

## Federelemente

- Schraubendruckfedern mit quadratischem Drahtquerschnitt
- Kunststoff-Federn und -Stäbe

## Spring elements

- Screw pressure springs with square wire cross section
- Synthetic springs and bars



**Bildverzeichnis, gruppiert**

**Federelemente**

Schraubendruckfedern



820 / 11.06



821 / 11.10



822 / 11.14



823 / 11.17



824 / 11.20

Eladur Federelemente



830 / 11.22



830 / 11.24

**Stickstoff-Gasdruckfedern \***



8381 / 11.29

**Image directory, grouped**

**Spring elements**

Coil springs

Eladur spring elements

**Nitrogen Gas Springs \***

\* nur CH- und Liechtenstein-Ausführung

\* only for CH and Liechtenstein

<b>Inhaltsverzeichnis (nach Normen aufsteigend chronologisch)</b>		Seite
<b>Klassifikation und technische Bezeichnung</b>		<b>11.05</b>
820	Druckfeder für leichte Belastung - ISO10243	11.06
821	Druckfeder für mittlere Belastung - ISO10243	11.10
822	Druckfeder für starke Belastung - ISO10243	11.14
823	Druckfeder für sehr starke Belastung - ISO10243	11.17
824	Druckfeder für extra starke Belastung - ISO10243	11.20
830	Eladur Hohlstab	11.22
830	Eladur Feder	11.24
<b>Speziell für CH und Liechtenstein</b>		
8381	Stickstoff-Gasdruckfedern	11.29

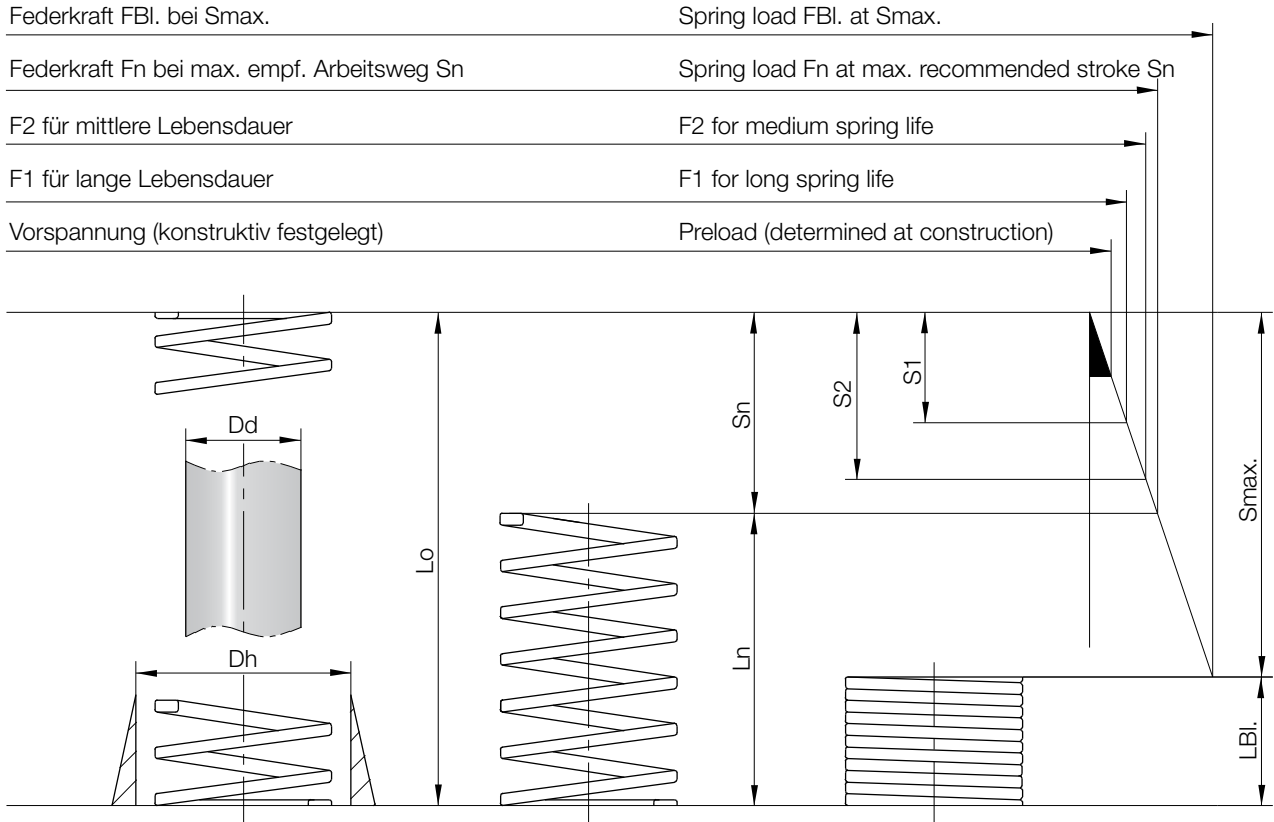
<b>Table of Contents (ascending chronological order of Standards)</b>		Page
<b>Classification and technical description</b>		<b>11.05</b>
820	Pressure spring for light loads - ISO10243	11.06
821	Pressure spring for medium loads - ISO10243	11.10
822	Pressure spring for heavy loads - ISO10243	11.14
823	Pressure spring for very heavy loads - ISO10243	11.17
824	Pressure spring for extra heavy loads - ISO10243	11.20
830	Eladur tubular bar	11.22
830	Eladur spring	11.24
<b>Special for CH and Liechtenstein</b>		
8381	Nitrogen Gas Springs	11.29

**Klassifikation und technische Bezeichnung**

Um eine einsetzspezifisch korrekte Wahl der Feder zu erleichtern, sind in den Tabellen jeweils die Federkraft für mittlere und lange Lebensdauer bei maximalem Arbeitsweg, die totale Federkraft mit Belastbarkeit, sowie Einzel- und Konstant-Belastung aufgeführt (erforderlicher Kraftaufwand, um die Feder 1mm zu drücken).

**Classification and technical description**

In order to simplify the correct selection of the spring for the specific job, the following charts offer values on total spring loads for medium, long life and maximum travel stroke, the total spring load capacity, as well as the single and constant load capacity (admissible load to compress the spring by 1mm)



**Erläuterungen:**

Dd	Dorndurchmesser in mm (Innenführung)
Dh	Hülsendurchmesser in mm (Aussenführung)
Lo	Länge der unbelasteten Feder in mm
Ln	Länge der belasteten Feder in mm
LBl.	Blocklänge der Feder in mm (alle Windungen liegen aneinander)
F1 bis Fn	Federkräfte in N, zugeordnet den Federwegen S1 bis Sn
S1	lange Lebensdauer
S2	mittlere Lebensdauer
Sn	maximaler Arbeitsweg
Smax.	maximaler Federweg

**Explanations:**

Dd	Rod diameter in mm (internal guide)
Dh	Hole diameter in mm (external guide)
Lo	Length of unloaded spring in mm
Ln	Length of loaded spring in mm
LBl.	Block length of spring in mm (all windings are in contact)
F1 to Fn	Load of spring in N, corresponding to stroke S1 to Sn
S1	long spring life
S2	medium spring life
Sn	maximum travel stroke
Smax.	maximum stroke of spring

**Druckfeder für leichte Belastung**

**Pressure spring for light loads**

**Technische Daten:**

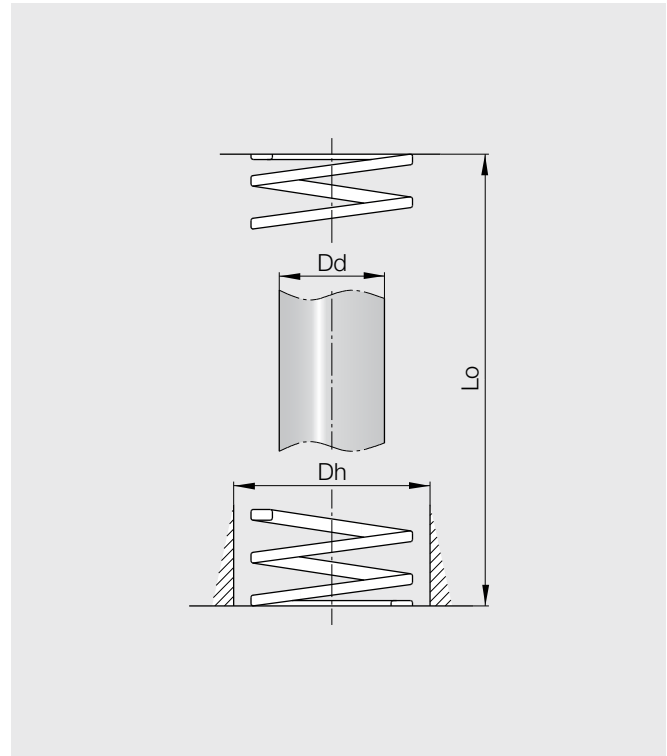
**Technical data:**

Farbe: Grün

Color: green

Dh Hülsendurchmesser  
Dd Dorndurchmesser  
Lo Länge unbelastet  
R Federrate (Federkraft pro mm Federweg)  
F1 Federkraft  
S1 Federweg (lange Lebensdauer)  
F2 Federkraft  
S2 Federweg (mittlere Lebensdauer)  
Fn Federkraft  
Sn Federweg (max. Belastbarkeit)  
FBI. Federkraft  
LBI. Federlänge (auf Block)

Dh Hole diameter  
Dd Rod diameter  
Lo Unloaded length  
R Deflection (spring load per mm travel stroke)  
F1 Spring load  
S1 Travel stroke (long spring life)  
F2 Spring load  
S2 Travel stroke (medium spring life)  
Fn Spring load  
Sn Travel stroke (max. load capacity)  
FBI. Spring load at Smax.  
LBI. Spring length (compressed to solid)



Art.-Nr.	Dh	Dd	Lo	R	F1	S1	F2	S2	Fn	Sn	FBI.	LBI.
	mm	mm	mm	N/mm	N	mm	N	mm	N	mm	N	mm
<b>820.10.025</b>	10	5	25	10.0	63	6.3	75	7.5	100	10.0	135	13.5
<b>820.10.032</b>			32	8.5	68	8.0	82	9.6	109	12.8	149	17.5
<b>820.10.038</b>			38	6.8	65	9.5	78	11.4	103	15.2	141	20.8
<b>820.10.044</b>			44	6.0	66	11.0	79	13.2	106	17.6	143	23.9
<b>820.10.051</b>			51	5.0	64	12.8	77	15.3	102	20.4	145	28.9
<b>820.10.064</b>			64	4.3	69	16.0	83	19.2	110	25.6	155	36.1
<b>820.10.076</b>			76	3.2	61	19.0	73	22.8	97	30.4	138	43.2
<b>820.10.305</b>			305	1.1	84	76.3	101	91.5	134	122.0	197	178.7
<b>820.13.025</b>	12.5	6.3	25	17.9	113	6.3	134	7.5	179	10.0	236	13.2
<b>820.13.032</b>			32	16.4	131	8.0	157	9.6	210	12.8	295	18.0
<b>820.13.038</b>			38	13.6	129	9.5	155	11.4	207	15.2	286	21.0
<b>820.13.044</b>			44	12.1	133	11.0	160	13.2	213	17.6	290	24.0
<b>820.13.051</b>			51	11.4	146	12.8	174	15.3	233	20.4	327	28.7
<b>820.13.064</b>			64	9.3	149	16.0	179	19.2	238	25.6	333	35.8
<b>820.13.076</b>			76	7.1	135	19.0	162	22.8	216	30.4	303	42.7
<b>820.13.305</b>			305	1.4	107	76.3	128	91.5	171	122.0	241	172

