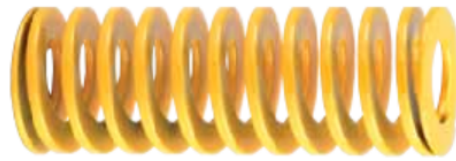
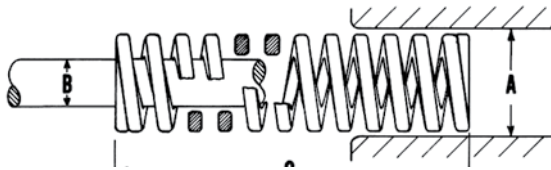


Rectangular Wire Construction



* Note: 1 daN = 1.0197 Kg (Force)

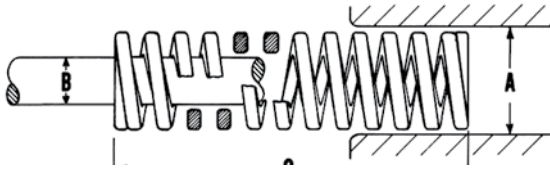
Outer Diam. (mm) A	Inner Diam. (mm) B	Wire Size (mm)	Free Length (mm) C	Catalog Number	Spring *Rate kgf/mm	LOAD-DEFLECTION TABLE					
						0.3 million		0.5 million		1 million	
						Deflection mm	Load kgf (N)	Deflection mm	Load kgf (N)	Deflection mm	Load kgf (N)
10	5	2.1 x 0.8	20	91-1020	1.00	10.0	10 (98.1)	9.0	9 (88.3)	8.0	8 (78.5)
			25	91-1025	0.80	12.5		11.2		10.0	
			30	91-1030	0.67	15.0		13.5		12.0	
			35	91-1035	0.57	17.5		15.7		14.0	
			40	91-1040	0.50	20.0		18.0		16.0	
			45	91-1045	0.44	22.5		20.2		18.0	
			50	91-1050	0.40	25.0		22.5		20.0	
			55	91-1055	0.36	27.5		24.7		22.0	
			60	91-1060	0.33	30.0		27.0		24.0	
			65	91-1065	0.31	32.5		29.2		26.0	
			70	91-1070	0.29	35.0		31.5		28.0	
			75	91-1075	0.27	37.5		33.7		30.0	
			80	91-1080	0.25	40.0		36.0		32.0	
12	6	2.5 x 1.2	20	91-1220	1.40	10.0	14 (137.3)	9.0	12.5 (122.6)	8.0	11 (107.9)
			25	91-1225	1.12	12.5		11.2		10.0	
			30	91-1230	0.93	15.0		13.5		12.0	
			35	91-1235	0.80	17.5		15.7		14.0	
			40	91-1240	0.70	20.0		18.0		16.0	
			45	91-1245	0.62	22.5		20.2		18.0	
			50	91-1250	0.56	25.0		22.5		20.0	
			55	91-1255	0.51	27.5		24.7		22.0	
			60	91-1260	0.47	30.0		27.0		24.0	
			65	91-1265	0.43	32.5		29.2		26.0	
			70	91-1270	0.40	35.0		31.5		28.0	
			75	91-1275	0.37	37.5		33.7		30.0	
			80	91-1280	0.35	40.0		36.0		32.0	
14	7	3.1 x 1.2	25	91-1425	1.44	12.5	18 (176.5)	11.2	16 (156.9)	10.0	14.5 (142.2)
			30	91-1430	1.20	15.0		13.5		12.0	
			35	91-1435	1.03	17.5		15.7		14.0	
			40	91-1440	0.90	20.0		18.0		16.0	
			45	91-1445	0.80	22.5		20.2		18.0	
			50	91-1450	0.72	25.0		22.5		20.0	
			55	91-1455	0.65	27.5		24.7		22.0	
			60	91-1460	0.60	30.0		27.0		24.0	
			65	91-1465	0.55	32.5		29.2		26.0	
			70	91-1470	0.51	35.0		31.5		28.0	
			75	91-1475	0.48	37.5		33.7		30.0	
			80	91-1480	0.45	40.0		36.0		32.0	
			90	91-1490	0.40	45.0		40.5		36.0	
16	8	3.5 x 1.4	25	91-1625	1.68	12.5	21 (206)	11.2	19 (186.3)	10.0	17 (166.7)
			30	91-1630	1.40	15.0		13.5		12.0	
			35	91-1635	1.20	17.5		15.7		14.0	
			40	91-1640	1.05	20.0		18.0		16.0	
			45	91-1645	0.94	22.5		20.0		18.0	
			50	91-1650	0.84	25.0		22.5		20.0	
			55	91-1655	0.77	27.5		24.7		22.0	
			60	91-1660	0.70	30.0		27.0		24.0	
			65	91-1665	0.65	32.5		29.2		26.0	
			70	91-1670	0.60	35.0		31.5		28.0	
			75	91-1675	0.56	37.5		33.7		30.0	
			80	91-1680	0.53	40.0		36.0		32.0	
			90	91-1690	0.47	45.0		40.5		36.0	
			100	91-16100	0.42	50.0		45.0		40.0	

