

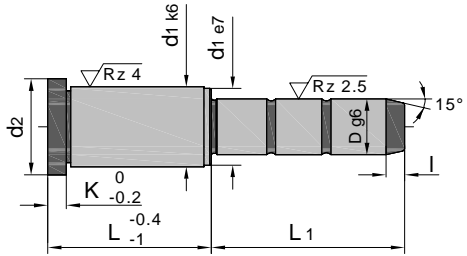


STANDARD PARTS FOR TOOL MAKING AND MOULD CONSTRUCTION

N01 ¹ 	N011 ¹ 	N02 ¹ 	N021 ¹ 	N03 ² 	N035 ² 	N04 ² 	N045 ²
N046 ³ 	N047 ³ 	N048 ³ 	N0481 ³ 	N05 ⁴ 	N051 ⁴ 	N06 ⁴ 	N06M ⁴
N06W ⁴ 	N065 ⁴ 	N065M ⁴ 	N065W ⁴ 	N0661 ⁴ 	N0661M ⁴ 	N0661W ⁴ 	N0662 ⁴
N0662M ⁴ 	N0662W ⁴ 	N0663 ⁴ 	N0663M ⁴ 	N0663W ⁴ 	N0664 ⁴ 	N0665 ⁴ 	N0666 ⁴
N61 ⁴ 	N62 ⁴ 	N63 ⁴ 	N07 ⁵ 	N071 ⁵ 	N072 ⁵ 	N074 ⁵ 	N08 ⁵
N081 ⁵ 	N09 ⁶ 	N091 ⁶ 	N10 ⁶ 	N101 ⁶ 	N102 ⁶ 	N11 ⁶ 	N12 ⁶
N121 ⁶ 	N13 ⁷ 	N130 ⁷ 	N131 ⁷ 	N1310 ⁷ 	N14 ⁷ 	N146 ⁷ 	N140 ⁷
N15 ⁷ 	N156 ⁷ 	N135 ⁷ 	N1305 ⁷ 	N1315 ⁷ 	N1320 ⁷ 	N145 ⁷ 	N1456 ⁷
N155 ⁷ 	N1556 ⁷ 	N165 ⁷ 	N166 ⁷ 	N167 ⁷ 	N16 ⁸ 	N161 ⁸ 	N17 ⁸
N18 ⁸ 	N19 ⁹ 	N20 ⁹ 	N21 ⁹ 	N22 ⁹ 	N23 ⁹ 	N24 ⁹ 	N25 ⁹
N26 ⁹ 	N30R ¹⁰ 	N30 ¹⁰ 	N31 ¹⁰ 	N32 ¹⁰ 	N33 ¹⁰ 	N34 ¹⁰ 	N40 ¹⁰
N41 ¹⁰ 	N50 ¹¹ 	N51 ¹¹ 	N54 ¹¹ 	N55 ¹¹ 	N52 ¹² 	N53 ¹² 	N56 ¹²
N57 ¹² 	14 Packaging	15 Measuring Tools	16 New in our catalogue	17 Contact Persons	18 Production Special Parts	19 Technical Details	20 Comparative Tables

N01

Guide Pillar



Ordering-Example:

1 Piece N01 Ø9/12/45

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

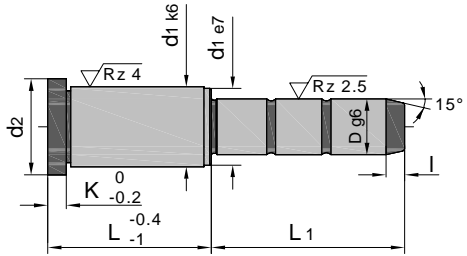
K	d1	d2	l	D	L	L1	€
3	14	16	4	9	12	45	
3	14	16	4	9	17	20	
						30	
						35	
3	14	16	4	9	22	25	
						35	
						55	
3	14	16	4	9	27	25	
						30	
						35	
						45	
						50	
3	14	16	4	9	36	25	
						35	
						45	
3	14	16	4	9	46	30	
						45	
						55	
						75	
3	14	16	4	10	12	45	
3	14	16	4	10	17	20	
						30	
						35	
3	14	16	4	10	22	25	
						35	
						55	
3	14	16	4	10	27	25	
						30	
						35	
						45	
						50	
3	14	16	4	10	36	25	
						35	
						45	
3	14	16	4	10	46	30	
						45	
						55	
						75	

K	d1	d2	l	D	L	L1	€
6	20	25	5	14	17	35	
						55	
						75	
						95	
6	20	25	5	14	22	20	
						35	
						40	
						45	
						50	
						55	
						65	
						70	
						90	
						110	
6	20	25	5	14	27	20	
						35	
						40	
						45	
						55	
						65	
						85	
						105	
6	20	25	5	14	36	20	
						35	
						40	
						45	
						55	
						65	
						75	
						95	
6	20	25	5	14	46	20	
						35	
						45	
						65	
						85	
						105	
6	20	25	5	14	56	20	
						35	
						55	
						75	
						95	
6	20	25	5	14	66	55	
						65	
						95	

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N01

Guide Pillar



Ordering-Example:

1 Piece N01 Ø14/76/55

Special Sizes Available On Request.

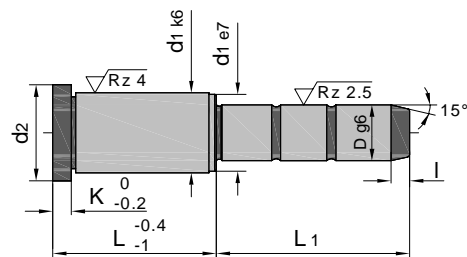
Material: 1.7139 ca. 700HV

K	d1	d2	l	D	L	L1	€
6	20	25	5	14	76	55	
						95	
6	20	25	5	14	86	55	
						95	
6	20	25	5	14	96	55	
						95	
6	20	25	5	15	17	35	
						55	
						75	
						95	
6	20	25	5	15	22	20	
						35	
						40	
						45	
						50	
						55	
						65	
						70	
						90	
						110	
6	20	25	5	15	27	20	
						35	
						40	
						45	
						55	
						65	
						85	
						105	
6	20	25	5	15	36	20	
						35	
						40	
						45	
						55	
						65	
						75	
						95	
6	20	25	5	15	46	20	
						35	
						45	
						65	
						85	
						105	

K	d1	d2	l	D	L	L1	€
6	20	25	5	15	56	20	
						35	
						55	
						75	
						95	
6	20	25	5	15	66	55	
						65	
						95	
6	20	25	5	15	76	55	
						95	
6	20	25	5	15	86	55	
						95	
6	20	25	5	15	96	55	
						95	
6	26	31	7	18	22	20	
						35	
						40	
						45	
						50	
						55	
						65	
						70	
						80	
						85	
						115	
6	26	31	7	18	27	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						80	
						85	
						105	
						125	

N01

Guide Pillar



Ordering-Example:

1 Piece N01 Ø18/36/20

Special Sizes Available On Request.