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>820.16.025</b>	16	8	25	23.4	147	6.3	176	7.5	234	10.0	295	12.6
<b>820.16.032</b>			32	22.9	183	8.0	220	9.6	293	12.8	376	16.4
<b>820.16.038</b>			38	19.3	183	9.5	220	11.4	293	15.2	380	19.7
<b>820.16.044</b>			44	17.1	188	11.0	226	13.2	301	17.6	385	22.5
<b>820.16.051</b>			51	15.7	201	12.8	240	15.3	320	20.4	413	26.3
<b>820.16.064</b>			64	10.7	171	16.0	205	19.2	274	25.6	356	33.3
<b>820.16.076</b>			76	10.0	190	19.0	228	22.8	304	30.4	402	40.2
<b>820.16.089</b>			89	8.6	192	22.3	230	26.7	306	35.6	409	47.6
<b>820.16.102</b>			102	7.8	199	25.5	239	30.6	318	40.8	432	55.4
<b>820.16.305</b>			305	2.5	191	76.3	229	91.5	305	122.0	413	165.3
<b>820.19.025</b>	20	10	25	55.8	352	6.3	419	7.5	558	10.0	675	12.1
<b>820.19.032</b>			32	45.0	360	8.0	432	9.6	576	12.8	689	15.3
<b>820.19.038</b>			38	33.3	316	9.5	380	11.4	506	15.2	629	18.9
<b>820.19.044</b>			44	30.0	330	11.0	396	13.2	528	17.6	645	21.5
<b>820.19.051</b>			51	24.5	314	12.8	375	15.3	500	20.4	613	25.0
<b>820.19.064</b>			64	20.0	320	16.0	384	19.2	512	25.6	622	31.1
<b>820.19.076</b>			76	16.0	304	19.0	365	22.8	486	30.4	597	37.3
<b>820.19.089</b>			89	14.0	312	22.3	374	26.7	498	35.6	623	44.5
<b>820.19.102</b>			102	12.0	306	25.5	367	30.6	490	40.8	613	51.1
<b>820.19.115</b>			115	10.9	314	28.8	376	34.5	501	46.0	634	58.2
<b>820.19.127</b>			127	9.5	302	31.8	362	38.1	483	50.8	617	64.9
<b>820.19.140</b>			139	8.4	294	35.0	353	42.0	470	56.0	601	71.5
<b>820.19.152</b>			152	7.5	285	38.0	342	45.6	456	60.8	591	78.8
<b>820.19.305</b>			305	4.0	305	76.3	366	91.5	488	122.0	630	157.4
<b>820.26.025</b>	25	12.5	25	100.0	630	6.3	750	7.5	1000	10.0	1190	11.9
<b>820.26.032</b>			32	80.3	642	8.0	771	9.6	1028	12.8	1285	16.0
<b>820.26.038</b>			38	62.0	589	9.5	707	11.4	942	15.2	1135	18.3
<b>820.26.044</b>			44	52.9	582	11.0	698	13.2	931	17.6	1132	21.4
<b>820.26.051</b>			51	44.0	563	12.8	673	15.3	898	20.4	1096	24.9
<b>820.26.064</b>			64	35.2	563	16.0	676	19.2	901	25.6	1105	31.4
<b>820.26.076</b>			76	28.0	532	19.0	638	22.8	851	30.4	1050	37.5
<b>820.26.089</b>			89	24.0	535	22.3	641	26.7	854	35.6	1044	43.5
<b>820.26.102</b>			102	21.1	538	25.5	646	30.6	861	40.8	1078	51.1
<b>820.26.115</b>			115	18.7	539	28.8	645	34.5	860	46.0	1086	58.1
<b>820.26.127</b>			127	16.7	531	31.8	636	38.1	848	50.8	1070	64.1
<b>820.26.140</b>			139	15.3	536	35.0	643	42.0	857	56.0	1077	70.4
<b>820.26.152</b>			152	14.0	532	38.0	638	45.6	851	60.8	1079	77.1
<b>820.26.178</b>			178	12.5	556	44.5	668	53.4	890	71.2	1164	93.1
<b>820.26.203</b>			203	10.4	528	50.8	633	60.9	844	81.2	1068	102.7
<b>820.26.305</b>			305	7.0	534	76.3	641	91.5	854	122.0	1091	155.9

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>820.32.038</b>	32	16	38	94.0	893	9.5	1072	11.4	1429	15.2	1720	18.3
<b>820.32.044</b>			44	79.5	875	11.0	1049	13.2	1399	17.6	1709	21.5
<b>820.32.051</b>			51	67.0	858	12.8	1025	15.3	1367	20.4	1709	25.5
<b>820.32.064</b>			64	53.0	848	16.0	1018	19.2	1357	25.6	1691	31.9
<b>820.32.076</b>			76	44.0	836	19.0	1033	22.8	1338	30.4	1698	38.6
<b>820.32.089</b>			89	37.2	830	22.3	993	26.7	1324	35.6	1730	46.5
<b>820.32.102</b>			102	32.0	816	25.5	979	30.6	1306	40.8	1702	53.2
<b>820.32.115</b>			115	29.0	835	28.8	1001	34.5	1334	46.0	1740	60.0
<b>820.32.127</b>			127	25.0	795	31.8	953	38.1	1270	50.8	1668	66.7
<b>820.32.140</b>			139	23.0	805	35.0	966	42.0	1288	56.0	1651	71.8
<b>820.32.152</b>			152	21.5	817	38.0	980	45.6	1307	60.8	1688	78.5
<b>820.32.178</b>			178	18.2	810	44.5	972	53.4	1296	71.2	1718	94.4
<b>820.32.203</b>			203	15.8	803	50.8	962	60.9	1283	81.2	1692	107.1
<b>820.32.254</b>			254	12.5	794	63.5	953	76.2	1270	101.6	1706	136.5
<b>820.32.305</b>			305	10.3	786	76.3	942	91.5	1257	122.0	1676	162.7
<b>820.38.051</b>	40	20	51	92.0	1178	12.8	1408	15.3	1877	20.4	2346	25.5
<b>820.38.064</b>			64	73.0	1168	16.0	1402	19.2	1869	25.6	2292	31.4
<b>820.38.076</b>			76	63.0	1197	19.0	1436	22.8	1915	30.4	2381	37.8
<b>820.38.089</b>			89	51.0	1137	22.3	1362	26.7	1816	35.6	2259	44.3
<b>820.38.102</b>			102	43.0	1097	25.5	1316	30.6	1754	40.8	2180	50.7
<b>820.38.115</b>			115	39.6	1140	28.8	1366	34.5	1822	46.0	2301	58.1
<b>820.38.127</b>			127	37.0	1177	31.8	1410	38.1	1880	50.8	2390	64.6
<b>820.38.140</b>			139	32.0	1120	35.0	1344	42.0	1792	56.0	2243	70.1
<b>820.38.152</b>			152	28.0	1064	38.0	1277	45.6	1702	60.8	2145	76.6
<b>820.38.178</b>			178	25.2	1121	44.5	1346	53.4	1794	71.2	2278	90.4
<b>820.38.203</b>			203	22.7	1153	50.8	1382	60.9	1843	81.2	2324	102.4
<b>820.38.254</b>			254	17.0	1080	63.5	1295	76.2	1727	101.6	2190	128.8
<b>820.38.305</b>			305	14.8	1129	76.3	1354	91.5	1806	122.0	2310	156.1
<b>820.51.064</b>	50	25	64	156.0	2496	16.0	2995	19.2	3994	25.6	4836	31.0
<b>820.51.076</b>			76	125.0	2375	19.0	2850	22.8	3800	30.4	4650	37.2
<b>820.51.089</b>			89	109.0	2431	22.3	2910	26.7	3880	35.6	4752	43.6
<b>820.51.102</b>			102	94.0	2397	25.5	2876	30.6	3835	40.8	4728	50.3
<b>820.51.115</b>			115	81.0	2333	28.8	2795	34.5	3726	46.0	4706	58.1
<b>820.51.127</b>			127	71.0	2258	31.8	2705	38.1	3607	50.8	4523	63.7
<b>820.51.140</b>			139	66.5	2328	35.0	2793	42.0	3724	56.0	4622	69.5
<b>820.51.152</b>			152	60.0	2280	38.0	2736	45.6	3648	60.8	4590	76.5
<b>820.51.178</b>			178	52.0	2314	44.5	2777	53.4	3702	71.2	4779	91.9
<b>820.51.203</b>			203	44.0	2235	50.8	2680	60.9	3573	81.2	4607	104.7
<b>820.51.254</b>			254	35.0	2223	63.5	2667	76.2	3556	101.6	4571	130.6
<b>820.51.305</b>			305	28.5	2175	76.3	2608	91.5	3477	122.0	4415	154.9



Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>820.63.076</b>	63	38	76	189.0	3591	19.0	4309	22.8	5746	30.4	6899	36.5
<b>820.63.089</b>			89	158.0	3523	22.3	4219	26.7	5625	35.6	6857	43.4
<b>820.63.102</b>			102	131.0	3341	25.5	4009	30.6	5345	40.8	6511	49.7
<b>820.63.115</b>			115	116.0	3341	28.8	4002	34.5	5336	46.0	6450	55.6
<b>820.63.127</b>			127	103.0	3275	31.8	3924	38.1	5232	50.8	6458	62.7
<b>820.63.152</b>			152	84.3	3203	38.0	3844	45.6	5125	60.8	6500	77.1
<b>820.63.178</b>			178	71.5	3182	44.5	3818	53.4	5091	71.2	6592	92.2
<b>820.63.203</b>			203	61.7	3134	50.8	3758	60.9	5010	81.2	6386	103.5
<b>820.63.254</b>			254	47.0	2985	63.5	3581	76.2	4775	101.6	6129	130.4
<b>820.63.305</b>			305	38.2	2915	76.3	3495	91.5	4660	122.0	6013	157.4