JIS Extra-light load springs

* Note: 1 daN = 1.0197 Kg (Force)

Outer Diam. (mm) A	Inner Diam. (mm) B	Wire Size (mm)	Free Length (mm) C	Catalog Number	Spring *Rate kgf/mm	LOAD-DEFLECTION TABLE					
						0.3 million		0.5 million		1 million	
						Deflection mm	Load kgf (N)	Deflection mm	Load kgf (N)	Deflection mm	Load kgf (N)
18	9	3.9 x 1.5	25	91-1825	2.08	12.5	26 (255)	11.2	23 (226)	10.0	21 (206)
			30	91-1830	1.74	15.0		13.5		12.0	
			35	91-1835	1.49	17.5		15.7		14.0	
			40	91-1840	1.30	20.0		18.0		16.0	
			45	91-1845	1.16	22.5		20.2		18.0	
			50	91-1850	1.04	25.0		22.5		20.0	
			55	91-1855	0.95	27.5		24.7		22.0	
			60	91-1860	0.87	30.0		27.0		24.0	
			65	91-1865	0.80	32.5		29.2		26.0	
			70	91-1870	0.74	35.0		31.5		28.0	
			75	91-1875	0.70	37.5		33.7		30.0	
			80	91-1880	0.65	40.0		36.0		32.0	
			90	91-1890	0.58	45.0		40.5		36.0	
			100	91-18100	0.52	50.0		45.0		40.0	
20	11	4.0 x 1.7	25	91-2025	2.56	12.5	32 (313.8)	11.2	29 (284.4)	10.0	26 (255.0)
			30	91-2030	2.13	15.0		13.5		12.0	
			35	91-2035	1.83	17.5		15.7		14.0	
			40	91-2040	1.60	20.0		18.0		16.0	
			45	91-2045	1.42	22.5		20.2		18.0	
			50	91-2050	1.28	25.0		22.5		20.0	
			55	91-2055	1.16	27.5		24.7		22.0	
			60	91-2060	1.07	30.0		27.0		24.0	
			65	91-2065	0.98	32.5		29.2		26.0	
			70	91-2070	0.91	35.0		31.5		28.0	
			75	91-2075	0.85	37.5		33.7		30.0	
			80	91-2080	0.80	40.0		36.0		32.0	
			90	91-2090	0.71	45.0		40.5		36.0	
			100	91-20100	0.64	50.0		45.0		40.0	
			125	91-20125	0.51	62.5		56.2		50.0	
			150	91-20150	0.43	75.0		67.5		60.0	
22	11	4.7 x 1.9	25	91-2225	3.20	12.5	40 (392)	11.2	36 (353)	10.0	32 (314)
			30	91-2230	2.67	15.0		13.5		12.0	
			35	91-2235	2.29	17.5		15.7		14.0	
			40	91-2240	2.00	20.0		18.0		16.0	
			45	91-2245	1.78	22.5		20.2		18.0	
			50	91-2250	1.60	25.0		22.5		20.0	
			55	91-2255	1.46	27.5		24.7		22.0	
			60	91-2260	1.33	30.0		27.0		24.0	
			65	91-2265	1.23	32.5		29.2		26.0	
			70	91-2270	1.14	35.0		31.5		28.0	
			75	91-2275	1.07	37.5		33.7		30.0	
			80	91-2280	1.00	40.0		36.0		32.0	
			90	91-2290	0.89	45.0		40.5		36.0	
			100	91-22100	0.8	50.0		45.0		40.0	
			125	91-22125	0.64	62.5		56.2		50.0	
			150	91-22150	0.53	75.0		67.5		60.0	