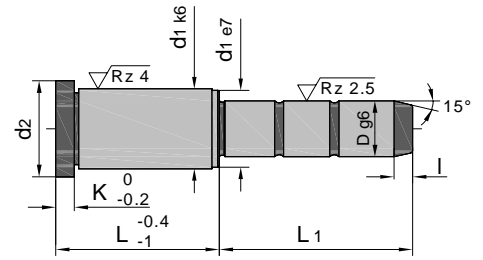
Material: 1.7139 ca. 700HV

K	d1	d2	l	D	L	L1	€
6	26	31	7	18	36	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						75	
						80	
						85	
						95	
						115	
						135	
6	26	31	7	18	46	20	
						45	
						65	
						85	
						105	
						135	
						165	
6	26	31	7	18	56	20	
						35	
						55	
						75	
						95	
6	26	31	7	18	66	55	
						75	
						95	
6	26	31	7	18	76	55	
						75	
						95	
6	26	31	7	18	86	55	
						75	
						95	
6	26	31	7	18	96	55	
						95	
6	26	31	7	18	116	115	

K	d1	d2	l	D	L	L1	€
6	26	31	7	20	22	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
6	26	31	7	20	27	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
6	26	31	7	20	36	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						75	
						80	
						85	
						95	
						115	
						135	
6	26	31	7	20	46	20	
						45	
						65	
						85	
						105	
						135	
						165	

N01

Guide Pillar



Ordering-Example:

1 Piece N01 Ø20/56/20

Special Sizes Available On Request.

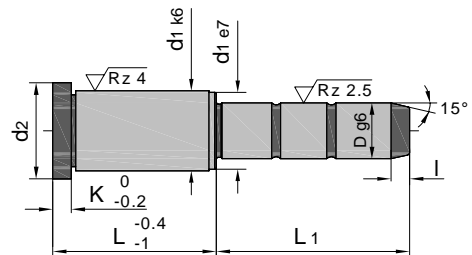
Material: 1.7139 ca. 700HV

K	d1	d2	l	D	L	L1	€
6	26	31	7	20	56	20	
						35	
						55	
						75	
						95	
6	26	31	7	20	66	55	
						75	
						95	
6	26	31	7	20	76	55	
						75	
						95	
6	26	31	7	20	86	55	
						75	
						95	
6	26	31	7	20	96	55	
						95	
6	26	31	7	20	116	115	
6	30	35	7	22	27	25	
						45	
						50	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
						165	
6	30	35	7	22	36	25	
						45	
						50	
						55	
						60	
						70	
						75	
						80	
						95	
						115	
						135	
						165	

K	d1	d2	l	D	L	L1	€
6	30	35	7	22	46	25	
						45	
						50	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
						165	
6	30	35	7	22	56	25	
						45	
						55	
						75	
						95	
6	30	35	7	22	66	55	
						75	
						95	
6	30	35	7	22	76	25	
						45	
						55	
						75	
						95	
						115	
6	30	35	7	22	86	55	
						75	
						95	
6	30	35	7	22	96	55	
						75	
						95	
6	30	35	7	22	116	75	
						115	
						155	
6	30	35	7	22	136	135	

N01

Guide Pillar



Ordering-Example:

1 Piece N01 Ø24/27/25

Special Sizes Available On Request.

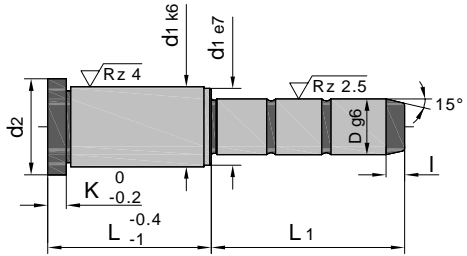
Material: 1.7139 ca. 700HV

K	d1	d2	l	D	L	L1	€
6	30	35	7	24	27	25	
						45	
						50	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
						165	
6	30	35	7	24	36	25	
						45	
						50	
						55	
						60	
						70	
						75	
						80	
						95	
						115	
						135	
						165	
6	30	35	7	24	46	25	
						45	
						50	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
						165	
6	30	35	7	24	56	25	
						45	
						55	
						75	
						95	
						115	
						165	
6	30	35	7	24	66	55	
						75	
						95	

K	d1	d2	l	D	L	L1	€
6	30	35	7	24	76	25	
						45	
						55	
						75	
						95	
						115	
6	30	35	7	24	86	55	
						75	
						95	
6	30	35	7	24	96	55	
						75	
						95	
6	30	35	7	24	116	75	
						115	
						155	
6	30	35	7	24	136	135	
6	42	47	7	30	27	45	
						65	
						105	
						165	
6	42	47	7	30	36	55	
						75	
						95	
						115	
						155	
6	42	47	7	30	46	45	
						65	
						85	
						105	
						125	
						165	
6	42	47	7	30	56	55	
						75	
						95	
						115	
						135	
						175	

N01

Guide Pillar



Ordering-Example:

1 Piece N01 Ø30/66/55

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

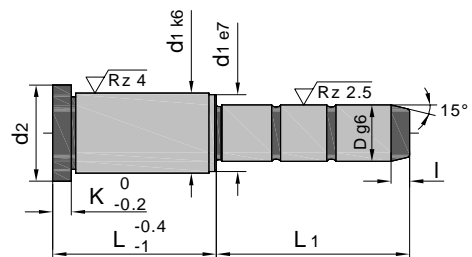
K	d1	d2	l	D	L	L1	€
6	42	47	7	30	66	55	
						75	
						95	
						115	
						135	
						175	
6	42	47	7	30	76	55	
						75	
						95	
						115	
						155	
6	42	47	7	30	86	55	
						75	
						95	
						115	
						155	
6	42	47	7	30	96	55	
						75	
						95	
						155	
6	42	47	7	30	116	75	
						115	
						155	
6	42	47	7	30	136	95	
						115	
						155	
6	42	47	7	30	156	115	
						155	
6	42	47	7	30	176	135	
						175	
6	42	47	7	30	196	155	
						195	
6	42	47	7	32	27	45	
						65	
						105	
						165	

K	d1	d2	l	D	L	L1	€
6	42	47	7	32	36	55	
						75	
						95	
						115	
						155	
6	42	47	7	32	46	45	
						65	
						85	
						105	
						165	
6	42	47	7	32	56	55	
						75	
						95	
						115	
						175	
6	42	47	7	32	66	55	
						75	
						95	
						115	
						175	
6	42	47	7	32	76	55	
						75	
						95	
						155	
6	42	47	7	32	86	55	
						75	
						95	
						155	
6	42	47	7	32	96	55	
						75	
						95	
						155	
6	42	47	7	32	116	75	
						115	
						155	

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N01

Guide Pillar



Ordering-Example:

1 Piece N01 Ø32/136/95

Special Sizes Available On Request.