**Druckfeder für mittlere Belastung**

**Technische Daten:**

Farbe: Blau

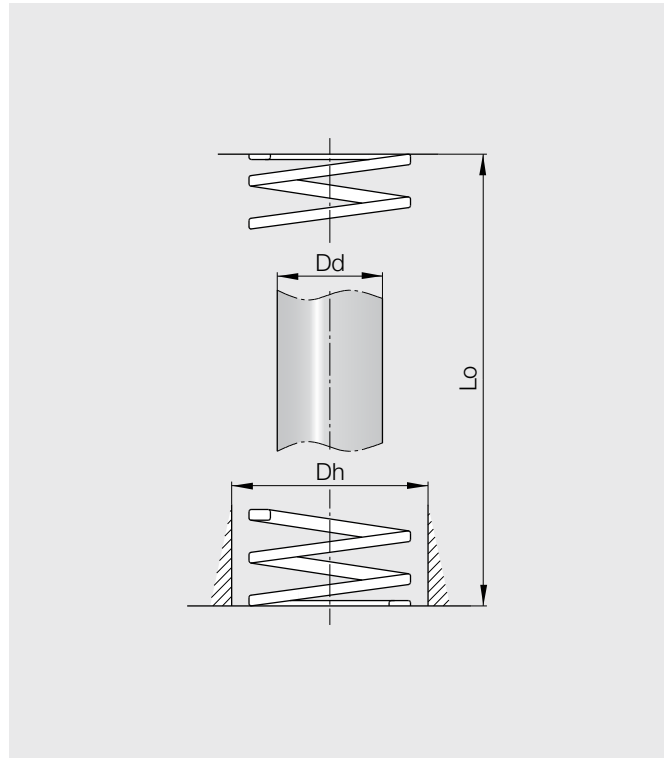
Dh Hülsendurchmesser  
Dd Dorndurchmesser  
Lo Länge unbelastet  
R Federrate (Federkraft pro mm Federweg)  
F1 Federkraft  
S1 Federweg (lange Lebensdauer)  
F2 Federkraft  
S2 Federweg (mittlere Lebensdauer)  
Fn Federkraft  
Sn Federweg (max. Belastbarkeit)  
FBI. Federkraft  
LBI. Federlänge (auf Block)

**Pressure spring for medium loads**

**Technical data:**

Color: blue

Dh Hole diameter  
Dd Rod diameter  
Lo Unloaded length  
R Deflection (spring load per mm travel stroke)  
F1 Spring load  
S1 Travel stroke (long spring life)  
F2 Spring load  
S2 Travel stroke (medium spring life)  
Fn Spring load  
Sn Travel stroke (max. load capacity)  
FBI. Spring load at Smax.  
LBI. Spring length (compressed to solid)



Art.-Nr.	Dh	Dd	Lo	R	F1	S1	F2	S2	Fn	Sn	FBI.	LBI.
	mm	mm	mm	N/mm	N	mm	N	mm	N	mm	N	mm
<b>821.10.025</b>	10	5	25	16.0	101	6.3	120	7.5	150	9.4	163	10.2
<b>821.10.032</b>			32	13.0	104	8.0	125	9.6	156	12.0	185	14.2
<b>821.10.038</b>			38	11.9	113	9.5	136	11.4	170	14.3	200	16.8
<b>821.10.044</b>			44	10.3	113	11.0	136	13.2	170	16.5	200	19.4
<b>821.10.051</b>			51	8.9	114	12.8	136	15.3	170	19.1	208	23.4
<b>821.10.064</b>			64	7.5	120	16.0	144	19.2	180	24.0	212	28.2
<b>821.10.076</b>			76	5.3	101	19.0	121	22.8	151	28.5	181	34.2
<b>821.10.305</b>			305	1.6	122	76.3	146	91.5	183	114.4	214	133.8
<b>821.13.025</b>	12.5	6.3	25	30.0	189	6.3	225	7.5	282	9.4	357	11.9
<b>821.13.032</b>			32	24.8	198	8.0	238	9.6	298	12.0	402	16.2
<b>821.13.038</b>			38	21.4	203	9.5	244	11.4	306	14.3	400	18.7
<b>821.13.044</b>			44	18.5	204	11.0	244	13.2	305	16.5	394	21.3
<b>821.13.051</b>			51	15.5	198	12.8	237	15.3	296	19.1	397	25.6
<b>821.13.064</b>			64	12.1	194	16.0	232	19.2	290	24.0	392	32.4
<b>821.13.076</b>			76	10.2	194	19.0	233	22.8	291	28.5	398	39.0
<b>821.13.305</b>			305	2.1	160	76.3	192	91.5	240	114.4	320	152.5

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>821.16.025</b>	16	8	25	49.4	311	6.3	371	7.5	464	9.4	519	10.5
<b>821.16.032</b>			32	37.1	297	8.0	356	9.6	445	12.0	490	13.2
<b>821.16.038</b>			38	33.9	322	9.5	386	11.4	485	14.3	583	17.2
<b>821.16.044</b>			44	30.0	330	11.0	396	13.2	495	16.5	582	19.4
<b>821.16.051</b>			51	26.4	338	12.8	404	15.3	504	19.1	639	24.2
<b>821.16.064</b>			64	20.5	328	16.0	394	19.2	492	24.0	599	29.2
<b>821.16.076</b>			76	17.8	338	19.0	406	22.8	507	28.5	646	36.3
<b>821.16.089</b>			89	15.2	339	22.3	406	26.7	508	33.4	634	41.7
<b>821.16.102</b>			102	13.5	344	25.5	413	30.6	517	38.3	660	48.9
<b>821.16.305</b>			305	4.8	366	76.3	439	91.5	549	114.4	680	141.6
<b>821.19.025</b>	20	10	25	98.0	617	6.3	735	7.5	921	9.4	1029	10.5
<b>821.19.032</b>			32	72.6	581	8.0	697	9.6	871	12.0	1009	13.9
<b>821.19.038</b>			38	56.0	532	9.5	638	11.4	801	14.3	930	16.6
<b>821.19.044</b>			44	47.5	523	11.0	627	13.2	784	16.5	893	18.8
<b>821.19.051</b>			51	41.7	534	12.8	638	15.3	796	19.1	963	23.1
<b>821.19.064</b>			64	32.3	517	16.0	620	19.2	775	24.0	888	27.5
<b>821.19.076</b>			76	25.1	477	19.0	572	22.8	715	28.5	848	33.8
<b>821.19.089</b>			89	22.0	491	22.3	587	26.7	735	33.4	873	39.7
<b>821.19.102</b>			102	19.8	505	25.5	606	30.6	758	38.3	937	47.3
<b>821.19.115</b>			115	18.1	521	28.8	624	34.5	780	43.1	950	52.5
<b>821.19.127</b>			127	16.6	528	31.8	632	38.1	790	47.6	945	56.9
<b>821.19.140</b>			139	15.1	529	35.0	634	42.0	793	52.5	938	62.1
<b>821.19.152</b>			152	13.2	500	38.0	600	45.6	750	57.0	889	67.6
<b>821.19.305</b>			305	6.1	465	76.3	558	91.5	698	114.4	875	143.4
<b>821.26.025</b>	25	12.5	25	147.0	926	6.3	1103	7.5	1382	9.4	1499	10.2
<b>821.26.032</b>			32	118.0	944	8.0	1133	9.6	1416	12.0	1617	13.7
<b>821.26.038</b>			38	93.0	884	9.5	1060	11.4	1330	14.3	1460	15.7
<b>821.26.044</b>			44	80.8	889	11.0	1067	13.2	1333	16.5	1471	18.2
<b>821.26.051</b>			51	68.6	878	12.8	1050	15.3	1310	19.1	1489	21.7
<b>821.26.064</b>			64	53.0	848	16.0	1018	19.2	1272	24.0	1378	26.0
<b>821.26.076</b>			76	43.2	821	19.0	985	22.8	1231	28.5	1395	32.3
<b>821.26.089</b>			89	38.2	852	22.3	1020	26.7	1276	33.4	1452	38.0
<b>821.26.102</b>			102	33.0	842	25.5	1010	30.6	1264	38.3	1419	43.0
<b>821.26.115</b>			115	28.0	806	28.8	966	34.5	1207	43.1	1361	48.6
<b>821.26.127</b>			127	25.9	824	31.8	987	38.1	1233	47.6	1391	53.7
<b>821.26.140</b>			139	23.2	812	35.0	974	42.0	1218	52.5	1378	59.4
<b>821.26.152</b>			152	20.8	790	38.0	948	45.6	1186	57.0	1327	63.8
<b>821.26.178</b>			178	17.8	792	44.5	951	53.4	1189	66.8	1363	76.6
<b>821.26.203</b>			203	15.8	803	50.8	962	60.9	1202	76.1	1397	88.4
<b>821.26.305</b>			305	10.2	778	76.3	933	91.5	1167	114.4	1378	135.1

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
821.32.038	32	16	38	185.0	1758	9.5	2109	11.4	2646	14.3	3016	16.3
821.32.044			44	158.0	1738	11.0	2086	13.2	2607	16.5	2986	18.9
821.32.051			51	134.0	1715	12.8	2050	15.3	2559	19.1	3095	23.1
821.32.064			64	99.0	1584	16.0	1901	19.2	2376	24.0	2822	28.5
821.32.076			76	80.5	1530	19.0	1835	22.8	2294	28.5	2753	34.2
821.32.089			89	69.1	1541	22.3	1845	26.7	2308	33.4	2792	40.4
821.32.102			102	58.8	1499	25.5	1799	30.6	2252	38.3	2822	48.0
821.32.115			115	51.5	1483	28.8	1777	34.5	2220	43.1	2796	54.3
821.32.127			127	44.8	1425	31.8	1707	38.1	2132	47.6	2652	59.2
821.32.140			139	42.3	1481	35.0	1777	42.0	2221	52.5	2762	65.3
821.32.152			152	37.8	1436	38.0	1724	45.6	2155	57.0	2759	73.0
821.32.178			178	32.5	1446	44.5	1736	53.4	2171	66.8	2746	84.5
821.32.203			203	28.9	1468	50.8	1760	60.9	2199	76.1	2800	96.9
821.32.254			254	21.4	1359	63.5	1631	76.2	2039	95.3	2587	120.9
821.32.305			305	18.3	1396	76.3	1674	91.5	2094	114.4	2688	146.9
821.38.051	40	20	51	181.6	2324	12.8	2778	15.3	3469	19.1	3886	21.4
821.38.064			64	140.0	2240	16.0	2688	19.2	3360	24.0	3752	26.8
821.38.076			76	108.0	2052	19.0	2462	22.8	3078	28.5	3532	32.7
821.38.089			89	90.7	2023	22.3	2422	26.7	3029	33.4	3537	39.0
821.38.102			102	81.0	2066	25.5	2479	30.6	3102	38.3	3572	44.1
821.38.115			115	71.8	2068	28.8	2477	34.5	3095	43.1	3633	50.6
821.38.127			127	62.7	1994	31.8	2389	38.1	2985	47.6	3505	55.9
821.38.140			139	57.5	2013	35.0	2415	42.0	3019	52.5	3554	61.8
821.38.152			152	51.6	1961	38.0	2353	45.6	2941	57.0	3483	67.5
821.38.178			178	44.1	1962	44.5	2355	53.4	2946	66.8	3405	77.2
821.38.203			203	36.7	1864	50.8	2235	60.9	2793	76.1	3369	91.8
821.38.254			254	30.1	1911	63.5	2294	76.2	2869	95.3	3392	112.7
821.38.305			305	24.6	1877	76.3	2251	91.5	2814	114.4	3397	138.1
821.51.064	50	25	64	209.0	3344	16.0	4013	19.2	5016	24.0	5894	28.2
821.51.076			76	168.0	3192	19.0	3830	22.8	4788	28.5	5863	34.9
821.51.089			89	140.0	3122	22.3	3738	26.7	4676	33.4	5488	39.2
821.51.102			102	119.0	3035	25.5	3641	30.6	4558	38.3	5629	47.3
821.51.115			115	106.0	3053	28.8	3657	34.5	4569	43.1	5576	52.6
821.51.127			127	97.0	3085	31.8	3696	38.1	4617	47.6	5801	59.8
821.51.140			139	87.0	3045	35.0	3654	42.0	4568	52.5	5664	65.1
821.51.152			152	80.0	3040	38.0	3648	45.6	4560	57.0	5664	70.8
821.51.178			178	69.5	3093	44.5	3711	53.4	4643	66.8	5852	84.2
821.51.203			203	59.8	3038	50.8	3642	60.9	4551	76.1	5771	96.5
821.51.254			254	43.9	2788	63.5	3345	76.2	4184	95.3	5347	121.8
821.51.305			305	38.6	2945	76.3	3532	91.5	4416	114.4	5666	146.8

