Your solution partner for **durable die springs**

kalıpyansan®

Die Springs Selection and Use

Kalıpyansan Die Springs are capable to meet special requirements of the production in all die and machinery sectors with their 6 different load classes (4 different loads with ISO 10243 Standards and 2 different loads with Kalıpyansan Standards) and engineered for high performance and long service life.

When Selecting Die Springs;

- Select a pressure force demanded available in the measurement table according to the diameters and lengths specified for die springs.
- In case the diameters and lengths are not specified, it must be taken into consideration that the maximum spring pressure is to be provided in the longest spring size when specifying the spring length.
- During selection, it is recommended to take the free length of springs to be exposed to light, medium and heavy load as 6-fold of the working distance. For the springs to be exposed to extra heavy load, it is recommended to take the free length as 8-fold of the working distance.
- The shorter springs are selected for the cases where the height is not sufficient while the number of spring is increased under control in accordance with the die construction.
- Die springs are available in 6 colour-coded load classifications for rapid recognition and are qualified to meet a wide range of diameters and lengths.

Technical Specifications

- Kalıpyansan Die Springs are manufactured exclusively from high alloy, chrome silicon quality, rectangular profile spring steel.
- 6 different load classes such as extra light, light, medium, heavy, extra heavy and ultra heavy load are used.
- Each die spring is qualified to meet all requirements with the highest material volume as possible, with the winding inclination of most adequate shape and spiral number. Section size is a resistance preventing flexion of the die spring.
- Attention must be paid to compliance of the holes and arbour diameters. Die springs have been arranged according to 9 different holes and arbour diameters. Spring diameters are guaranteed to fit in the hole and over the rod diameters listed in the dimensional data.
- Ends of each spring are closed and ground square to assure every spring will stand on either end, providing a maximum bearing surface and improving performance.

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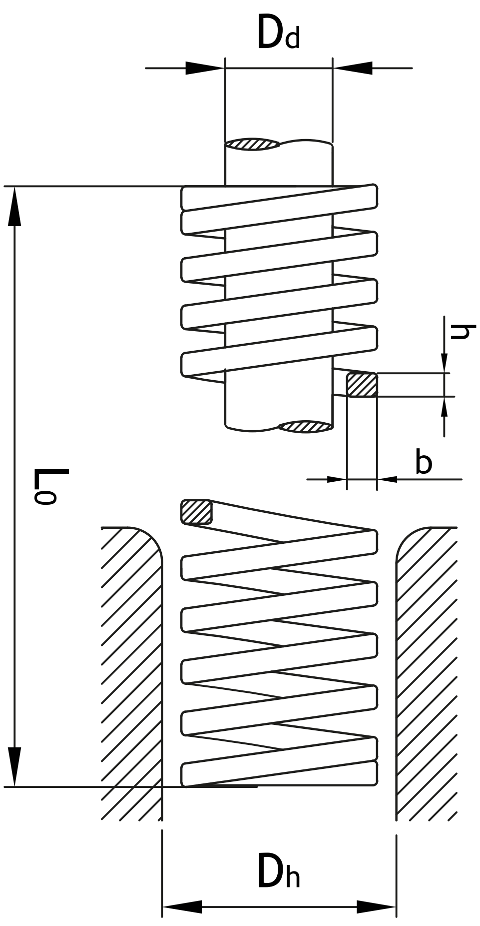