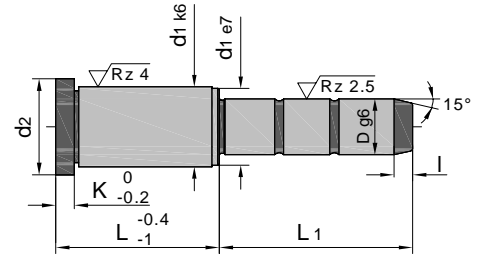
Material: 1.7139 ca. 700HV

K	d1	d2	l	D	L	L1	€
6	42	47	7	32	136	95	
						115	
						155	
6	42	47	7	32	156	115	
						155	
6	42	47	7	32	176	135	
						175	
6	42	47	7	32	196	155	
						195	
10	54	59	10	40	56	75	
						115	
						155	
						195	
10	54	59	10	40	66	75	
						135	
10	54	59	10	40	76	75	
						115	
						175	
10	54	59	10	40	86	75	
						135	
10	54	59	10	40	96	75	
						115	
						155	
10	54	59	10	40	116	95	
						135	
						195	
10	54	59	10	40	136	95	
						135	
						215	
10	54	59	10	40	156	115	
						155	
						215	
10	54	59	10	40	176	135	
						155	
						175	
10	54	59	10	40	196	155	
						195	
						235	

K	d1	d2	l	D	L	L1	€
10	54	59	10	40	246	165	
						245	
10	54	59	10	42	56	75	
						115	
						155	
						195	
10	54	59	10	42	66	75	
						135	
10	54	59	10	42	76	75	
						115	
						175	
10	54	59	10	42	86	75	
						135	
10	54	59	10	42	96	75	
						115	
						155	
10	54	59	10	42	116	95	
						135	
						195	
10	54	59	10	42	136	95	
						135	
						215	
10	54	59	10	42	156	115	
						155	
						215	
10	54	59	10	42	176	135	
						155	
						175	
10	54	59	10	42	196	155	
						195	
						235	
10	54	59	10	42	246	165	
						245	
10	66	71	10	50	96	115	
						155	
						195	

N01

Guide Pillar



Ordering-Example:

1 Piece N01 Ø50/116/135

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

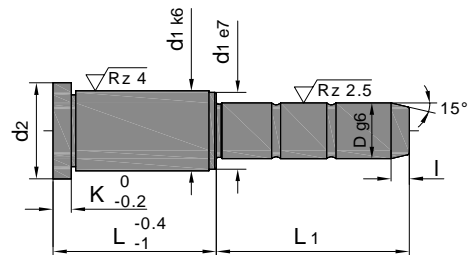
K	d1	d2	l	D	L	L1	€
10	66	71	10	50	116	135	
						155	
						195	
10	66	71	10	50	136	135	
						155	
						195	
10	66	71	10	50	156	155	
						195	
						235	
10	66	71	10	50	196	175	
						195	
						235	
10	66	71	10	52	96	115	
						155	
						195	
10	66	71	10	52	116	135	
						155	
						195	
10	66	71	10	52	136	135	
						155	
						195	
10	66	71	10	52	156	155	
						195	
						235	
10	66	71	10	52	196	175	
						195	
						235	
20	80	86	10	60	96	115	
						155	
						195	
20	80	86	10	60	116	135	
						155	
						195	
20	80	86	10	60	136	135	
						155	
						195	
20	80	86	10	60	156	155	
						195	
						235	

K	d1	d2	l	D	L	L1	€
20	80	86	10	60	196	175	
						195	
						235	
20	80	86	10	60	246	195	
						235	
						275	
						315	
20	80	86	10	62	96	115	
						155	
						195	
20	80	86	10	62	116	135	
						155	
						195	
20	80	86	10	62	136	135	
						155	
						195	
20	80	86	10	62	156	155	
						195	
						235	
20	80	86	10	62	196	175	
						195	
						235	
20	80	86	10	62	246	195	
						235	
						275	
						315	

N011

Guide Pillar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N011 Ø9/12/45

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

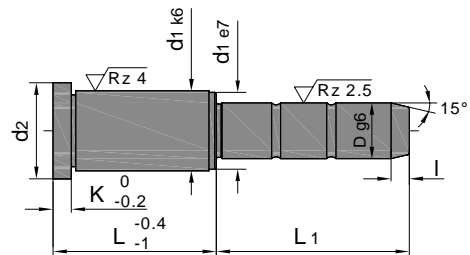
K	d1	d2	l	D	L	L1	€
3	14	16	4	9	12	45	
3	14	16	4	9	17	20	
						30	
						35	
3	14	16	4	9	22	25	
						35	
						55	
3	14	16	4	9	27	25	
						30	
						35	
						45	
						50	
3	14	16	4	9	36	25	
						35	
						45	
3	14	16	4	9	46	30	
						45	
						55	
						75	
3	14	16	4	10	12	45	
3	14	16	4	10	17	20	
						30	
						35	
3	14	16	4	10	22	25	
						35	
						55	
3	14	16	4	10	27	25	
						30	
						35	
						45	
						50	
3	14	16	4	10	36	25	
						35	
						45	
3	14	16	4	10	46	30	
						45	
						55	
						75	

K	d1	d2	l	D	L	L1	€
6	20	25	5	14	17	35	
						55	
						75	
						95	
6	20	25	5	14	22	20	
						35	
						40	
						45	
						50	
						55	
						65	
						70	
						90	
						110	
6	20	25	5	14	27	20	
						35	
						40	
						45	
						55	
						65	
						85	
						105	
6	20	25	5	14	36	20	
						35	
						40	
						45	
						55	
						65	
						75	
						95	
6	20	25	5	14	46	20	
						35	
						45	
						65	
						85	
						105	
6	20	25	5	14	56	20	
						35	
						55	
						75	
						95	
6	20	25	5	14	66	55	
						65	
						95	

N011

Guide Pillar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N011 Ø14/76/55

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

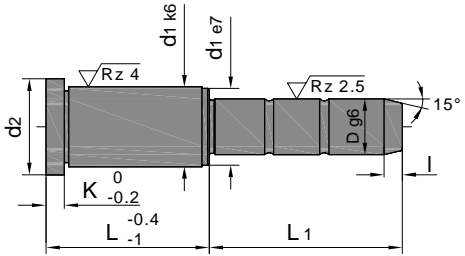
K	d1	d2	l	D	L	L1	€
6	20	25	5	14	76	55	
						95	
6	20	25	5	14	86	55	
						95	
6	20	25	5	14	96	55	
						95	
6	20	25	5	15	17	35	
						55	
						75	
						95	
6	20	25	5	15	22	20	
						35	
						40	
						45	
						50	
						55	
						65	
						70	
						90	
						110	
6	20	25	5	15	27	20	
						35	
						40	
						45	
						55	
						65	
						85	
						105	
6	20	25	5	15	36	20	
						35	
						40	
						45	
						55	
						65	
						75	
						95	
6	20	25	5	15	46	20	
						35	
						45	
						65	
						105	

K	d1	d2	l	D	L	L1	€
6	20	25	5	15	56	20	
						35	
						55	
6	20	25	5	15	66	55	
						65	
						95	
6	20	25	5	15	76	55	
						95	
6	20	25	5	15	86	55	
						95	
6	20	25	5	15	96	55	
						95	
6	26	31	7	18	22	20	
						35	
						40	
						45	
						50	
						55	
						85	
						115	
6	26	31	7	18	27	20	
						35	
						40	
						55	
						125	

N011

Guide Pillar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N011 Ø18/36/20

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

K	d1	d2	l	D	L	L1	€
6	26	31	7	18	36	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						75	
						80	
						85	
						95	
						115	
						135	
6	26	31	7	18	46	20	
						45	
						65	
						85	
						105	
						135	
						165	
6	26	31	7	18	56	20	
						35	
						55	
						75	
						95	
6	26	31	7	18	66	55	
						75	
						95	
6	26	31	7	18	76	55	
						75	
						95	
6	26	31	7	18	86	55	
						75	
						95	
6	26	31	7	18	96	55	
						95	
6	26	31	7	18	116	115	

