.0	6.4	8.53	22.0	14.5	7.5	1.137	7.5
14	CO.MO 061	1.00	12.3	10.3	1.06	24.0	13.2	10.8	0.099	9
15	CO.MO 172	1.20	7.4	5.0	8.90	43.0	29.7	13.3	0.669	15
16	CO.MO 192	1.80	17.0	13.4	9.36	12.5	7.8	4.7	1.992	3.5
17	CO.MO 183	2.00	12.0	8.0	14.39	19.0	16.3	2.7	5.333	5
18	CO.MO 184	0.90	12.7	10.9	1.92	28.0	9.9	18.1	0.106	5.75
19	CO.MO 175	1.70	9.0	5.6	17.17	26.0	19.2	6.8	2.525	10.5
20	CO.MO 084	1.70	12.0	8.6	9.63	24.0	17.7	6.3	1.528	7
21	CO.MO 187	1.50	14.6	11.6	5.85	25.0	14.6	10.4	0.562	6
22	CO.MO 181	1.80	11.7	8.1	16.63	37.0	24.7	12.3	1.352	10
23	CO.MO 178	1.30	10.5	7.9	7.92	43.5	21.9	21.6	0.366	12
*24	CO.MO 076	2.20	13.5	9.1	30.27	28.0	20.4	7.6	3.983	7
25	CO.MO 251	1.00	8.2	6.2	4.84	50.0	28.3	21.7	0.223	14
26	CO MO 176	1.00	9.2	7.2	2.39	58.0	29.6	28.4	0.084	23.5
27	CO.MO 249	1.00	9.0	7.0	3.72	83.0	35.3	47.7	0.078	27
28	CO.MO 179	1.20	11.2	8.8	4.88	90.0	38.2	51.8	0.094	24
29	CO MO 186	2.00	14.5	10.5	7.37	22.0	18.4	3.6	2.048	6
30	CO MO 177	2.00	9.6	5.6	27.33	44.0	35.0	9.0	3.037	14
31	CO.MO 248	1.50	11.5	8.5	10.46	53.0	28.2	24.8	0.421	14
32	CO.MO 191	2.00	16.8	12.8	8.07	31.0	22.0	9.0	0.897	7.5
33	CO.MO 189	1.20	15.0	12.6	4.22	58.0	23.2	34.8	0.121	8.5
34	CO.MO 174	1.50	9.0	6.0	12.20	68.0	44.6	23.4	0.521	25.
*35	CO MO 182	2.50	11.8	6.8	32.78	37.0	31.6	5.4	6.070	10
36	CO MO 246	2.00	17.0	13.0	8.53	32.0	22.1	9.9	0.861	7.5
37	CO MO 195	2.00	20.3	16.3	4.69	24.0	17.7	6.3	0.745	5.5
38	CO.MO 194	2.00	20.0	16.0	13.58	25.0	15.1	9.9	1.371	4
*39	CO.MO 091	3.00	22.5	16.5	24.03	35.0	25.1	9.9	2.427	6.5
40	CO.MO 196	1.50	22.8	19.8	2.72	22.0	11.6	10.4	0.261	4
41	CO.MO 188	1.00	15.0	13.0	1.31	45.0	16.2	28.8	0.045	10
42	CO.MO 190	1.20	16.0	13.6	2.58	60.0	21.6	38.4	0.067	11.5
43	CO.MO 197	1.50	26.0	23.0	1.23	13.0	9.4	3.6	0.344	3
44	CO.MO 198	1.60	29.5	26.3	0.65	13.0	10.3	2.7	0.241	3.25
45	CO.MO 200	0.90	9.0	7.2	1.10	50.0	28.5	21.5	0.051	26
46	CO.MO 202	2.00	14.7	10.7	14.93	43.0	27.7	15.3	0.976	10
47	CO.MO 087	1.50	16.5	13.5	6.02	76.0	29.8	46.2	0.130	13.5
48	CO.MO 201	1.50	13.2	10.2	6.69	90.0	43.4	46.6	0.143	24
*49	CO.MO 204	2.50	27.5	22.5	8.07	30.0	18.7	11.3	0.714	5.5
50	CO.MO 205	2.00	29.2	25.2	5.72	40.0	18.4	21.6	0.265	5
51	CO.MO 093	3.00	15.0	9.0	56.81	100.0	80.0	20.0	2.840	18.5
*52	CO.MO 092	3.50	30.0	23.0	29.95	39.0	26.0	13.0	2.303	5.5
53	CO.MO 100	1.80	14.5	10.9	11.58	37.0	22.3	14.7	0.788	8.5
54	CO.MO 245	3.00	33.0	27.0	15.04	75.0	39.9	35.1	0.428	9