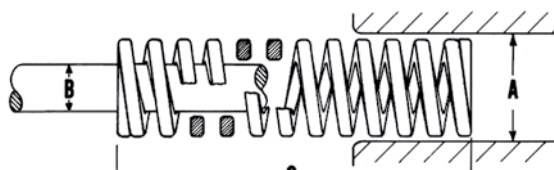
Rectangular Wire Construction



* Note: 1 daN = 1.0197 Kg (Force)

Outer Diam. (mm) A	Inner Diam. (mm) B	Wire Size (mm)	Free Length (mm) C	Catalog Number	Spring *Rate kgf/mm	LOAD-DEFLECTION TABLE					
						0.3 million		0.5 million		1 million	
						Deflection mm	Load kgf (N)	Deflection mm	Load kgf (N)	Deflection mm	Load kgf (N)
25	13.5	5.6 x 2.2	25	91-2525	4.00	12.5	50 (490.3)	11.2	45 (441.3)	10.0	40 (392.3)
			30	91-2530	3.33	15.0		13.5		12.0	
			35	91-2535	2.85	17.5		15.7		14.0	
			40	91-2540	2.50	20.0		18.0		16.0	
			45	91-2545	2.22	22.5		20.2		18.0	
			50	91-2550	2.00	25.0		22.5		20.0	
			55	91-2555	1.82	27.5		24.7		22.0	
			60	91-2560	1.67	30.0		27.0		24.0	
			65	91-2565	1.54	32.5		29.2		26.0	
			70	91-2570	1.43	35.0		31.5		28.0	
			75	91-2575	1.33	37.5		33.7		30.0	
			80	91-2580	1.25	40.0		36.0		32.0	
			90	91-2590	1.11	45.0		40.5		36.0	
			100	91-25100	1.00	50.0		45.0		40.0	
			125	91-25125	0.80	62.5		56.2		50.0	
			150	91-25150	0.67	75.0		67.5		60.0	
			175	91-25175	0.57	87.5		78.7		70.0	
27	13.5	6.4 x 2.2	25	91-2725	4.80	12.5	60 (588)	11.2	54 (530)	10.0	48 (471)
			30	91-2730	4.00	15.0		13.5		12.0	
			35	91-2735	3.43	17.5		15.7		14.0	
			40	91-2740	3.00	20.0		18.0		16.0	
			45	91-2745	2.67	22.5		20.2		18.0	
			50	91-2750	2.40	25.0		22.5		20.0	
			55	91-2755	2.18	27.5		24.7		22.0	
			60	91-2760	2.00	30.0		27.0		24.0	
			65	91-2765	1.85	32.5		29.2		26.0	
			70	91-2770	1.71	35.0		31.5		28.0	
			75	91-2775	1.60	37.5		33.7		30.0	
			80	91-2780	1.50	40.0		36.0		32.0	
			90	91-2790	1.33	45.0		40.5		36.0	
			100	91-27100	1.20	50.0		45.0		40.0	
			125	91-27125	0.96	62.5		56.2		50.0	
			150	91-27150	0.80	75.0		67.5		60.0	
			175	91-27175	0.69	87.5		78.7		70.0	
30	16	6.0 x 2.7	25	91-3025	5.80	12.5	72 (706.1)	11.2	65 (637.4)	10.0	58 (568.8)
			30	91-3030	4.80	15.0		13.5		12.0	
			35	91-3035	4.13	17.5		15.7		14.0	
			40	91-3040	3.60	20.0		18.0		16.0	
			45	91-3045	3.21	22.5		20.2		18.0	
			50	91-3050	2.88	25.0		22.5		20.0	
			55	91-3055	2.63	27.5		24.7		22.0	
			60	91-3060	2.40	30.0		27.0		24.0	
			65	91-3065	2.22	32.5		29.2		26.0	
			70	91-3070	2.05	35.0		31.5		28.0	
			75	91-3075	1.93	37.5		33.7		30.0	
			80	91-3080	1.80	40.0		36.0		32.0	
			90	91-3090	1.60	45.0		40.5		36.0	
			100	91-30100	1.44	50.0		45.0		40.0	
			125	91-30125	1.15	62.5		56.2		50.0	
			150	91-30150	0.96	75.0		67.5		60.0	
			175	91-30175	0.82	87.5		78.7		70.0	
			200	91-30200	0.72	100.0		90.0		80.0	