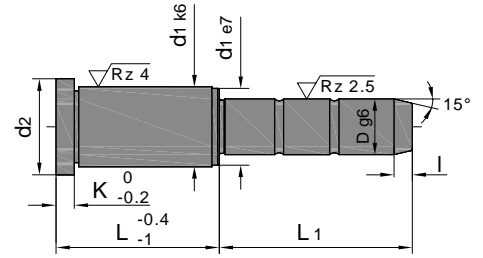
K	d1	d2	l	D	L	L1	€
6	26	31	7	20	22	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						85	
						115	
6	26	31	7	20	27	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						85	
						105	
						125	
6	26	31	7	20	36	20	
						35	
						40	
						45	
						50	
						55	
						60	
						65	
						70	
						75	
						80	
						85	
						95	
						115	
						135	
6	26	31	7	20	46	20	
						45	
						65	
						85	
						105	
						135	
						165	

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N011

Guide Pillar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N011 Ø20/56/20

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

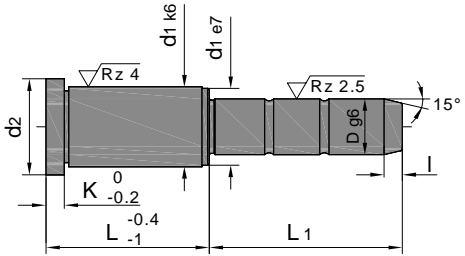
K	d1	d2	l	D	L	L1	€
6	26	31	7	20	56	20	
						35	
						55	
						75	
						95	
6	26	31	7	20	66	55	
						75	
						95	
6	26	31	7	20	76	55	
						75	
						95	
6	26	31	7	20	86	55	
						75	
						95	
6	26	31	7	20	96	55	
						95	
6	26	31	7	20	116	115	
6	30	35	7	22	27	25	
						45	
						50	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
						165	
6	30	35	7	22	36	25	
						45	
						50	
						55	
						60	
						70	
						75	
						80	
						95	
						115	
						135	
						165	

K	d1	d2	l	D	L	L1	€
6	30	35	7	22	46	25	
						45	
						50	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
						165	
6	30	35	7	22	56	25	
						45	
						55	
						75	
						95	
6	30	35	7	22	66	55	
						75	
						95	
6	30	35	7	22	76	25	
						45	
						55	
						75	
						95	
						115	
6	30	35	7	22	86	55	
						75	
						95	
6	30	35	7	22	96	55	
						75	
						95	
6	30	35	7	22	116	75	
						115	
						155	
6	30	35	7	22	136	135	

N011

Guide Pillar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N011 Ø24/27/25

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

K	d1	d2	l	D	L	L1	€
6	30	35	7	24	27	25	
						45	
						50	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
						165	
6	30	35	7	24	36	25	
						45	
						50	
						55	
						60	
						70	
						75	
						80	
						95	
						115	
						135	
						165	
6	30	35	7	24	46	25	
						45	
						50	
						60	
						65	
						70	
						80	
						85	
						105	
						125	
						165	
6	30	35	7	24	56	25	
						45	
						55	
						75	
						95	
						115	
						165	
6	30	35	7	24	66	55	
						75	
						95	

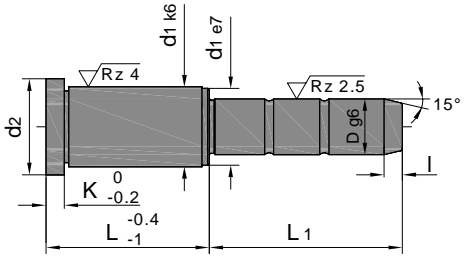
K	d1	d2	l	D	L	L1	€
6	30	35	7	24	76	25	
						45	
						55	
						75	
						95	
						115	
6	30	35	7	24	86	55	
						75	
						95	
6	30	35	7	24	96	55	
						75	
						95	
6	30	35	7	24	116	75	
						115	
						155	
6	30	35	7	24	136	135	
6	42	47	7	30	27	45	
						65	
						105	
						165	
6	42	47	7	30	36	55	
						75	
						95	
						115	
						155	
6	42	47	7	30	46	45	
						65	
						85	
						105	
						125	
						165	
6	42	47	7	30	56	55	
						75	
						95	
						115	
						135	
						175	

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N011

Guide Pillar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N011 Ø30/66/55

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

K	d1	d2	l	D	L	L1	€
6	42	47	7	30	66	55	
						75	
						95	
						115	
						135	
						175	
6	42	47	7	30	76	55	
						75	
						95	
						115	
						155	
6	42	47	7	30	86	55	
						75	
						95	
						115	
						155	
6	42	47	7	30	96	55	
						75	
						95	
						115	
						155	
6	42	47	7	30	116	75	
						115	
						155	
6	42	47	7	30	136	95	
						115	
						155	
6	42	47	7	30	156	115	
						155	
6	42	47	7	30	176	135	
						175	
6	42	47	7	30	196	155	
						195	
6	42	47	7	32	27	45	
						65	
						105	
						165	

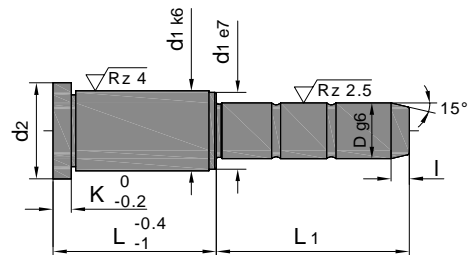
K	d1	d2	l	D	L	L1	€
6	42	47	7	32	36	55	
						75	
						95	
						115	
						155	
6	42	47	7	32	46	45	
						65	
						85	
						105	
						125	
						165	
6	42	47	7	32	56	55	
						75	
						95	
						115	
						135	
						175	
6	42	47	7	32	66	55	
						75	
						95	
						115	
						135	
						175	
6	42	47	7	32	76	55	
						75	
						95	
						115	
						155	
6	42	47	7	32	86	55	
						75	
						95	
						115	
						155	
6	42	47	7	32	96	55	
						75	
						95	
						115	
						155	
6	42	47	7	32	116	75	
						115	
						155	

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N011

Guide Pillar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N011 Ø32/136/95

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

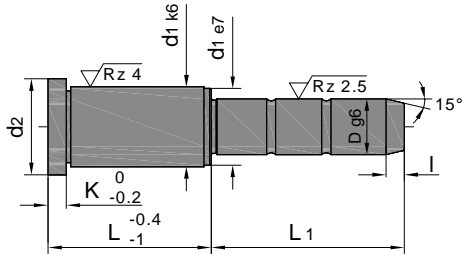
K	d1	d2	l	D	L	L1	€
6	42	47	7	32	136	95	
						115	
						155	
6	42	47	7	32	156	115	
						155	
6	42	47	7	32	176	135	
						175	
6	42	47	7	32	196	155	
						195	
10	54	59	10	40	56	75	
						115	
						155	
						195	
10	54	59	10	40	66	75	
						135	
10	54	59	10	40	76	75	
						115	
						175	
10	54	59	10	40	86	75	
						135	
10	54	59	10	40	96	75	
						115	
						155	
10	54	59	10	40	116	95	
						135	
						195	
10	54	59	10	40	136	95	
						135	
						215	
10	54	59	10	40	156	115	
						155	
						215	
10	54	59	10	40	176	135	
						155	
						175	
10	54	59	10	40	196	155	
						195	
						235	