500 Extra - Light Load Die Springs - Silver

D_h Hole Diameter	D_d Rod Diameter	L_0 Free Lenght	Catalog No.	Rate ± 10%
b x h				
mm	mm	mm		N / mm
20	10	25	500.20.025	33,8
		32	500.20.032	25,9
		38	500.20.038	20,4
		44	500.20.044	17,3
		51	500.20.051	15,0
		64	500.20.064	12,5
		76	500.20.076	10,8
		89	500.20.089	9,2
		102	500.20.102	8,5
		115	500.20.115	7,4
		127	500.20.127	6,8
		139	500.20.139	6,2
		152	500.20.152	5,6
4,2 x 1,7		305	500.20.305	2,9
25	12,5	25	500.25.025	59,3
		32	500.25.032	46,4
		38	500.25.038	39,5
		44	500.25.044	34,6
		51	500.25.051	29,7
		64	500.25.064	23,8
		76	500.25.076	19,9
		89	500.25.089	16,8
		102	500.25.102	14,5
		115	500.25.115	13,0
		127	500.25.127	11,7
		139	500.25.139	10,6
		152	500.25.152	9,7
		178	500.25.178	8,4
		203	500.25.203	7,4
5,5 x 2,2		305	500.25.305	4,9
32	16	38	500.32.038	47,4
		44	500.32.044	41,0
		51	500.32.051	35,7
		64	500.32.064	28,0
		76	500.32.076	23,8
		89	500.32.089	19,9
		102	500.32.102	17,3
		115	500.32.115	15,6
		127	500.32.127	14,0
		139	500.32.139	12,8
		152	500.32.152	11,7
		178	500.32.178	9,9
		203	500.32.203	8,5
		254	500.32.254	7,0
6,5 x 2,8		305	500.32.305	5,8
40	20	51	500.40.051	52,9
		64	500.40.064	43,0
		76	500.40.076	36,6
		89	500.40.089	31,2
		102	500.40.102	26,9
		115	500.40.115	24,2
		127	500.40.127	21,6
		139	500.40.139	19,5
		152	500.40.152	17,8
		178	500.40.178	15,1
		203	500.40.203	13,5
		254	500.40.254	10,8
7,9 x 3,9		305	500.40.305	9,2
50	25	64	500.50.064	94,9
		76	500.50.076	77,6
		89	500.50.089	65,8
		102	500.50.102	57,2
		115	500.50.115	50,7
		127	500.50.127	46,4
		139	500.50.139	42,0
		152	500.50.152	37,7
		178	500.50.178	32,3
		203	500.50.203	28,0
		229	-	-
		254	500.50.254	22,7
10,5 x 4,3		305	500.50.305	18,9

1 N = 0,102 kg 1 kg = 9,81 N

501 Light Load Die Springs - Green ISO 10243

D_h Hole Diameter	D_d Rod Diameter	L_0 Free Lenght	Catalog No.	Rate ± 10%
b x h				
mm	mm	mm		N / mm
10	5	25	501.10.025	11,0
		32	501.10.032	8,8
		38	501.10.038	7,4
		44	501.10.044	6,3
		51	501.10.051	5,4
		64	501.10.064	4,5
		76	501.10.076	3,7
1,8 x 1,2		305	501.10.305	0,9
12,5	6,3	25	501.13.025	19,1
		32	501.13.032	16,5
		38	501.13.038	13,7
		44	501.13.044	11,6
		51	501.13.051	10,2
		64	501.13.064	8,2
		76	501.13.076	6,2
		89	501.13.089	5,3
		102	501.13.102	4,1
2,4 x 1,5		305	501.13.305	1,5
16	8	25	501.16.025	31,5
		32	501.16.032	23,5
		38	501.16.038	21,0
		44	501.16.044	17,5
		51	501.16.051	16,3
		64	501.16.064	12,6
		76	501.16.076	10,3
		89	501.16.089	9,3
		102	501.16.102	8,2
		115	501.16.115	6,6
3,1 x 1,5		305	501.16.305	2,6
20	10	25	501.20.025	56,0
		32	501.20.032	42,7
		38	501.20.038	33,8
		44	501.20.044	28,4
		51	501.20.051	24,9
		64	501.20.064	19,3
		76	501.20.076	16,1
		89	501.20.089	13,5
		102	501.20.102	11,9
		115	501.20.115	10,5
		127	501.20.127	9,3
		139	501.20.139	8,5
		152	501.20.152	7,9
4,0 x 2,1		305	501.20.305	3,8
25	12,5	25	501.25.025	107,2
		32	501.25.032	80,9
		38	501.25.038	64,8
		44	501.25.044	53,6
		51	501.25.051	46,4
		64	501.25.064	35,7
		76	501.25.076	29,4
		89	501.25.089	24,7
		102	501.25.102	21,2
		115	501.25.115	18,7
		127	501.25.127	16,8
		139	501.25.139	15,2
		152	501.25.152	14,0
		178	501.25.178	12,1
		203	501.25.203	10,5
5,3 x 2,7		305	501.25.305	7,0
32	16	38	501.32.038	101,0
		44	501.32.044	83,2
		51	501.32.051	71,3
		64	501.32.064	55,0
		76	501.32.076	46,1
		89	501.32.089	38,9
		102	501.32.102	33,6
		115	501.32.115	29,6
		127	501.32.127	26,3
		139	501.32.139	23,6
		152	501.32.152	21,5
		178	501.32.178	18,2
		203	501.32.203	15,9
		254	501.32.254	12,6
7,0 x 3,3		305	501.32.305	10,3
40	20	51	501.40.051	106,0
		64	501.40.064	80,2
		76	501.40.076	65,7
		89	501.40.089	55,7
		102	501.40.102	47,8
		115	501.40.115	42,2
		127	501.40.127	37,8
		139	501.40.139	34,0
		152	501.40.152	30,8
		178	501.40.178	26,3
		203	501.40.203	22,6
		254	501.40.254	18,0
8,2 x 4,0		305	501.40.305	14,7
50	25	64	501.50.064	157,0
		76	501.50.076	126,1
		89	501.50.089	105,0
		102	501.50.102	89,7
		115	501.50.115	78,6
		127	501.50.127	70,1
		139	501.50.139	63,0
		152	501.50.152	57,4
		178	501.50.178	48,7
		203	501.50.203	41,7
		229	-	-
		254	501.50.254	32,9
11,0 x 5,3		305	501.50.305	27,1
63	38	76	501.63.076	192,0
		89	501.63.089	157,0
		102	501.63.102	133,0
		115	501.63.115	116,0
		127	501.63.127	103,0
		152	501.63.152	83,4
		178	501.63.178	70,1
		203	501.63.203	60,2
		229	-	-
		254	501.63.254	46,8
11,2 x 7,7		305	501.63.305	38,5