Rectangular Wire Construction



* Note: 1 daN = 1.0197 Kg (Force)

Outer Diam. (mm) A	Inner Diam. (mm) B	Wire Size (mm)	Free Length (mm) C	Catalog Number	Spring *Rate kgf/mm 1 mm	LOAD-DEFLECTION TABLE					
						0.3 million		0.5 million		1 million	
						Deflection mm	Load kgf (N)	Deflection mm	Load kgf (N)	Deflection mm	Load kgf (N)
35	19	7.4 x 2.8	40	91-3540	4.90	20.0	98 (961.1)	18.0	88 (863.0)	16.0	78 (764.9)
			45	91-3545	4.36	22.5		20.2		18.0	
			50	91-3550	3.92	25.0		22.5		20.0	
			55	91-3555	3.56	27.5		24.7		22.0	
			60	91-3560	3.26	30.0		27.0		24.0	
			65	91-3565	3.02	32.5		29.2		26.0	
			70	91-3570	2.80	35.0		31.5		28.0	
			75	91-3575	2.61	37.5		33.7		30.0	
			80	91-3580	2.45	40.0		36.0		32.0	
			90	91-3590	2.17	45.0		40.5		36.0	
			100	91-35100	1.96	50.0		45.0		40.0	
			125	91-35125	1.57	62.5		56.2		50.0	
			150	91-35150	1.30	75.0		67.5		60.0	
			175	91-35175	1.12	87.5		78.7		70.0	
40	22	8.5 x 3.2	200	91-35200	0.98	100.0		90.0		80.0	
			40	91-4040	6.38	20.0	128 (1255.3)	18.0	115 (1127.8)	16.0	102 (1000.3)
			50	91-4050	5.12	25.0		22.5		18.0	
			60	91-4060	4.26	30.0		27.0		20.0	
			70	91-4070	3.65	35.0		31.5		22.0	
			80	91-4080	3.20	40.0		36.0		24.0	
			90	91-4090	2.84	45.0		40.5		26.0	
			100	91-40100	2.56	50.0		45.0		28.0	
			125	91-40125	2.04	62.5		56.2		30.0	
			150	91-40150	1.70	75.0		67.5		32.0	
			175	91-40175	1.46	87.5		78.7		36.0	
			200	91-40200	1.28	100.0		90.0		40.0	
			250	91-40250	1.02	125.0		112.5		50.0	
50	27.5	10.6 x 4.0	50	91-5050	8.00	25.0	200 (1961.3)	22.5	180 (1765.2)	20.0	160 (1569.1)
			60	91-5060	6.66	30.0		27.0		24.0	
			70	91-5070	5.71	35.0		31.5		28.0	
			80	91-5080	5.00	40.0		36.0		32.0	
			90	91-5090	4.44	45.0		40.5		36.0	
			100	91-50100	4.00	50.0		45.0		40.0	
			125	91-50125	3.20	62.5		56.2		50.0	
			150	91-50150	2.66	75.0		67.5		60.0	
			175	91-50175	2.28	87.5		78.7		70.0	
			200	91-50200	2.00	100.0		90.0		80.0	
			250	91-50250	1.60	125.0		112.5		100.0	
			300	91-50300	1.33	150.0		135.0		120.0	
60	33	13.0 x 4.8	60	91-6060	9.59	30.0	288 (2824.3)	27.0	259 (2539.9)	24.0	230 (2255.5)
			70	91-6070	8.22	35.0		31.5		28.0	
			80	91-6080	7.19	40.0		36.0		32.0	
			90	91-6090	6.40	45.0		40.5		36.0	
			100	91-60100	5.76	50.0		45.0		40.0	
			125	91-60125	4.60	62.5		56.2		50.0	
			150	91-60150	3.84	75.0		67.5		60.0	
			175	91-60175	3.29	87.5		78.7		70.0	
			200	91-60200	2.88	100.0		90.0		80.0	
			250	91-60250	2.30	125.0		112.5		100.0	
			300	91-60300	1.92	150.0		135.0		120.0	