* Molle con le estremità molate. * *Grinded extremities springs.*

Significato dei Simboli

d: diametro del filo
De: diam esterno della molla, mm
Lo: lunghezza libera (della molla non sottoposta a carico), in mm
Fo: Precarica della molla, in Kgf
Fn: Carico massimo al quale può essere sottoposta la molla, in Kgf
Ln: Lunghezza della molla quando è sottoposta al carico Fn, in mm.
fn: freccia (accorciamento) della molla quando è sottoposta al carico Fn, in mm
Rg: Rigidità della molla (rapporto tra l'aumento del carico e l'accorciamento corrispondente della molla), in Kgf/mm
Lb: lunghezza a blocco della molla (compressa con le spire a contatto), in mm



molle a compressione standard 83

N. pos.	N. dis.	d	De	Fo	Fn	Lo	Ln	fn	Rg	i
55	CO.MO 182	1.60	10	6.8	11	31.5	20.5	13.900	1.269	12
56	CO.MO 183	1.20	14	11.6	90.4	130	39.6	5.230	0.057	24
57	CO.MO 184	1.60	22	18.8	34.2	48	13.8	6.545	0.191	8
58	CO.MO 185	1	13.8	11.8	2.812	115	27.6	87.4	0.032	17
59	CO.MO 186	1.60	14	10.8	9.833	115	47.5	67.5	0.145	25
60	CO.MO 187	1.20	14	11.6	5.230	62.5	19.9	42.6	0.122	10
61	CO.MO 188	1.60	14	10.8	9.833	53.5	30.4	30.4	0.323	10
62	CO.MO 189	1.60	22	18.8	6.545	110	28.6	81.4	0.080	12
63	CO.MO 190	2	22	18	21.719	55	35.3	19.7	1.100	16.5
64	CO.MO 191	2	18	14	15.064	45	19.8	25.2	0.598	8.5
65	CO.MO 192	2	22	18	12.456	41	15.2	25.8	0.482	6.5
66	CO.MO 193	2	22	18	12.456	94	31.2	62.8	0.198	12
67	CO.MO 194	2	22	18	12.456	200	63.1	136.9	0.091	24
68	CO.MO 195	2.50	15	10	33.936	98	62	36	0.943	24
69	CO.MO 196	2.50	18.5	13.5	28.200	41	22.6	18.4	1.532	8
70	CO.MO 197	2.50	27.5	22.5	19.463	75	26	48.5	0.401	8
71	CO.MO 198	2.50	35	30	15.642	71	20.4	51.1	0.306	6
72	CO.MO 199	3.20	19	12.6	50.041	83	55.4	28.1	1.783	16
73	CO.MO 200	3.20	23	16.6	42.360	74	41.8	32.2	1.316	12
74	CO.MO 201	3.20	28	21.6	35.399	64	30.3	33.2	1.064	8.5
75	CO.MO 202	3.20	35	28.6	28.700	58	23	35.5	0.808	6
76	CO.MO 203	3.20	28	21.6	35.399	135	60.1	74.9	0.472	16
77	CO.MO 204	3.20	35	28.6	28.700	135	47.4	87.6	0.327	12
78	CO.MO 205	3.20	43	36.6	23.562	125	36.1	88.9	0.264	8
Molle con estremità molate			*Grinded extremities springs*							