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>821.63.076</b>	63	38	76	312.0	5928	19.0	7114	22.8	8892	28.5	9578	30.7
<b>821.63.089</b>			89	260.0	5798	22.3	6942	26.7	8684	33.4	9490	36.5
<b>821.63.102</b>			102	221.0	5636	25.5	6763	30.6	8464	38.3	9636	43.6
<b>821.63.115</b>			115	187.0	5386	28.8	6452	34.5	8060	43.1	9144	48.9
<b>821.63.127</b>			127	168.0	5342	31.8	6401	38.1	7997	47.6	9106	54.2
<b>821.63.152</b>			152	136.0	5168	38.0	6202	45.6	7752	57.0	8935	65.7
<b>821.63.178</b>			178	114.0	5073	44.5	6088	53.4	7615	66.8	8721	76.5
<b>821.63.203</b>			203	100.0	5080	50.8	6090	60.9	7610	76.1	8800	88.0
<b>821.63.254</b>			254	78.4	4978	63.5	5974	76.2	7472	95.3	8812	112.4
<b>821.63.305</b>			305	64.7	4937	76.3	5920	91.5	7402	114.4	8657	138.8

**Druckfeder für starke Belastung**

**Pressure spring for heavy loads**

**Technische Daten:**

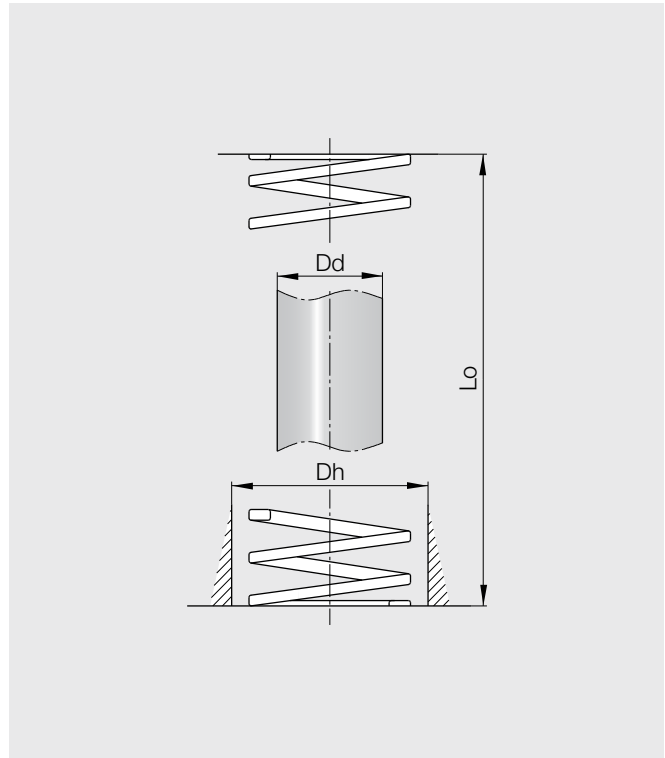
**Technical data:**

Farbe: Rot

Color: red

Dh Hülsendurchmesser  
Dd Dorndurchmesser  
Lo Länge unbelastet  
R Federrate (Federkraft pro mm Federweg)  
F1 Federkraft  
S1 Federweg (lange Lebensdauer)  
F2 Federkraft  
S2 Federweg (mittlere Lebensdauer)  
Fn Federkraft  
Sn Federweg (max. Belastbarkeit)  
FBI. Federkraft  
LBI. Federlänge (auf Block)

Dh Hole diameter  
Dd Rod diameter  
Lo Unloaded length  
R Deflection (spring load per mm travel stroke)  
F1 Spring load  
S1 Travel stroke (long spring life)  
F2 Spring load  
S2 Travel stroke (medium spring life)  
Fn Spring load  
Sn Travel stroke (max. load capacity)  
FBI. Spring load at Smax.  
LBI. Spring length (compressed to solid)



Art.-Nr.	Dh	Dd	Lo	R	F1	S1	F2	S2	Fn	Sn	FBI.	LBI.
	mm	mm	mm	N/mm	N	mm	N	mm	N	mm	N	mm
<b>822.10.025</b>	10	5	25	22.1	111	5.0	139	6.3	166	7.5	203	9.2
<b>822.10.032</b>			32	17.5	112	6.4	140	8.0	168	9.6	212	12.1
<b>822.10.038</b>			38	17.1	130	7.6	162	9.5	195	11.4	226	13.2
<b>822.10.044</b>			44	15.0	132	8.8	165	11.0	198	13.2	227	15.1
<b>822.10.051</b>			51	12.8	131	10.2	164	12.8	196	15.3	250	19.5
<b>822.10.064</b>			64	10.7	137	12.8	171	16.0	205	19.2	233	21.8
<b>822.10.076</b>			76	7.5	114	15.2	143	19.0	171	22.8	209	27.9
<b>822.10.305</b>			305	2.1	128	61.0	160	76.3	192	91.5	267	127.2
<b>822.13.025</b>	12.5	6.3	25	42.1	211	5.0	265	6.3	316	7.5	413	9.8
<b>822.13.032</b>			32	33.2	212	6.4	266	8.0	319	9.6	452	13.6
<b>822.13.038</b>			38	29.3	223	7.6	278	9.5	334	11.4	428	14.6
<b>822.13.044</b>			44	24.6	216	8.8	271	11.0	325	13.2	445	18.1
<b>822.13.051</b>			51	19.6	200	10.2	251	12.8	300	15.3	437	22.3
<b>822.13.064</b>			64	15.0	192	12.8	240	16.0	288	19.2	410	27.3
<b>822.13.076</b>			76	13.2	201	15.2	251	19.0	301	22.8	437	33.1
<b>822.13.305</b>			305	2.8	171	61.0	214	76.3	256	91.5	391	139.7

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>822.16.025</b>	16	8	25	75.7	379	5.0	477	6.3	568	7.5	636	8.4
<b>822.16.032</b>			32	52.8	338	6.4	422	8.0	507	9.6	554	10.5
<b>822.16.038</b>			38	48.5	369	7.6	461	9.5	553	11.4	660	13.6
<b>822.16.044</b>			44	42.8	377	8.8	471	11.0	565	13.2	681	15.9
<b>822.16.051</b>			51	37.1	378	10.2	475	12.8	568	15.3	701	18.9
<b>822.16.064</b>			64	30.3	388	12.8	485	16.0	582	19.2	754	24.9
<b>822.16.076</b>			76	25.7	391	15.2	488	19.0	586	22.8	750	29.2
<b>822.16.089</b>			89	21.7	386	17.8	484	22.3	579	26.7	749	34.5
<b>822.16.102</b>			102	19.3	394	20.4	492	25.5	591	30.6	755	39.1
<b>822.16.305</b>			305	7.1	433	61.0	542	76.3	650	91.5	736	103.6
<b>822.19.025</b>	20	10	25	216.0	1080	5.0	1361	6.3	1620	7.5	1793	8.3
<b>822.19.032</b>			32	168.0	1075	6.4	1344	8.0	1613	9.6	1831	10.9
<b>822.19.038</b>			38	129.0	980	7.6	1226	9.5	1471	11.4	1613	12.5
<b>822.19.044</b>			44	112.0	986	8.8	1232	11.0	1478	13.2	1680	15.0
<b>822.19.051</b>			51	94.0	959	10.2	1203	12.8	1438	15.3	1654	17.6
<b>822.19.064</b>			64	72.1	923	12.8	1154	16.0	1384	19.2	1629	22.6
<b>822.19.076</b>			76	59.7	907	15.2	1134	19.0	1361	22.8	1642	27.5
<b>822.19.089</b>			89	50.5	899	17.8	1126	22.3	1348	26.7	1601	31.7
<b>822.19.102</b>			102	44.2	902	20.4	1127	25.5	1353	30.6	1658	37.5
<b>822.19.115</b>			115	38.4	883	23.0	1106	28.8	1325	34.5	1636	42.6
<b>822.19.127</b>			127	34.1	866	25.4	1084	31.8	1299	38.1	1552	45.5
<b>822.19.140</b>			139	31.0	868	28.0	1085	35.0	1302	42.0	1553	50.1
<b>822.19.152</b>			152	28.2	857	30.4	1072	38.0	1286	45.6	1574	55.8
<b>822.19.305</b>			305	15.0	915	61.0	1145	76.3	1373	91.5	1712	114.1
<b>822.26.032</b>	25	12.5	32	297.0	1901	6.4	2376	8.0	2851	9.6	3267	11.0
<b>822.26.038</b>			38	219.0	1664	7.6	2081	9.5	2497	11.4	2759	12.6
<b>822.26.044</b>			44	187.0	1646	8.8	2057	11.0	2468	13.2	2768	14.8
<b>822.26.051</b>			51	156.0	1591	10.2	1997	12.8	2387	15.3	2792	17.9
<b>822.26.064</b>			64	123.0	1574	12.8	1968	16.0	2362	19.2	2841	23.1
<b>822.26.076</b>			76	99.0	1505	15.2	1881	19.0	2257	22.8	2604	26.3
<b>822.26.089</b>			89	84.0	1495	17.8	1873	22.3	2243	26.7	2562	30.5
<b>822.26.102</b>			102	73.0	1489	20.4	1862	25.5	2234	30.6	2723	37.3
<b>822.26.115</b>			115	65.0	1495	23.0	1872	28.8	2243	34.5	2724	41.9
<b>822.26.127</b>			127	57.7	1466	25.4	1835	31.8	2198	38.1	2666	46.2
<b>822.26.140</b>			139	52.7	1476	28.0	1845	35.0	2213	42.0	2598	49.3
<b>822.26.152</b>			152	47.8	1453	30.4	1816	38.0	2180	45.6	2662	55.7
<b>822.26.178</b>			178	41.0	1460	35.6	1825	44.5	2189	53.4	2669	65.1
<b>822.26.203</b>			203	35.8	1453	40.6	1819	50.8	2180	60.9	2667	74.5
<b>822.26.305</b>			305	22.9	1397	61.0	1747	76.3	2095	91.5	2524	110.2