1 N = 0,102 kg 1 kg = 9,81 N

502 Medium Load Die Springs - Blue ISO 10243

D_h Hole Diameter	D_d Rod Diameter	L_0 Free Lenght	Catalog No.	Rate ± 10%
b x h				
mm	mm	mm		N / mm
10	5	25	502.10.025	16,3
		32	502.10.032	14,0
		38	502.10.038	11,7
		44	502.10.044	9,8
		51	502.10.051	8,6
		64	502.10.064	6,8
		76	502.10.076	5,7
1,8 x 1,3		305	502.10.305	1,3
12,5	6,3	25	502.13.025	28,9
		32	502.13.032	22,6
		38	502.13.038	19,1
		44	502.13.044	16,1
		51	502.13.051	14,0
		64	502.13.064	11,0
		76	502.13.076	8,8
		89	502.13.089	7,5
		102	502.13.102	6,3
2,6 x 1,5		305	502.13.305	2,2
16	8	25	502.16.025	55,7
		32	502.16.032	40,3
		38	502.16.038	35,2
		44	502.16.044	30,5
		51	502.16.051	27,0
		64	502.16.064	21,0
		76	502.16.076	17,7
		89	502.16.089	15,2
		102	502.16.102	13,3
		115	502.16.115	11,8
3,2 x 2,0		305	502.16.305	4,1
20	10	25	502.20.025	90,2
		32	502.20.032	68,1
		38	502.20.038	54,8
		44	502.20.044	45,2
		51	502.20.051	38,9
		64	502.20.064	30,3
		76	502.20.076	24,7
		89	502.20.089	21,4
		102	502.20.102	18,6
		115	502.20.115	16,3
		127	502.20.127	14,5
		139	502.20.139	13,1
		152	502.20.152	12,1
4,2 x 2,4		305	502.20.305	6,1
25	12,5	25	502.25.025	166,2
		32	502.25.032	124,7
		38	502.25.038	98,6
		44	502.25.044	83,2
		51	502.25.051	71,8
		64	502.25.064	55,0
		76	502.25.076	45,2
		89	502.25.089	37,8
		102	502.25.102	32,9
		115	502.25.115	29,2
		127	502.25.127	26,3
		139	502.25.139	23,6
		152	502.25.152	21,7
		178	502.25.178	18,4
		203	502.25.203	15,9
5,4 x 3,3		305	502.25.305	10,5
32	16	38	502.32.038	166,0
		44	502.32.044	136,0
		51	502.32.051	116,1
		64	502.32.064	87,7
		76	502.32.076	70,9
		89	502.32.089	59,9
		102	502.32.102	51,8
		115	502.32.115	46,1
		127	502.32.127	41,5
		139	502.32.139	37,5
		152	502.32.152	34,2
		178	502.32.178	29,1
		203	502.32.203	25,2
		254	502.32.254	20,0
6,9 x 4,0		305	502.32.305	16,6
40	20	51	502.40.051	170,0
		64	502.40.064	128,7
		76	502.40.076	105,0
		89	502.40.089	87,7
		102	502.40.102	76,0
		115	502.40.115	66,4
		127	502.40.127	59,5
		139	502.40.139	53,6
		152	502.40.152	48,9
		178	502.40.178	41,5
		203	502.40.203	36,1
		254	502.40.254	28,9
8,3 x 4,8		305	502.40.305	23,8
50	25	64	502.50.064	211,9
		76	502.50.076	167,0
		89	502.50.089	139,8
		102	502.50.102	121,9
		115	502.50.115	107,2
		127	502.50.127	94,6
		139	502.50.139	85,5
		152	502.50.152	77,9
		178	502.50.178	66,4
		203	502.50.203	57,4
		229	502.50.229	51,0
		254	502.50.254	45,7
11,0 x 6,0		305	502.50.305	37,7
63	38	76	502.63.076	304,0
		89	502.63.089	250,0
		102	502.63.102	211,9
		115	502.63.115	184,6
		127	502.63.127	164,1
		152	502.63.152	132,9
		178	502.63.178	111,7
		203	502.63.203	96,3
		229	502.63.229	85,5
		254	502.63.254	76,9
11,7 x 9,1		305	502.63.305	63,4