K	d1	d2	l	D	L	L1	€
10	54	59	10	40	246	165	
						245	
10	54	59	10	42	56	75	
						115	
						155	
10	54	59	10	42	66	75	
						135	
10	54	59	10	42	76	75	
						115	
10	54	59	10	42	86	75	
						135	
10	54	59	10	42	96	75	
						115	
						155	
10	54	59	10	42	116	95	
						135	
						195	
10	54	59	10	42	136	95	
						135	
						215	
10	54	59	10	42	156	115	
						155	
						215	
10	54	59	10	42	176	135	
						155	
						175	
10	54	59	10	42	196	155	
						195	
						235	
10	54	59	10	42	246	165	
						245	
10	66	71	10	50	96	115	
						155	
						195	

N011

Guide Pillar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N011 Ø50/116/135

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

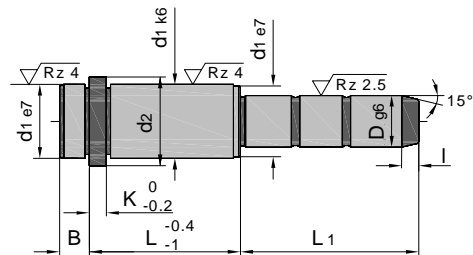
K	d1	d2	l	D	L	L1	€
10	66	71	10	50	116	135	
						155	
						195	
10	66	71	10	50	136	135	
						155	
						195	
10	66	71	10	50	156	155	
						195	
						235	
10	66	71	10	50	196	175	
						195	
						235	
10	66	71	10	52	96	115	
						155	
						195	
10	66	71	10	52	116	135	
						155	
						195	
10	66	71	10	52	136	135	
						155	
						195	
10	66	71	10	52	156	155	
						195	
						235	
10	66	71	10	52	196	175	
						195	
						235	
20	80	86	10	60	96	115	
						155	
						195	
20	80	86	10	60	116	135	
						155	
						195	
20	80	86	10	60	136	135	
						155	
						195	
20	80	86	10	60	156	155	
						195	
						235	

K	d1	d2	l	D	L	L1	€
20	80	86	10	60	196	175	
						195	
						235	
20	80	86	10	60	246	195	
						235	
						275	
						315	
20	80	86	10	62	96	115	
						155	
						195	
20	80	86	10	62	116	135	
						155	
						195	
20	80	86	10	62	136	135	
						155	
						195	
20	80	86	10	62	156	155	
						195	
						235	
20	80	86	10	62	196	175	
						195	
						235	
20	80	86	10	62	246	195	
						235	
						275	
						315	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø9/12/25

Special Sizes Available On Request.

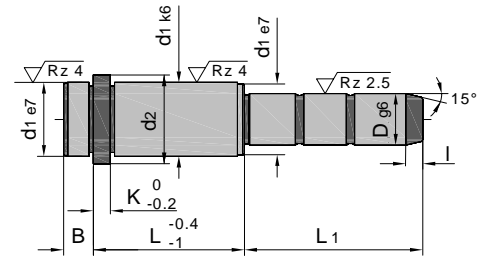
Material: 1.7139 ca. 700HV

B	K	d1	d2	l	D	L	L1	€
3	3	14	16	4	9	12	25	
							45	
							65	
3	3	14	16	4	9	17	20	
							25	
							30	
							35	
							50	
							55	
							70	
75								
3	3	14	16	4	9	22	25	
							35	
							55	
							75	
3	3	14	16	4	9	27	20	
							25	
							30	
							35	
							45	
							50	
							70	
90								
3	3	14	16	4	9	36	25	
							35	
							45	
							55	
							85	
3	3	14	16	4	9	46	30	
							35	
							45	
							70	
3	3	14	16	4	9	56	35	
							60	
							75	
3	3	14	16	4	10	12	25	
							45	
							65	

B	K	d1	d2	l	D	L	L1	€
3	3	14	16	4	10	17	20	
							25	
							30	
							35	
							50	
3	3	14	16	4	10	22	25	
							35	
							55	
							75	
3	3	14	16	4	10	27	20	
							25	
							30	
							35	
							45	
3	3	14	16	4	10	36	25	
							35	
							45	
							55	
							85	
3	3	14	16	4	10	46	30	
							35	
							45	
							70	
3	3	14	16	4	10	56	35	
							60	
9	6	20	25	5	14	17	35	
							55	
							75	
							95	

N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø14/22/25

Special Sizes Available On Request.

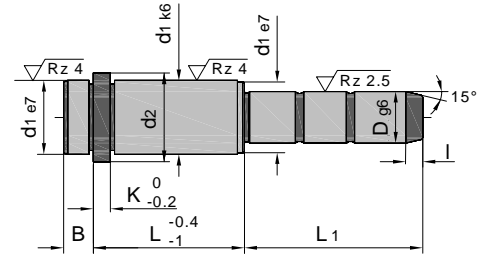
Material: 1.7139 ca. 700HV

B	K	d1	d2	l	D	L	L1	€
9	6	20	25	5	14	22	25	
							30	
							35	
							50	
							70	
							90	
							110	
							125	
							150	
9	6	20	25	5	14	27	25	
							30	
							45	
							65	
							85	
							95	
							105	
							115	
							125	
							145	
							165	
9	6	20	25	5	14	36	35	
							55	
							75	
							95	
							115	
							125	
							155	
9	6	20	25	5	14	46	35	
							45	
							65	
							85	
							105	
							125	
							145	
9	6	20	25	5	14	56	35	
							55	
							75	
							95	
							115	
							135	
9	6	20	25	5	14	66	55	
							65	
							95	
							125	

B	K	d1	d2	l	D	L	L1	€
9	6	20	25	5	14	76	55	
							95	
9	6	20	25	5	14	86	55	
							75	
							95	
9	6	20	25	5	14	96	55	
							95	
9	6	20	25	5	14	116	75	
9	6	20	25	5	15	17	35	
							55	
							75	
							95	
9	6	20	25	5	15	22	25	
							30	
							35	
							50	
							70	
							90	
							110	
							125	
							150	
9	6	20	25	5	15	27	25	
							30	
							45	
							65	
							85	
							95	
							105	
							115	
							125	
							145	
							165	
9	6	20	25	5	15	36	35	
							55	
							75	
							95	
							115	
							125	
							155	

N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø15/46/35

Special Sizes Available On Request.

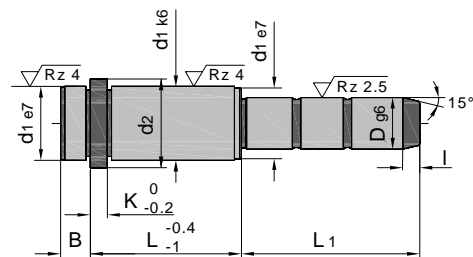
Material: 1.7139 ca. 700HV

B	K	d1	d2	l	D	L	L1	€
9	6	20	25	5	15	46	35	
							45	
							65	
							85	
							105	
							125	
							145	
9	6	20	25	5	15	56	35	
							55	
							75	
							95	
							115	
							135	
9	6	20	25	5	15	66	55	
							65	
							95	
							125	
9	6	20	25	5	15	76	55	
							95	
9	6	20	25	5	15	86	55	
							75	
							95	
9	6	20	25	5	15	96	55	
							95	
9	6	20	25	5	15	116	75	
9	6	26	31	7	18	17	35	
							55	
							75	
							120	
9	6	26	31	7	18	22	35	
							45	
							65	
							85	
							115	

B	K	d1	d2	l	D	L	L1	€
9	6	26	31	7	18	27	35	
							45	
							65	
							85	
							105	
							125	
							165	
							225	
							245	
9	6	26	31	7	18	36	35	
							55	
							75	
							95	
							115	
							135	
							165	
							225	
							255	
9	6	26	31	7	18	46	35	
							45	
							65	
							85	
							105	
							115	
							135	
							165	
							245	
9	6	26	31	7	18	56	35	
							55	
							75	
							95	
							155	
9	6	26	31	7	18	66	35	
							55	
							75	
							95	
							145	
9	6	26	31	7	18	76	55	
							75	
							95	
							135	
9	6	26	31	7	18	86	55	
							75	
							95	
							125	

N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø18/96/55

Special Sizes Available On Request.