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>822.32.038</b>	32	16	38	388.0	2949	7.6	3686	9.5	4423	11.4	4850	12.5
<b>822.32.044</b>			44	324.0	2851	8.8	3564	11.0	4277	13.2	4828	14.9
<b>822.32.051</b>			51	272.0	2774	10.2	3482	12.8	4162	15.3	4842	17.8
<b>822.32.064</b>			64	212.0	2714	12.8	3392	16.0	4070	19.2	4749	22.4
<b>822.32.076</b>			76	172.0	2614	15.2	3268	19.0	3922	22.8	4489	26.1
<b>822.32.089</b>			89	141.0	2510	17.8	3144	22.3	3765	26.7	4343	30.8
<b>822.32.102</b>			102	122.0	2489	20.4	3111	25.5	3733	30.6	4490	36.8
<b>822.32.115</b>			115	107.0	2461	23.0	3082	28.8	3692	34.5	4430	41.4
<b>822.32.127</b>			127	93.0	2362	25.4	2957	31.8	3543	38.1	4129	44.4
<b>822.32.140</b>			139	86.0	2408	28.0	3010	35.0	3612	42.0	4171	48.5
<b>822.32.152</b>			152	78.0	2371	30.4	2964	38.0	3557	45.6	4274	54.8
<b>822.32.178</b>			178	67.2	2392	35.6	2990	44.5	3588	53.4	4274	63.6
<b>822.32.203</b>			203	59.1	2399	40.6	3002	50.8	3599	60.9	4285	72.5
<b>822.32.254</b>			254	46.4	2357	50.8	2946	63.5	3536	76.2	4306	92.8
<b>822.32.305</b>			305	38.0	2318	61.0	2899	76.3	3477	91.5	4248	111.8
<b>822.38.051</b>	40	20	51	350.0	3570	10.2	4480	12.8	5355	15.3	5950	17.0
<b>822.38.064</b>			64	269.0	3443	12.8	4304	16.0	5165	19.2	5891	21.9
<b>822.38.076</b>			76	219.0	3329	15.2	4161	19.0	4993	22.8	5847	26.7
<b>822.38.089</b>			89	190.0	3382	17.8	4237	22.3	5073	26.7	5947	31.3
<b>822.38.102</b>			102	163.0	3325	20.4	4157	25.5	4988	30.6	6047	37.1
<b>822.38.115</b>			115	142.0	3266	23.0	4090	28.8	4899	34.5	5822	41.0
<b>822.38.127</b>			127	128.0	3251	25.4	4070	31.8	4877	38.1	5952	46.5
<b>822.38.140</b>			139	115.0	3220	28.0	4025	35.0	4830	42.0	6107	53.1
<b>822.38.152</b>			152	105.0	3192	30.4	3990	38.0	4788	45.6	5891	56.1
<b>822.38.178</b>			178	89.0	3168	35.6	3961	44.5	4753	53.4	5999	67.4
<b>822.38.203</b>			203	77.0	3126	40.6	3912	50.8	4689	60.9	5867	76.2
<b>822.38.254</b>			254	61.0	3099	50.8	3874	63.5	4648	76.2	5868	96.2
<b>822.38.305</b>			305	51.0	3111	61.0	3891	76.3	4667	91.5	5855	114.8
<b>822.51.064</b>	50	25	64	413.0	5286	12.8	6608	16.0	7930	19.2	9251	22.4
<b>822.51.076</b>			76	339.0	5153	15.2	6441	19.0	7729	22.8	8984	26.5
<b>822.51.089</b>			89	288.0	5126	17.8	6422	22.3	7690	26.7	9072	31.5
<b>822.51.102</b>			102	245.0	4998	20.4	6248	25.5	7497	30.6	9212	37.6
<b>822.51.115</b>			115	215.0	4945	23.0	6192	28.8	7418	34.5	9181	42.7
<b>822.51.127</b>			127	192.0	4877	25.4	6106	31.8	7315	38.1	9120	47.5
<b>822.51.140</b>			139	168.0	4704	28.0	5880	35.0	7056	42.0	8702	51.8
<b>822.51.152</b>			152	154.0	4682	30.4	5852	38.0	7022	45.6	8901	57.8
<b>822.51.178</b>			178	134.0	4770	35.6	5963	44.5	7156	53.4	9179	68.5
<b>822.51.203</b>			203	117.0	4750	40.6	5944	50.8	7125	60.9	9079	77.6
<b>822.51.254</b>			254	89.0	4521	50.8	5652	63.5	6782	76.2	8713	97.9
<b>822.51.305</b>			305	73.0	4453	61.0	5570	76.3	6680	91.5	8811	120.7



**Druckfeder für sehr starke Belastung**

**Pressure spring for very heavy loads**

**Technische Daten:**

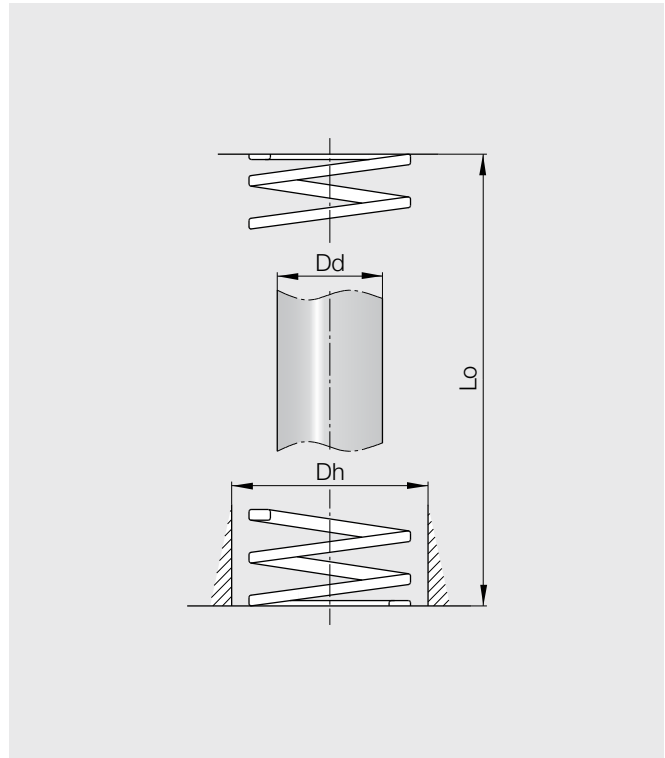
**Technical data:**

Farbe: Gelb

Color: yellow

Dh Hülsendurchmesser  
Dd Dorndurchmesser  
Lo Länge unbelastet  
R Federrate (Federkraft pro mm Federweg)  
F1 Federkraft  
S1 Federweg (lange Lebensdauer)  
F2 Federkraft  
S2 Federweg (mittlere Lebensdauer)  
Fn Federkraft  
Sn Federweg (max. Belastbarkeit)  
FBI. Federkraft  
LBI. Federlänge (auf Block)

Dh Hole diameter  
Dd Rod diameter  
Lo Unloaded length  
R Deflection (spring load per mm travel stroke)  
F1 Spring load  
S1 Travel stroke (long spring life)  
F2 Spring load  
S2 Travel stroke (medium spring life)  
Fn Spring load  
Sn Travel stroke (max. load capacity)  
FBI. Spring load at Smax.  
LBI. Spring length (compressed to solid)



Art.-Nr.	Dh	Dd	Lo	R	F1	S1	F2	S2	Fn	Sn	FBI.	LBI.
	mm	mm	mm	N/mm	N	mm	N	mm	N	mm	N	mm
<b>823.10.025</b>	10	5	25	36.8	158	4.3	184	5.0	232	6.3	283	7.7
<b>823.10.032</b>			32	27.9	151	5.4	179	6.4	223	8.0	296	10.6
<b>823.10.038</b>			38	23.7	154	6.5	180	7.6	225	9.5	299	12.6
<b>823.10.044</b>			44	19.2	144	7.5	169	8.8	211	11.0	265	13.8
<b>823.10.051</b>			51	16.5	144	8.7	168	10.2	211	12.8	267	16.2
<b>823.10.064</b>			64	13.2	144	10.9	169	12.8	211	16.0	269	20.4
<b>823.10.076</b>			76	10.9	141	12.9	166	15.2	207	19.0	275	25.2
<b>823.10.305</b>			305	2.6	135	51.9	159	61.0	198	76.3	288	110.8
<b>823.13.025</b>	12.5	6.3	25	58.5	252	4.3	293	5.0	369	6.3	474	8.1
<b>823.13.032</b>			32	43.9	237	5.4	281	6.4	351	8.0	435	9.9
<b>823.13.038</b>			38	36.0	234	6.5	274	7.6	342	9.5	464	12.9
<b>823.13.044</b>			44	30.3	227	7.5	267	8.8	333	11.0	427	14.1
<b>823.13.051</b>			51	26.2	228	8.7	267	10.2	335	12.8	456	17.4
<b>823.13.064</b>			64	21.2	231	10.9	271	12.8	339	16.0	445	21.0
<b>823.13.076</b>			76	17.1	221	12.9	260	15.2	325	19.0	451	26.4
<b>823.13.305</b>			305	4.3	223	51.9	262	61.0	328	76.3	479	111.3