1 N = 0,102 kg 1 kg = 9,81 N

503 Heavy Load Die Springs - Red ISO 10243

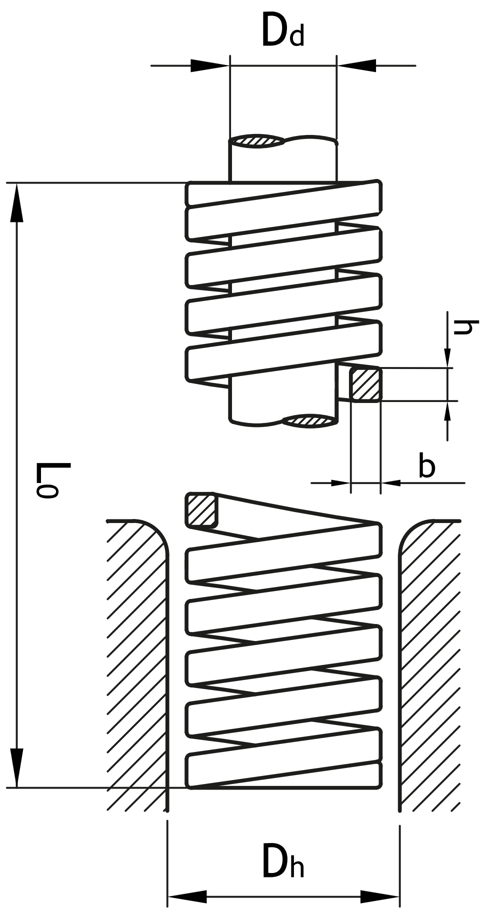
D_h Hole Diameter (mm)	D_d Rod Diameter (mm)	L_0 Free Lenght (mm)	Catalog No.	Rate ± 10% (N / mm)
10	5	25	503.10.025	22,1
		32	503.10.032	17,5
		38	503.10.038	16,3
		44	503.10.044	14,0
		51	503.10.051	11,9
		64	503.10.064	9,6
		76	503.10.076	7,6
b x h: 1,9 x 1,5		305	503.10.305	1,9
12,5	6,3	25	503.13.025	41,3
		32	503.13.032	32,9
		38	503.13.038	27,1
		44	503.13.044	23,3
		51	503.13.051	20,0
		64	503.13.064	15,2
		76	503.13.076	13,5
		89	503.13.089	10,9
		102	503.13.102	8,4
b x h: 2,5 x 1,9		305	503.13.305	3,1
16	8	25	503.16.025	75,5
		32	503.16.032	60,9
		38	503.16.038	48,7
		44	503.16.044	43,3
		51	503.16.051	35,9
		64	503.16.064	28,9
		76	503.16.076	24,5
		89	503.16.089	20,8
		102	503.16.102	18,2
		115	503.16.115	15,7
b x h: 3,0 x 2,5		305	503.16.305	5,8
20	10	25	503.20.025	239,9
		32	503.20.032	180,4
		38	503.20.038	144,0
		44	503.20.044	120,0
		51	503.20.051	101,2
		64	503.20.064	77,1
		76	503.20.076	63,4
		89	503.20.089	53,9
		102	503.20.102	46,9
		115	503.20.115	41,5
		127	503.20.127	37,1
		139	503.20.139	33,8
		152	503.20.152	30,8
b x h: 4,2 x 3,4		305	503.20.305	15,1
25	12,5	25	503.25.025	376,0
		32	503.25.032	285,0
		38	503.25.038	222,0
		44	503.25.044	190,0
		51	503.25.051	156,6
		64	503.25.064	121,0
		76	503.25.076	99,8
		89	503.25.089	84,1
		102	503.25.102	73,2
		115	503.25.115	65,0
		127	503.25.127	58,0
		139	503.25.139	52,5
		152	503.25.152	48,2
		178	503.25.178	41,2
		203	503.25.203	35,9
b x h: 5,5 x 4,3		305	503.25.305	24,2
32	16	38	503.32.038	390,0
		44	503.32.044	318,7
		51	503.32.051	269,7
		64	503.32.064	204,0
		76	503.32.076	166,0
		89	503.32.089	140,3
		102	503.32.102	121,0
		115	503.32.115	106,3
		127	503.32.127	95,8
		139	503.32.139	86,3
		152	503.32.152	78,6
		178	503.32.178	66,7
		203	503.32.203	57,8
		254	503.32.254	46,2
b x h: 7,2 x 5,3		305	503.32.305	38,2
40	20	51	503.40.051	363,0
		64	503.40.064	268,0
		76	503.40.076	218,9
		89	503.40.089	185,0
		102	503.40.102	158,7
		115	503.40.115	140,8
		127	503.40.127	125,2
		139	503.40.139	112,6
		152	503.40.152	103,3
		178	503.40.178	88,1
		203	503.40.203	76,7
		254	503.40.254	60,6
b x h: 8,4 x 6,3		305	503.40.305	50,3
50	25	64	503.50.064	423,0
		76	503.50.076	338,0
		89	503.50.089	281,0
		102	503.50.102	245,2
		115	503.50.115	215,4
		127	503.50.127	189,1
		139	503.50.139	168,8
		152	503.50.152	154,1
		178	503.50.178	131,3
		203	503.50.203	114,0
		229	-	-
		254	503.50.254	89,8
b x h: 11,2 x 7,5		305	503.50.305	74,6
63	38	76	503.63.076	54,7
		89	503.63.089	44,1
		102	503.63.102	41,2
		115	503.63.115	38,4
		127	503.63.127	34,5
		152	503.63.152	28,1
		178	503.63.178	23,8
		203	503.63.203	21,4
		229	-	-
		254	-	-
b x h: 11,5 x 12,0		305	-	-