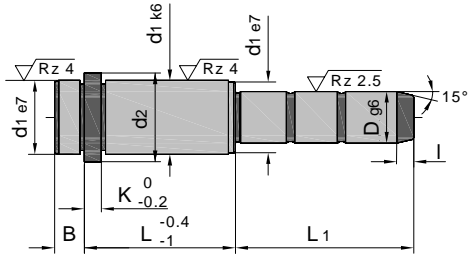
Material: 1.7139 ca. 700HV

B	K	d1	d2	l	D	L	L1	€
9	6	26	31	7	18	96	55	
							95	
9	6	26	31	7	18	116	75	
							115	
9	6	26	31	7	18	136	135	
9	6	26	31	7	20	17	35	
							55	
							75	
							120	
9	6	26	31	7	20	22	35	
							45	
							65	
							85	
							115	
9	6	26	31	7	20	27	35	
							45	
							65	
							85	
							105	
							125	
							165	
							225	
							245	
9	6	26	31	7	20	36	35	
							55	
							75	
							95	
							115	
							135	
							165	
							225	
							255	
9	6	26	31	7	20	46	35	
							45	
							65	
							85	
							105	
							115	
							135	
							165	
							245	

B	K	d1	d2	l	D	L	L1	€
9	6	26	31	7	20	56	35	
							55	
							75	
							95	
							155	
9	6	26	31	7	20	66	35	
							55	
							75	
							95	
							145	
9	6	26	31	7	20	76	55	
							75	
							95	
							135	
9	6	26	31	7	20	86	55	
							75	
							95	
							125	
9	6	26	31	7	20	96	55	
							95	
9	6	26	31	7	20	116	75	
							115	
9	6	26	31	7	20	136	135	
9	6	30	35	7	22	17	35	
							55	
							75	
9	6	30	35	7	22	22	35	
							55	
							75	
							105	
							130	

N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø22/27/35

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

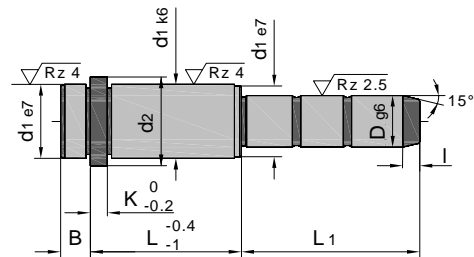
B	K	d1	d2	l	D	L	L1	€							
9	6	30	35	7	22	27	35								
							45								
							55								
							65								
							75								
							85								
							95								
							105								
							115								
							125								
							155								
							165								
							205								
							245								
285															
9	6	30	35	7	22	36	35								
							55								
							75								
							95								
							115								
							135								
							155								
							165								
							205								
							245								
							285								
							9	6	30	35	7	22	46	35	
														45	
														65	
85															
105															
125															
155															
165															
205															
9	6	30	35	7	22	56								35	
														55	
														75	
														95	
														115	
							165								
							205								
							9	6	30	35	7	22	66	35	
														55	
														75	
														95	
														155	
														155	

B	K	d1	d2	l	D	L	L1	€
9	6	30	35	7	22	76	55	
							75	
							95	
							115	
							135	
							145	
							155	
9	6	30	35	7	22	86	55	
							75	
							95	
							135	
							155	
							195	
9	6	30	35	7	22	96	55	
							75	
							95	
							125	
9	6	30	35	7	22	116	75	
							115	
							135	
							155	
9	6	30	35	7	22	136	95	
							135	
9	6	30	35	7	22	156	155	
9	6	30	35	7	24	17	35	
							55	
							75	
9	6	30	35	7	24	22	35	
							55	
							75	
							105	
							130	

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N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø24/27/35

Special Sizes Available On Request.

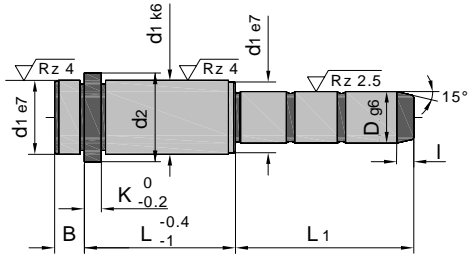
Material: 1.7139 ca. 700HV

B	K	d1	d2	l	D	L	L1	€							
9	6	30	35	7	24	27	35								
							45								
							55								
							65								
							75								
							85								
							95								
							105								
							115								
							125								
							155								
							165								
							205								
							245								
285															
9	6	30	35	7	24	36	35								
							55								
							75								
							95								
							115								
							135								
							155								
							165								
							205								
							245								
							285								
							9	6	30	35	7	24	46	35	
														45	
														65	
85															
105															
125															
155															
165															
205															
9	6	30	35	7	24	56								35	
														55	
														75	
														95	
														115	
							165								
							205								
							9	6	30	35	7	24	66	35	
														55	
														75	
														95	
														155	

B	K	d1	d2	l	D	L	L1	€
9	6	30	35	7	24	76	55	
							75	
							95	
							115	
							135	
							145	
							155	
9	6	30	35	7	24	86	55	
							75	
							95	
							135	
							155	
							195	
							9	6
75								
95								
125								
9	6	30	35	7	24	116	75	
							115	
							135	
							155	
9	6	30	35	7	24	136	95	
							135	
9	6	30	35	7	24	156	155	
9	6	42	47	7	30	27	45	
							65	
							105	
							165	
							185	
							245	
							285	
9	6	42	47	7	30	36	55	
							75	
							95	
							115	
							155	
							245	
285								

N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø30/46/45

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

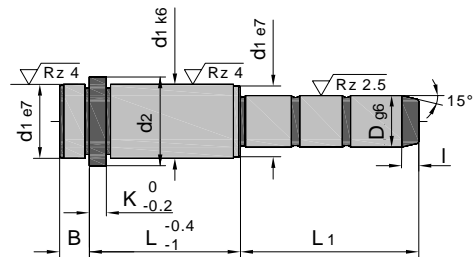
B	K	d1	d2	l	D	L	L1	€							
9	6	42	47	7	30	46	45								
							65								
							75								
							85								
							95								
							105								
							125								
							165								
							245								
							285								
9	6	42	47	7	30	56	55								
							75								
							95								
							115								
							135								
							155								
							175								
							245								
							295								
							9	6	42	47	7	30	66	55	
75															
95															
115															
135															
155															
175															
245															
275															
295															
9	6	42	47	7	30	76	55								
							75								
							95								
							115								
							155								
							225								
							235								
							9	6	42	47	7	30	86	55	
														75	
														95	
115															
155															
225															

B	K	d1	d2	l	D	L	L1	€
9	6	42	47	7	30	96	55	
							75	
							95	
							115	
							155	
							205	
9	6	42	47	7	30	116	75	
							115	
							155	
9	6	42	47	7	30	136	95	
							115	
							155	
9	6	42	47	7	30	156	115	
							155	
9	6	42	47	7	30	176	115	
							135	
							155	
9	6	42	47	7	30	196	155	
							195	
							9	6
65								
105								
165								
185								
245								
9	6	42	47	7	32	36	55	
							75	
							95	
							115	
							155	
							245	
9	6	42	47	7	32	36	285	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø32/46/45

Special Sizes Available On Request.