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>823.16.025</b>	16	8	25	118.0	507	4.3	590	5.0	743	6.3	1003	8.5
<b>823.16.032</b>			32	89.0	481	5.4	570	6.4	712	8.0	979	11.0
<b>823.16.038</b>			38	72.1	469	6.5	548	7.6	685	9.5	952	13.2
<b>823.16.044</b>			44	60.9	457	7.5	536	8.8	670	11.0	895	14.7
<b>823.16.051</b>			51	52.3	455	8.7	533	10.2	669	12.8	926	17.7
<b>823.16.064</b>			64	41.2	449	10.9	527	12.8	659	16.0	902	21.9
<b>823.16.076</b>			76	34.1	440	12.9	518	15.2	648	19.0	948	27.8
<b>823.16.089</b>			89	29.5	445	15.1	525	17.8	658	22.3	920	31.2
<b>823.16.102</b>			102	25.6	443	17.3	522	20.4	653	25.5	970	37.9
<b>823.16.305</b>			305	8.4	436	51.9	512	61.0	641	76.3	953	113.5
<b>823.19.025</b>	20	10	25	293.0	1260	4.3	1465	5.0	1846	6.3	2022	6.9
<b>823.19.032</b>			32	224.0	1210	5.4	1434	6.4	1792	8.0	2106	9.4
<b>823.19.038</b>			38	177.0	1151	6.5	1345	7.6	1682	9.5	2124	12.0
<b>823.19.044</b>			44	149.0	1118	7.5	1311	8.8	1639	11.0	2012	13.5
<b>823.19.051</b>			51	128.0	1114	8.7	1306	10.2	1638	12.8	2074	16.2
<b>823.19.064</b>			64	99.0	1079	10.9	1267	12.8	1584	16.0	2099	21.2
<b>823.19.076</b>			76	81.7	1054	12.9	1242	15.2	1552	19.0	2018	24.7
<b>823.19.089</b>			89	69.5	1049	15.1	1237	17.8	1550	22.3	2002	28.8
<b>823.19.102</b>			102	60.6	1048	17.3	1236	20.4	1545	25.5	2109	34.8
<b>823.19.115</b>			115	53.0	1039	19.6	1219	23.0	1526	28.8	2067	39.0
<b>823.19.127</b>			127	47.5	1026	21.6	1207	25.4	1511	31.8	2043	43.0
<b>823.19.140</b>			139	43.0	1023	23.8	1204	28.0	1505	35.0	1948	45.3
<b>823.19.152</b>			152	39.0	1006	25.8	1186	30.4	1482	38.0	1966	50.4
<b>823.19.305</b>			305	21.2	1100	51.9	1293	61.0	1618	76.3	2194	103.5
<b>823.26.032</b>	25	12.5	32	374.4	2022	5.4	2396	6.4	2995	8.0	4006	10.7
<b>823.26.038</b>			38	346.0	2249	6.5	2630	7.6	3287	9.5	4152	12.0
<b>823.26.044</b>			44	244.0	1830	7.5	2147	8.8	2684	11.0	3514	14.4
<b>823.26.051</b>			51	207.5	1805	8.7	2117	10.2	2656	12.8	3611	17.4
<b>823.26.064</b>			64	161.0	1755	10.9	2061	12.8	2576	16.0	3445	21.4
<b>823.26.076</b>			76	130.8	1687	12.9	1988	15.2	2485	19.0	3519	26.9
<b>823.26.089</b>			89	110.5	1669	15.1	1967	17.8	2464	22.3	3414	30.9
<b>823.26.102</b>			102	96.3	1666	17.3	1965	20.4	2456	25.5	3534	36.7
<b>823.26.115</b>			115	85.7	1680	19.6	1971	23.0	2468	28.8	3454	40.3
<b>823.26.127</b>			127	76.3	1648	21.6	1938	25.4	2426	31.8	3441	45.1
<b>823.26.140</b>			139	68.9	1640	23.8	1929	28.0	2412	35.0	3280	47.6
<b>823.26.152</b>			152	63.5	1638	25.8	1930	30.4	2413	38.0	3397	53.5
<b>823.26.178</b>			178	53.9	1633	30.3	1919	35.6	2399	44.5	3444	63.9
<b>823.26.203</b>			203	47.0	1622	34.5	1908	40.6	2388	50.8	3299	70.2
<b>823.26.305</b>			305	30.9	1604	51.9	1885	61.0	2358	76.3	3402	110.1

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	F2 N	S2 mm	Fn N	Sn mm	FBI. N	LBI. mm
<b>823.32.038</b>	32	16	38	528.2	3433	6.5	4014	7.6	5018	9.5	6021	11.4
<b>823.32.044</b>			44	424.4	3183	7.5	3735	8.8	4668	11.0	5814	13.7
<b>823.32.051</b>			51	353.0	3071	8.7	3601	10.2	4518	12.8	5507	15.6
<b>823.32.064</b>			64	269.2	2934	10.9	3446	12.8	4307	16.0	5384	20.0
<b>823.32.076</b>			76	218.5	2819	12.9	3321	15.2	4152	19.0	5331	24.4
<b>823.32.089</b>			89	180.3	2723	15.1	3209	17.8	4021	22.3	5355	29.7
<b>823.32.102</b>			102	155.0	2682	17.3	3162	20.4	3953	25.5	5441	35.1
<b>823.32.115</b>			115	140.0	2744	19.6	3220	23.0	4032	28.8	5460	39.0
<b>823.32.127</b>			127	124.0	2678	21.6	3150	25.4	3943	31.8	5307	42.8
<b>823.32.140</b>			139	112.3	2673	23.8	3144	28.0	3931	35.0	5458	48.6
<b>823.32.152</b>			152	102.0	2632	25.8	3101	30.4	3876	38.0	5345	52.4
<b>823.32.178</b>			178	88.2	2672	30.3	3140	35.6	3925	44.5	5371	60.9
<b>823.32.203</b>			203	76.0	2622	34.5	3086	40.6	3861	50.8	5259	69.2
<b>823.32.254</b>			254	60.8	2627	43.2	3089	50.8	3861	63.5	5356	88.1
<b>823.32.305</b>			305	49.0	2543	51.9	2989	61.0	3739	76.3	5106	104.2
<b>823.38.051</b>	40	20	51	628.0	5464	8.7	6406	10.2	8038	12.8	9420	15.0
<b>823.38.064</b>			64	487.0	5308	10.9	6234	12.8	7792	16.0	9497	19.5
<b>823.38.076</b>			76	379.0	4889	12.9	5761	15.2	7201	19.0	8831	23.3
<b>823.38.089</b>			89	321.0	4847	15.1	5714	17.8	7158	22.3	8571	26.7
<b>823.38.102</b>			102	281.0	4861	17.3	5732	20.4	7166	25.5	9498	33.8
<b>823.38.115</b>			115	245.0	4802	19.6	5635	23.0	7056	28.8	8869	36.2
<b>823.38.127</b>			127	221.0	4774	21.6	5613	25.4	7028	31.8	8995	40.7
<b>823.38.140</b>			139	190.0	4522	23.8	5320	28.0	6650	35.0	8455	44.5
<b>823.38.152</b>			152	168.0	4334	25.8	5107	30.4	6384	38.0	8333	49.6
<b>823.38.178</b>			178	146.0	4424	30.3	5198	35.6	6497	44.5	8745	59.9
<b>823.38.203</b>			203	132.0	4554	34.5	5359	40.6	6706	50.8	8857	67.1
<b>823.38.254</b>			254	107.0	4622	43.2	5436	50.8	6795	63.5	9234	86.3
<b>823.38.305</b>			305	87.8	4557	51.9	5356	61.0	6699	76.3	9096	103.6
<b>823.51.064</b>	50	25	64	709.0	7728	10.9	9075	12.8	11344	16.0	13684	19.3
<b>823.51.076</b>			76	572.0	7379	12.9	8694	15.2	10868	19.0	13842	24.2
<b>823.51.089</b>			89	475.0	7173	15.1	8455	17.8	10593	22.3	13300	28.0
<b>823.51.102</b>			102	405.0	7007	17.3	8262	20.4	10328	25.5	13568	33.5
<b>823.51.115</b>			115	352.0	6899	19.6	8096	23.0	10138	28.8	13587	38.6
<b>823.51.127</b>			127	316.0	6826	21.6	8026	25.4	10049	31.8	13082	41.4
<b>823.51.140</b>			139	274.0	6521	23.8	7672	28.0	9590	35.0	12960	47.3
<b>823.51.152</b>			152	239.0	6166	25.8	7266	30.4	9082	38.0	11998	50.2
<b>823.51.178</b>			178	215.0	6515	30.3	7654	35.6	9568	44.5	13137	61.1
<b>823.51.203</b>			203	187.0	6452	34.5	7592	40.6	9500	50.8	12660	67.7
<b>823.51.254</b>			254	153.0	6610	43.2	7772	50.8	9716	63.5	13311	87.0
<b>823.51.305</b>			305	127.0	6591	51.9	7747	61.0	9690	76.3	13132	103.4

**Druckfeder für extra starke Belastung**

**Pressure spring for extra heavy loads**

**Technische Daten:**

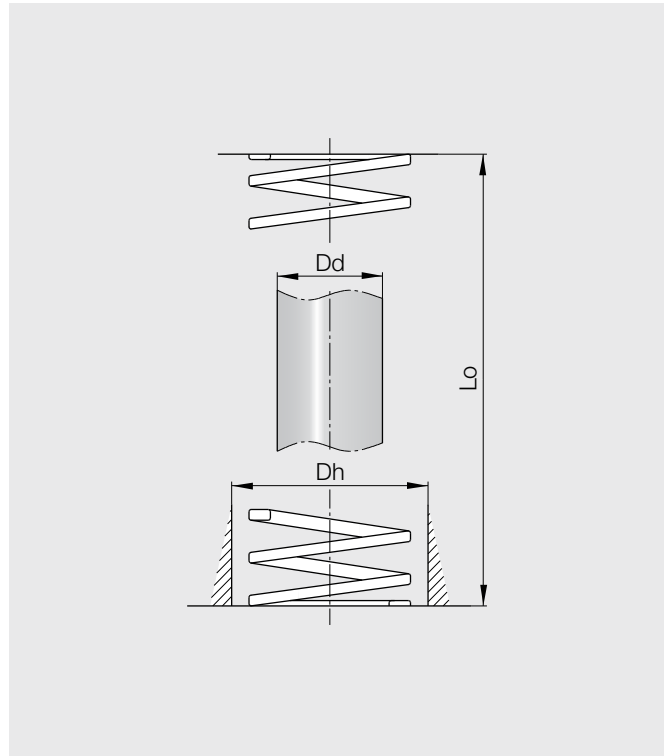
**Technical data:**

Farbe: Braun

Color: brown

Dh Hülsendurchmesser  
Dd Dorndurchmesser  
Lo Länge unbelastet  
R Federrate (Federkraft pro mm Federweg)  
F1 Federkraft  
S1 Federweg (lange Lebensdauer)  
Fn Federkraft  
Sn Federweg (max. Belastbarkeit)  
FBl. Federkraft  
LBl. Federlänge (auf Block)

Dh Hole diameter  
Dd Rod diameter  
Lo Unloaded length  
R Deflection (spring load per mm travel stroke)  
F1 Spring load  
S1 Travel stroke (long spring life)  
Fn Spring load  
Sn Travel stroke (max. load capacity)  
FBl. Spring load at Smax.  
LBl. Spring length (compressed to solid)