1 N = 0,102 kg 1 kg = 9,81 N

504 Extra - Heavy Load Die Springs - Yellow ISO 10243

D_h Hole Diameter (mm)	D_d Rod Diameter (mm)	L_0 Free Lenght (mm)	Catalog No.	Rate ± 10% (N / mm)
10	5	25	504.10.025	32,7
		32	504.10.032	25,6
		38	504.10.038	21,2
		44	504.10.044	17,7
		51	504.10.051	15,4
		64	504.10.064	12,3
		76	504.10.076	10,2
b x h: 1,9 x 1,7		305	504.10.305	2,5
12,5	6,3	25	504.13.025	58,7
		32	504.13.032	44,1
		38	504.13.038	36,3
		44	504.13.044	30,6
		51	504.13.051	27,0
		64	504.13.064	21,7
		76	504.13.076	17,7
		89	504.13.089	15,1
		102	504.13.102	12,7
b x h: 2,5 x 2,1		305	504.13.305	4,2
16	8	25	504.16.025	127,3
		32	504.16.032	94,0
		38	504.16.038	75,8
		44	504.16.044	63,6
		51	504.16.051	55,5
		64	504.16.064	43,3
		76	504.16.076	35,6
		89	504.16.089	30,3
		102	504.16.102	26,4
		115	504.16.115	22,4
b x h: 3,2 x 2,9		305	504.16.305	8,5
20	10	25	504.20.025	320,5
		32	504.20.032	239,9
		38	504.20.038	194,4
		44	504.20.044	161,8
		51	504.20.051	139,6
		64	504.20.064	108,8
		76	504.20.076	89,7
		89	504.20.089	75,7
		102	504.20.102	65,3
		115	504.20.115	57,4
		127	504.20.127	51,7
		139	504.20.139	46,6
		152	504.20.152	42,6
b x h: 4,2 x 3,7		305	504.20.305	21,0
25	12,5	25	504.25.025	459,0
		32	504.25.032	353,8
		38	504.25.038	280,2
		44	504.25.044	231,2
		51	504.25.051	197,9
		64	504.25.064	153,8
		76	504.25.076	125,0
		89	504.25.089	105,4
		102	504.25.102	91,1
		115	504.25.115	80,9
		127	504.25.127	72,2
		139	504.25.139	65,6
		152	504.25.152	60,2
		178	504.25.178	51,3
		203	504.25.203	44,7
b x h: 5,5 x 4,6		305	504.25.305	29,6
32	16	38	504.32.038	488,6
		44	504.32.044	404,0
		51	504.32.051	345,0
		64	504.32.064	266,2
		76	504.32.076	215,4
		89	504.32.089	182,1
		102	504.32.102	155,7
		115	504.32.115	135,7
		127	504.32.127	121,9
		139	504.32.139	111,0
		152	504.32.152	100,9
		178	504.32.178	85,6
		203	504.32.203	74,6
		254	504.32.254	59,5
b x h: 7,3 x 5,8		305	504.32.305	49,6
40	20	51	504.40.051	558,7
		64	504.40.064	421,0
		76	504.40.076	338,0
		89	504.40.089	280,2
		102	504.40.102	243,4
		115	504.40.115	213,7
		127	504.40.127	189,1
		139	504.40.139	171,0
		152	504.40.152	155,3
		178	504.40.178	131,0
		203	504.40.203	113,8
		254	504.40.254	90,4
b x h: 8,4 x 7,5		305	504.40.305	75,0
50	25	64	504.50.064	725,0
		76	504.50.076	572,7
		89	504.50.089	474,0
		102	504.50.102	404,0
		115	504.50.115	352,0
		127	504.50.127	313,0
		139	504.50.139	282,0
		152	504.50.152	255,0
		178	504.50.178	215,0
		203	504.50.203	186,0
		229	-	-
		254	504.50.254	146,2
b x h: 11,5 x 9,0		305	504.50.305	121,0
63	38	76	504.63.076	58,7
		89	504.63.089	55,2
		102	504.63.102	53,9
		115	-	-
		127	504.63.127	38,1
		152	504.63.152	32,8
		178	504.63.178	30,2
		203	504.63.203	23,3
		229	-	-
		254	-	-
b x h: 11,6 x 13,0		305	-	-