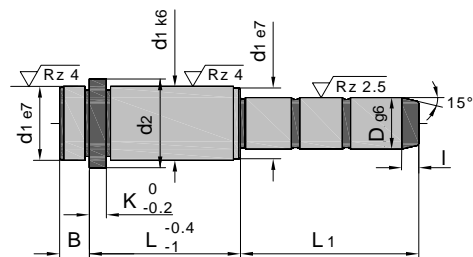
Material: 1.7139 ca. 700HV

B	K	d1	d2	l	D	L	L1	€							
9	6	42	47	7	32	46	45								
							65								
							75								
							85								
							95								
							105								
							125								
							165								
							245								
							285								
9	6	42	47	7	32	56	55								
							75								
							95								
							115								
							135								
							155								
							175								
							245								
							295								
							9	6	42	47	7	32	66	55	
75															
95															
115															
135															
155															
175															
245															
275															
295															
9	6	42	47	7	32	76	55								
							75								
							95								
							115								
							155								
							225								
							235								
							9	6	42	47	7	32	86	55	
														75	
														95	
115															
155															
225															

B	K	d1	d2	l	D	L	L1	€							
9	6	42	47	7	32	96	55								
							75								
							95								
							115								
							155								
							205								
9	6	42	47	7	32	116	75								
							115								
							155								
9	6	42	47	7	32	136	95								
							115								
							155								
9	6	42	47	7	32	156	115								
							155								
9	6	42	47	7	32	176	115								
							135								
							155								
9	6	42	47	7	32	196	155								
							195								
							12	10	54	59	10	40	36	75	
115															
12	10	54	59	10	40	46	95								
							165								
12	10	54	59	10	40	56	75								
							95								
							115								
							155								
12	10	54	59	10	40	66	75								
							135								
							12	10	54	59	10	40	76	75	
														95	
115															
155															
12	10	54	59	10	40	86	75								
							135								

N02

Guide Pillar With Centring Collar



Ordering-Example:

1 Piece N02 Ø40/96/75

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

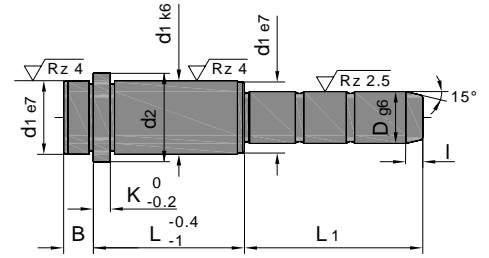
B	K	d1	d2	l	D	L	L1	€
12	10	54	59	10	40	96	75	
							95	
							115	
							155	
							195	
12	10	54	59	10	40	116	95	
							115	
							135	
							155	
							195	
12	10	54	59	10	40	136	95	
							115	
							135	
							155	
							195	
12	10	54	59	10	40	156	115	
							155	
							195	
							215	
12	10	54	59	10	40	176	135	
							155	
							175	
							195	
12	10	54	59	10	40	196	115	
							155	
							195	
							235	
12	10	54	59	10	40	246	165	
							245	
12	10	54	59	10	42	36	75	
							115	
12	10	54	59	10	42	46	95	
							165	
12	10	54	59	10	42	56	75	
							95	
							115	
							155	
							195	
12	10	54	59	10	42	66	75	
							135	

B	K	d1	d2	l	D	L	L1	€
12	10	54	59	10	42	76	75	
							95	
							115	
							155	
							175	
12	10	54	59	10	42	86	75	
							135	
12	10	54	59	10	42	96	75	
							95	
							115	
							155	
							195	
12	10	54	59	10	42	116	95	
							115	
							135	
							155	
							195	
12	10	54	59	10	42	136	95	
							115	
							135	
							155	
							195	
12	10	54	59	10	42	156	115	
							155	
							195	
							215	
12	10	54	59	10	42	176	135	
							155	
							175	
							195	
12	10	54	59	10	42	196	115	
							155	
							195	
							235	
12	10	54	59	10	42	246	165	
							245	

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø9/12/25

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

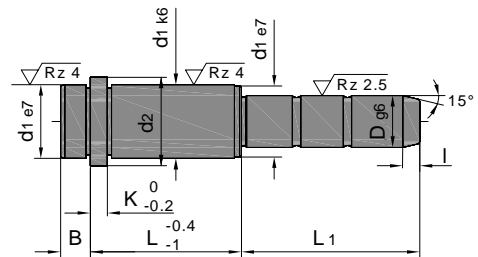
B	K	d1	d2	l	D	L	L1	€
3	3	14	16	4	9	12	25	
							45	
							65	
3	3	14	16	4	9	17	20	
							25	
							30	
							35	
							50	
							55	
							70	
75								
3	3	14	16	4	9	22	25	
							35	
							55	
							75	
3	3	14	16	4	9	27	20	
							25	
							30	
							35	
							45	
							50	
							70	
90								
3	3	14	16	4	9	36	25	
							35	
							45	
							55	
							85	
3	3	14	16	4	9	46	30	
							35	
							45	
							55	
							70	
3	3	14	16	4	9	56	35	
							60	
							75	
							95	
3	3	14	16	4	10	12	25	
							45	
							65	

B	K	d1	d2	l	D	L	L1	€
3	3	14	16	4	10	17	20	
							25	
							30	
							35	
							50	
3	3	14	16	4	10	22	25	
							35	
							55	
							75	
							95	
3	3	14	16	4	10	27	20	
							25	
							30	
							35	
							45	
3	3	14	16	4	10	36	25	
							35	
							45	
							55	
							85	
3	3	14	16	4	10	46	30	
							35	
							45	
							55	
							70	
3	3	14	16	4	10	56	35	
							60	
9	6	20	25	5	14	17	35	
							55	
							75	
							95	

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø14/22/25

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

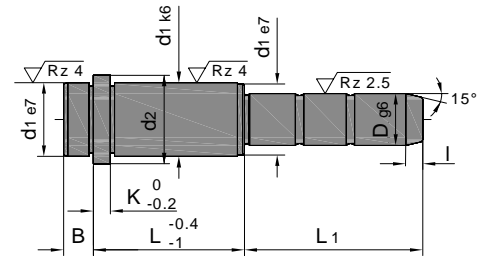
B	K	d1	d2	l	D	L	L1	€
9	6	20	25	5	14	22	25	
							30	
							35	
							50	
							70	
							90	
							110	
							125	
							150	
9	6	20	25	5	14	27	25	
							30	
							45	
							65	
							85	
							95	
							105	
							115	
							125	
							145	
							165	
9	6	20	25	5	14	36	35	
							55	
							75	
							95	
							115	
							125	
							155	
9	6	20	25	5	14	46	35	
							45	
							65	
							85	
							105	
							125	
							145	
9	6	20	25	5	14	56	35	
							55	
							75	
							95	
							115	
							135	
9	6	20	25	5	14	66	55	
							65	
							95	
							125	