Art.-Nr.	Dh	Dd	Lo	R	F1	S1	Fn	Sn	FBl.	LBl.	Normpack
	mm	mm	mm	N/mm	N	mm	N	mm	N	mm	Stk. / pcs
<b>824.25.064</b>	25	12.5	64	644.0	4122	6.4	6182	9.6	8372	13.0	50
<b>824.25.076</b>			76	556.0	4226	7.6	6338	11.4	8896	16.0	20
<b>824.25.089</b>			89	462.0	4112	8.9	6168	13.4	9240	20.0	20
<b>824.25.102</b>			102	390.0	3978	10.2	5967	15.3	8970	23.0	20
<b>824.25.115</b>			115	360.0	4140	11.5	6210	17.3	9360	26.0	20
<b>824.25.127</b>			127	326.0	4140	12.7	6210	19.1	9128	28.0	10
<b>824.25.152</b>			152	255.0	3876	15.2	5814	22.8	8670	34.0	10
<b>824.25.178</b>			178	230.0	4094	17.8	6141	26.7	8970	39.0	10
<b>824.25.203</b>			203	202.0	4101	20.3	6151	30.5	9090	45.0	10
<b>824.25.305</b>			305	136.0	4148	30.5	6222	45.8	8568	63.0	5
<b>824.40.089</b>	40	20	89	880.0	7832	8.9	11748	13.4	17600	20.0	20
<b>824.40.102</b>			102	762.0	7772	10.2	11659	15.3	17526	23.0	20
<b>824.40.115</b>			115	679.0	7809	11.5	11713	17.3	17654	26.0	10
<b>824.40.127</b>			127	622.0	7899	12.7	11849	19.1	17416	28.0	10
<b>824.40.152</b>			152	509.0	7737	15.2	11605	22.8	18324	36.0	10
<b>824.40.178</b>			178	429.0	7636	17.8	11454	26.7	18447	43.0	10

Art.-Nr.	Dh mm	Dd mm	Lo mm	R N/mm	F1 N	S1 mm	Fn N	Sn mm	FBI. N	LBI. mm	Normpack Stk. / pcs
<b>824.40.203</b>	40	20	203	374.0	7592	20.3	11388	30.5	18326	49.0	5
<b>824.40.254</b>			254	296.0	7518	25.4	11278	38.1	18352	62.0	5
<b>824.40.305</b>			305	246.0	7530	30.5	11255	45.8	18450	75.0	5
<b>824.50.089</b>	50	25	89	1410.0	12549	8.9	18824	13.4	26790	19.0	10
<b>824.50.102</b>			102	1215.0	12393	10.2	18590	15.3	26730	22.0	10
<b>824.50.115</b>			115	1076.0	12374	11.5	18561	17.3	26900	25.0	10
<b>824.50.127</b>			127	968.0	12294	12.7	18440	19.1	27104	28.0	10
<b>824.50.152</b>			152	806.0	12251	15.2	18377	22.8	27404	34.0	10
<b>824.50.178</b>			178	698.0	12424	17.8	18637	26.7	27920	40.0	5
<b>824.50.203</b>			203	612.0	12424	20.3	18635	30.5	27540	45.0	5
<b>824.50.254</b>			254	472.0	11989	25.4	17983	38.1	27376	58.0	5
<b>824.50.305</b>			305	388.0	11834	30.5	17751	45.8	27160	70.0	5

**Eladur Hohlstab**

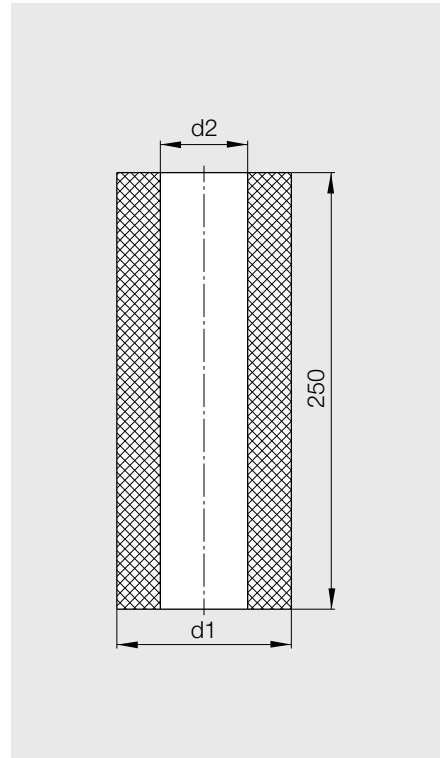
**Technische Daten:**

- Werkstoff: Eladur  
33, 80, 90, 95, 200, 315
- Toleranzen:  
d1 ±1.0%  
d2 ±1.0%  
l ±5mm
- **Eladur Adiprene**  
(Polyurethan-Elastomer auf Polyesterbasis)
- Eladur Adiprene ist in 6 verschiedenen Shore-Härten lieferbar. Die einzelnen Sorten sind durch folgende Farben gekennzeichnet:

**Eladur tubular bar**

**Technical data:**

- Material: Eladur  
33, 80, 90, 95, 200, 315
- Tolerances:  
d1 ±1.0%  
d2 ±1.0%  
l ±5mm
- **Eladur Adiprene**  
(polyurethane elastomer based on polyester)
- Eladur Adiprene can be supplied in 6 different shore hardness which are designated by the following colors:



Eladur	33	80 (ex 42)	90 (ex 100)	95 (ex 167)	200	315
Farbe Color	gelb yellow	rot red	grün green	hellbraun light brown	blau blue	beige beige
Shore A Shore D	60 ±5 -	80 ±3 -	90 ±2 40 ±3	95 ±1 50 ±3	97 ±0.5 60 ±3	- 75 ±3
Elastizität Elasticity	40%	35%	30%	25%	15%	5%

**Bestellbeispiel:**

Norm-d1-d2-Eladur Nr.  
830-20-6.5, Eladur 33

**Order example:**

Standard-d1-d2-Eladur No.  
830-20-6.5, Eladur 33

d1	d2	d1	d2	d1	d2	d1	d2	d1	d2	d1	d2
<b>15</b>	6.0	<b>32</b>	12.0	<b>50</b>	17.0	<b>60</b>	27.0	<b>65</b>	27.0	<b>75</b>	17.0
	6.5		13.5		21.0		30.0		30.0		21.0
			15.0		25.0		35.0		35.0		25.0
<b>16</b>	6.0	<b>35</b>	12.0		27.0	<b>63</b>	17.0		40.0		27.0
	6.5		13.5		30.0		45.0		45.0		30.0
			15.0		35.0		50.0		50.0		35.0
<b>20</b>	6.0		15.0	<b>55</b>	17.0	<b>70</b>	17.0		40.0		40.0
	6.5		20.0		21.0		25.0		25.0		45.0
	8.5				25.0		27.0		27.0		50.0
<b>25</b>	6.0	<b>40</b>	12.0		25.0		25.0		25.0		55.0
	6.5		13.5		27.0		30.0		30.0		60.0
	8.5		15.0		30.0		35.0		35.0		
	10.5		20.0		35.0		40.0		40.0	<b>80</b>	21.0
			40.0		45.0		45.0		45.0		25.0
					45.0		45.0		45.0		27.0
<b>30</b>	12.0	<b>45</b>	12.0		17.0	<b>65</b>	17.0		50.0		30.0
	13.5		13.5		21.0		21.0		21.0		35.0
	15.0		15.0		25.0		25.0		25.0		40.0

d1	d2	d1	d2	d1	d2	d1	d2	d1	d2	d1	d2
<b>80</b>	45.0	<b>100</b>	75.0	<b>125</b>	70.0						
	50.0		80.0		75.0						
	55.0				80.0						
	60.0	<b>110</b>	21.0		90.0						
	65.0		25.0		100.0						
			27.0		110.0						
			30.0								
<b>85</b>	21.0		35.0								
	25.0		40.0								
	27.0		45.0								
	30.0		50.0								
	35.0		55.0								
	40.0		60.0								
	45.0		65.0								
	50.0		70.0								
	55.0		75.0								
	60.0		80.0								
	65.0		90.0								
	70.0										
<b>90</b>	21.0	<b>120</b>	21.0								
	25.0		25.0								
	27.0		27.0								
	30.0		30.0								
	35.0		35.0								
	40.0		40.0								
	45.0		45.0								
	50.0		50.0								
	55.0		55.0								
	60.0		60.0								
	65.0		65.0								
	70.0		70.0								
	75.0		75.0								
			80.0								
			90.0								
<b>100</b>	21.0		100.0								
	25.0										
	27.0										
	30.0	<b>125</b>	27.0								
	35.0		30.0								
	40.0		35.0								
	45.0		40.0								
	50.0		45.0								
	55.0		50.0								
	60.0		55.0								
	65.0		60.0								
	70.0		65.0								

**Eladur Feder**

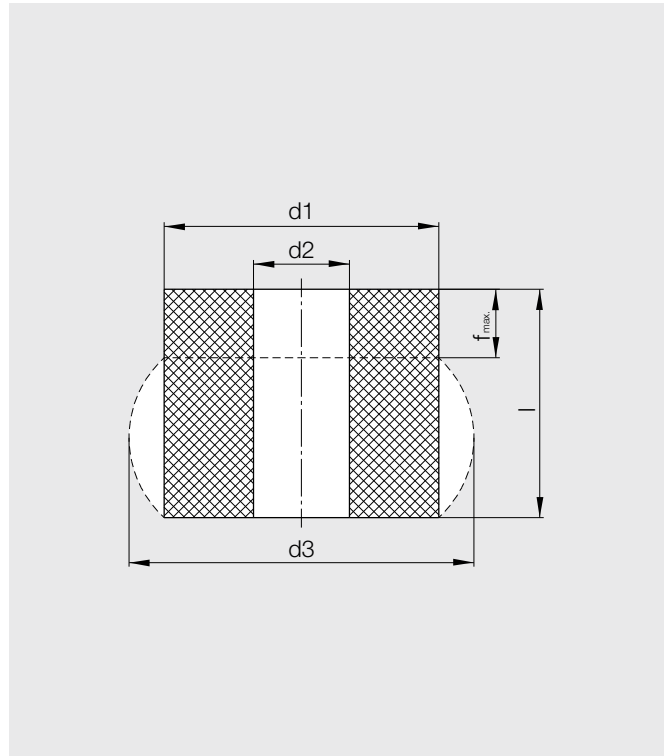
**Technische Daten:**

- Werkstoff: Eladur  
42, 100, 167, 200
- Toleranzen:  
d1 ±1.0%  
d2 ±1.0%  
l ±0.2mm
- Federkraft  $F_{max}$  in N
- Federweg  $f_{max}$  in mm

**Eladur spring**

**Technical data:**

- Material: Eladur  
42, 100, 167, 200
- Tolerances:  
d1 ±1.0%  
d2 ±1.0%  
l ±0.2mm
- Spring load  $F_{max}$  in N
- Travel stroke  $f_{max}$  in mm