1 N = 0,102 kg 1 kg = 9,81 N



505 Ultra - Heavy Load Die Springs - Brown

D_h Hole Diameter (mm)	D_d Rod Diameter (mm)	L_0 Free Lenght (mm)	Catalog No.	Rate ± 10% (N / mm)
20	10	44	505.20.044	406,7
		51	505.20.051	340,2
		64	505.20.064	270,0
		76	505.20.076	222,3
		89	505.20.089	187,2
		102	505.20.102	169,2
		115	505.20.115	143,1
		127	505.20.127	131,4
		139	-	-
		152	505.20.152	108,9
b x h: 4,3 x 5,8		305	505.20.305	54,0
25	12,5	25	-	-
		32	-	-
		38	-	-
		44	-	-
		51	505.25.051	654,0
		64	505.25.064	579,0
		76	505.25.076	500,0
		89	505.25.089	416,0
		102	505.25.102	351,0
		115	505.25.115	324,0
		127	505.25.127	293,0
		139	-	-
		152	505.25.152	229,0
		178	505.25.178	207,0
		203	505.25.203	182,0
b x h: 5,5 x 6,8		305	505.25.305	122,0
32	16	38	-	-
		44	-	-
		51	505.32.051	1210,0
		64	505.32.064	969,0
		76	505.32.076	786,0
		89	505.32.089	648,0
		102	505.32.102	558,0
		115	505.32.115	504,0
		127	505.32.127	446,0
		139	-	-
		152	505.32.152	367,0
		178	505.32.178	317,0
		203	505.32.203	273,0
		254	505.32.254	218,0
b x h: 7,4 x 9,0		305	505.32.305	176,0
40	20	51	-	-
		64	505.40.064	1105,0
		76	505.40.076	915,0
		89	505.40.089	792,0
		102	505.40.102	686,0
		115	505.40.115	611,0
		127	505.40.127	560,0
		139	-	-
		152	505.40.152	458,0
		178	505.40.178	386,0
		203	505.40.203	336,0
		254	505.40.254	265,0
b x h: 8,5 x 10,5		305	505.40.305	221,0
50	25	64	-	-
		76	505.50.076	1625,0
		89	505.50.089	1269,0
		102	505.50.102	1093,0
		115	505.50.115	968,0
		127	505.50.127	871,0
		139	505.50.139	-
		152	505.50.152	725,0
		178	505.50.178	630,0
		203	505.50.203	550,0
		229	-	-
		254	505.50.254	424,0
b x h: 11,7 x 13,3		305	505.50.305	349,0

1 N = 0,102 kg 1 kg = 9,81 N