**Bestellbeispiel:**

Eladur Feder  
Norm-d1-d2-l-Eladur Nr.  
830-32-13.5-40-Eladur 100  
830.04.473

**Order example:**

Eladur spring  
Standard-d1-d2-l-Eladur No.  
830-32-13.5-40-Eladur 100  
830.04.473

Art.-Nr.	d1	d2	d3	l	E-Nr.	$f_{max}$	$F_{max}$
830.04.212	16	6.5	22	12	42	4.2	940
830.04.222				16		5.6	900
830.04.232				20		7.0	880
830.04.242				25		8.7	860
830.04.252				32		11.2	830
830.04.213	16	6.5	21	12	100	3.6	1790
830.04.223				16		4.8	1730
830.04.233				20		6.0	1690
830.04.243				25		7.5	1660
830.04.253				32		9.6	1590
830.04.214	16	6.5	20	12	167	3.0	2260
830.04.224				16		4.0	2150
830.04.234				20		5.0	2130
830.04.244				25		6.2	2080
830.04.254				32		8.0	2000

Art.-Nr.	d1	d2	d3	l	E-Nr.	$f_{max}$	$F_{max}$
830.04.215	16	6.5	18	12	200	1.8	2650
830.04.225				16		2.4	2570
830.04.235				20		3.0	2520
830.04.245				25		3.7	2470
830.04.255				32		4.8	2360
830.04.282	20	8.5	27	12	42	4.2	1440
830.04.292				16		5.8	1400
830.04.302				20		7.0	1350
830.04.312				25		8.7	1330
830.04.322				32		11.2	1280
830.04.332				40		14.0	1260



Art.-Nr.	d1	d2	d3	l	E-Nr.	f <sub>max.</sub>	F <sub>max.</sub>	Art.-Nr.	d1	d2	d3	l	E-Nr.	f <sub>max.</sub>	F <sub>max.</sub>
830.04.283	20	8.5	16	12	100	3.6	2760	830.04.365	25	10.5	29	16	200	2.4	6480
830.04.293				16		4.8	2690	830.04.375				20		3.0	6270
830.04.303				20		6.0	2590	830.04.385				25		3.7	6170
830.04.313				25		7.5	2550	830.04.395				32		4.8	5960
830.04.323				32		9.6	2450	830.04.405				40		6.0	5860
830.04.333				40		12.0	2420	830.04.415				50		7.5	5650
830.04.284	20	8.5	25	12	167	3.0	3470	830.04.432	32	13.5	43	16	42	5.6	3850
830.04.294				16		4.0	3390	830.04.442				20		7.0	3740
830.04.304				20		5.0	3260	830.04.452				25		8.7	3600
830.04.314				25		6.2	3210	830.04.462				32		11.2	3460
830.04.324				32		8.0	3080	830.04.472				40		14.0	3420
830.04.334				40		10.0	3040	830.04.482				50		17.5	3350
830.04.285	20	8.5	23	12	200	1.8	4110	830.04.433	32	13.5	42	16	100	4.8	7380
830.04.295				16		2.4	4010	830.04.443				20		6.0	7180
830.04.305				20		3.0	3850	830.04.453				25		7.5	6900
830.04.315				25		3.7	3800	830.04.463				32		9.6	6620
830.04.325				32		4.8	3650	830.04.473				40		12.0	6560
830.04.335				40		6.0	3600	830.04.483				50		15.0	6420
830.04.362	25	10.5	34	16	42	5.6	2270	830.04.434	32	13.5	40	16	167	4.0	9290
830.04.372				20		7.0	2200	830.04.444				20		5.0	9030
830.04.382				25		8.7	2160	830.04.454				25		6.2	8680
830.04.392				32		11.2	2090	830.04.464				32		8.0	8330
830.04.402				40		14.0	2050	830.04.474				40		10.0	8250
830.04.412				50		17.5	1980	830.04.484				50		12.5	8070
830.04.363	25	10.5	34	16	100	4.8	4350	830.04.435	32	13.5	37	16	200	2.4	11000
830.04.373				20		6.0	4210	830.04.445				20		3.0	10690
830.04.383				25		7.5	4140	830.04.455				25		3.7	10280
830.04.393				32		9.6	4000	830.04.465				32		4.8	9870
830.04.403				40		12.0	3930	830.04.475				40		6.0	9770
830.04.413				50		15.0	3800	830.04.485				50		7.5	9560
830.04.364	25	10.5	31	16	167	4.0	5470	830.04.512	40	13.5	54	20	42	7.0	6660
830.04.374				20		5.0	5290	830.04.522				25		8.7	6410
830.04.384				25		6.2	5210	830.04.532				32		11.2	6190
830.04.394				32		8.0	5030	830.04.542				40		14.0	6010
830.04.404				40		10.0	4950	830.04.552				50		17.5	5870
830.04.414				50		12.5	4770	830.04.562				63		22.0	5760

Art.-Nr.	d1	d2	d3	I	E-Nr.	f <sub>max.</sub>	F <sub>max.</sub>
830.04.513	40	13.5	52	20	100	6.0	12770
830.04.523				25		7.5	12280
830.04.533				32		9.6	11870
830.04.543				40		12.0	11520
830.04.553				50		15.0	11250
830.04.563				63		18.9	11040
830.04.514	40	13.5	50	20	167	5.0	16060
830.04.524				25		6.2	15450
830.04.534				32		8.0	14930
830.04.544				40		10.0	14500
830.04.554				50		12.5	14150
830.04.564				63		15.7	13890
830.04.515	40	13.5	46	20	200	3.0	19020
830.04.525				25		3.7	18300
830.04.535				32		4.8	17680
830.04.545				40		6.0	17170
830.04.555				50		7.5	16760
830.04.565				63		9.4	16450
830.04.582	50	17.0	68	25	42	8.7	10400
830.04.592				32		11.2	9970
830.04.602				40		14.0	9650
830.04.612				50		17.5	9400
830.04.622				63		22.0	9140
830.04.632				80		28.0	8980
830.04.583	50	17.0	65	25	100	7.5	19940
830.04.593				32		9.6	19110
830.04.603				40		12.0	18500
830.04.613				50		15.0	18000
830.04.623				63		18.9	17530
830.04.633				80		24.0	17220
830.04.584	50	17.0	62	25	167	6.2	25090
830.04.594				32		8.0	24040
830.04.604				40		10.0	23260
830.04.614				50		12.5	22650
830.04.624				63		15.7	22050
830.04.634				80		20.0	21660

Art.-Nr.	d1	d2	d3	I	E-Nr.	f <sub>max.</sub>	F <sub>max.</sub>
830.04.585	50	17.0	57	25	200	3.7	29700
830.04.595				32		4.8	28480
830.04.605				40		6.0	27550
830.04.615				50		7.5	26830
830.04.625				63		9.4	26000
830.04.635				80		12.0	25650
830.04.652	63	17.0	85	32	42	11.2	17600
830.04.662				40		14.0	16880
830.04.672				50		17.5	16300
830.04.682				63		22.0	15770
830.04.692				80		28.0	15260
830.04.702				100		35.0	14940
830.04.653	63	17.0	82	32	100	9.6	33740
830.04.663				40		12.0	32360
830.04.673				50		15.0	31260
830.04.683				63		18.9	30220
830.04.693				80		24.0	29260
830.04.703				100		30.0	28640
830.04.654	63	17.0	78	32	167	8.0	42450
830.04.664				40		10.0	40700
830.04.674				50		12.5	39300
830.04.684				63		15.7	38020
830.04.694				80		20.0	36800
830.04.704				100		25.0	36020
830.04.655	63	17.0	72	32	200	4.8	50270
830.04.665				40		6.0	48200
830.04.675				50		7.5	46570
830.04.685				63		9.4	45030
830.04.695				80		12.0	43590
830.04.705				100		15.0	42660
830.04.712	80	21.0	108	40	42	14.0	28690
830.04.722				50		17.5	27500
830.04.732				63		22.0	26400
830.04.742				80		28.0	25500
830.04.752				100		35.0	24900
830.04.762				125		43.7	24200

Art.-Nr.	d1	d2	d3	I	E-Nr.	f <sub>max.</sub>	F <sub>max.</sub>	Art.-Nr.	d1	d2	d3	I	E-Nr.	f <sub>max.</sub>	F <sub>max.</sub>
830.04.713	80	21.0	104	40	100	12.0	55000	830.04.822	125	27.0	169	63	42	22.0	73900
830.04.723				50		15.0	52700	830.04.832				80		28.0	69500
830.04.733				63		18.9	50600	830.04.842				100		35.0	66100
830.04.743				80		24.0	49000	830.04.852				125		43.7	64800
830.04.753				100		30.0	47700	830.04.862				160		56.0	62300
830.04.763				125		37.5	46400								
830.04.714	80	21.0	99	40	167	10.0	69180	830.04.823	125	27.0	163	63	100	18.9	142000
830.04.724				50		12.5	66300	830.04.833				80		24.0	133000
830.04.734				63		15.7	63700	830.04.843				100		30.0	127000
830.04.744				80		20.0	61600	830.04.853				125		37.5	124000
830.04.754				100		25.0	60000	830.04.863				160		48.0	119000
830.04.764				125		31.2	58300								
830.04.715	80	21.0	91	40	200	6.0	81980	830.04.824	125	27.0	155	63	167	15.7	178000
830.04.725				50		7.5	78500	830.04.834				80		20.0	167000
830.04.735				63		9.4	75400	830.04.844				100		25.0	159000
830.04.745				80		12.0	73000	830.04.854				125		31.2	156000
830.04.755				100		15.0	71100	830.04.864				160		40.0	150000
830.04.765				125		18.7	69100								
830.04.772	100	21.0	135	50	42	17.5	46700	830.04.825	125	27.0	143	63	200	9.4	211000
830.04.782				63		22.0	44500	830.04.835				80		12.0	198000
830.04.792				80		28.0	42700	830.04.845				100		15.0	188000
830.04.802				100		35.0	41500	830.04.855				125		18.7	185000
830.04.812				125		43.7	40000	830.04.865				160		24.0	178000
830.04.773	100	21.0	130	50	100	15.0	89500								
830.04.783				63		18.9	85400								
830.04.793				80		24.0	82000								
830.04.803				100		30.0	79600								
830.04.813				125		37.5	76600								
830.04.774	100	21.0	124	50	167	12.5	112600								
830.04.784				63		15.7	107400								
830.04.794				80		20.0	103000								
830.04.804				100		25.0	100000								
830.04.814				125		31.2	96300								
830.04.775	100	21.0	114	50	200	7.5	134000								
830.04.785				63		9.4	127000								
830.04.795				80		12.0	122000								
830.04.805				100		15.0	118000								
830.04.815				125		18.7	114000								



**Dadco Stickstoff-Gasdruckfedern**

Mehr Informationen auf Anfrage.

**Dadco Nitrogen Gas Springs**

More information on request.