B	K	d1	d2	l	D	L	L1	€
9	6	20	25	5	14	76	55	
							95	
9	6	20	25	5	14	86	55	
							75	
							95	
9	6	20	25	5	14	96	55	
							95	
9	6	20	25	5	14	116	75	
9	6	20	25	5	15	17	35	
							55	
							75	
							95	
9	6	20	25	5	15	22	25	
							30	
							35	
							50	
							70	
							90	
							110	
							125	
							150	
9	6	20	25	5	15	27	25	
							30	
							45	
							65	
							85	
							95	
							105	
							115	
							125	
							145	
							165	
9	6	20	25	5	15	36	35	
							55	
							75	
							95	
							115	
							125	
							145	
							155	

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø15/46/35

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

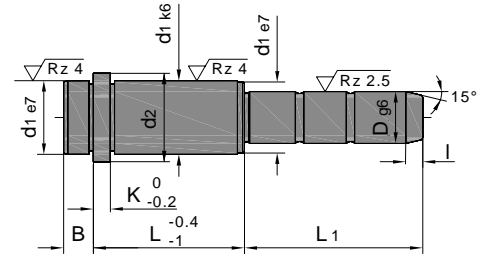
B	K	d1	d2	l	D	L	L1	€
9	6	20	25	5	15	46	35	
							45	
							65	
							85	
							105	
							125	
							145	
9	6	20	25	5	15	56	35	
							55	
							75	
							95	
							115	
							135	
9	6	20	25	5	15	66	55	
							65	
							95	
							125	
9	6	20	25	5	15	76	55	
							95	
9	6	20	25	5	15	86	55	
							75	
							95	
9	6	20	25	5	15	96	55	
							95	
9	6	20	25	5	15	116	75	
9	6	26	31	7	18	17	35	
							55	
							75	
							120	
9	6	26	31	7	18	22	35	
							45	
							65	
							85	
							115	

B	K	d1	d2	l	D	L	L1	€
9	6	26	31	7	18	27	35	
							45	
							65	
							85	
							105	
							125	
							165	
							225	
							245	
9	6	26	31	7	18	36	35	
							55	
							75	
							95	
							115	
							135	
							165	
							225	
							255	
9	6	26	31	7	18	46	35	
							45	
							65	
							85	
							105	
							115	
							135	
							165	
							245	
9	6	26	31	7	18	56	35	
							55	
							75	
							95	
							155	
9	6	26	31	7	18	66	35	
							55	
							75	
							95	
							145	
9	6	26	31	7	18	76	55	
							75	
							95	
							135	
9	6	26	31	7	18	86	55	
							75	
							95	
							125	

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø18/96/55

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

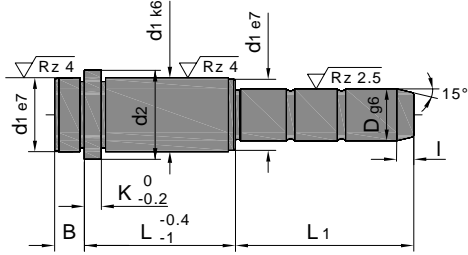
B	K	d1	d2	l	D	L	L1	€
9	6	26	31	7	18	96	55	
							95	
9	6	26	31	7	18	116	75	
							115	
9	6	26	31	7	18	136	135	
9	6	26	31	7	20	17	35	
							55	
							75	
							120	
9	6	26	31	7	20	22	35	
							45	
							65	
							85	
							115	
9	6	26	31	7	20	27	35	
							45	
							65	
							85	
							105	
							125	
							165	
							225	
							245	
9	6	26	31	7	20	36	35	
							55	
							75	
							95	
							115	
							135	
							165	
							225	
							255	
9	6	26	31	7	20	46	35	
							45	
							65	
							85	
							105	
							115	
							135	
							165	
							245	

B	K	d1	d2	l	D	L	L1	€
9	6	26	31	7	20	56	35	
							55	
							75	
							95	
							155	
9	6	26	31	7	20	66	35	
							55	
							75	
							95	
							145	
9	6	26	31	7	20	76	55	
							75	
							95	
							135	
9	6	26	31	7	20	86	55	
							75	
							95	
							125	
9	6	26	31	7	20	96	55	
							95	
9	6	26	31	7	20	116	75	
							115	
9	6	26	31	7	20	136	135	
9	6	30	35	7	22	17	35	
							55	
							75	
9	6	30	35	7	22	22	35	
							55	
							75	
							105	
							130	

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø22/27/35

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

B	K	d1	d2	l	D	L	L1	€
9	6	30	35	7	22	27	35	
							45	
							55	
							65	
							75	
							85	
							95	
							105	
							115	
							125	
							155	
							165	
							205	
							245	
							285	
9	6	30	35	7	22	36	35	
							55	
							75	
							95	
							115	
							135	
							155	
							165	
							205	
							245	
							285	
9	6	30	35	7	22	46	35	
							45	
							65	
							85	
							105	
							125	
							155	
							165	
							205	
9	6	30	35	7	22	56	35	
							55	
							75	
							95	
							115	
							165	
							205	
9	6	30	35	7	22	66	35	
							55	
							75	
							95	
							155	

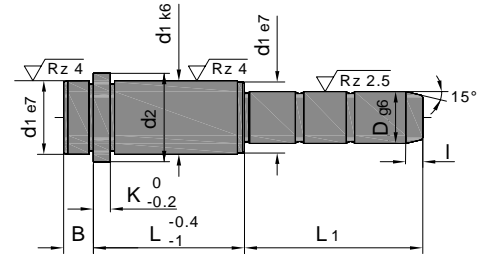
B	K	d1	d2	l	D	L	L1	€
9	6	30	35	7	22	76	55	
							75	
							95	
							115	
							135	
							145	
							155	
9	6	30	35	7	22	86	55	
							75	
							95	
							135	
							155	
9	6	30	35	7	22	96	55	
							75	
							125	
9	6	30	35	7	22	116	75	
							115	
							135	
							155	
9	6	30	35	7	22	136	95	
							135	
9	6	30	35	7	22	156	155	
9	6	30	35	7	24	17	35	
							55	
							75	
9	6	30	35	7	24	22	35	
							55	
							75	
							105	
							130	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø24/27/35

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

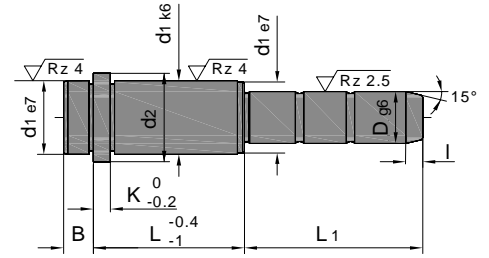
B	K	d1	d2	l	D	L	L1	€							
9	6	30	35	7	24	27	35								
							45								
							55								
							65								
							75								
							85								
							95								
							105								
							115								
							125								
							155								
							165								
							205								
							245								
285															
9	6	30	35	7	24	36	35								
							55								
							75								
							95								
							115								
							135								
							155								
							165								
							205								
							245								
							285								
							9	6	30	35	7	24	46	35	
														45	
														65	
85															
105															
125															
155															
165															
205															
9	6	30	35	7	24	56								35	
														55	
														75	
														95	
														115	
							165								
							205								
							9	6	30	35	7	24	66	35	
														55	
														75	
														95	
														155	

B	K	d1	d2	l	D	L	L1	€
9	6	30	35	7	24	76	55	
							75	
							95	
							115	
							135	
							145	
							155	
9	6	30	35	7	24	86	55	
							75	
							95	
							135	
							155	
							195	
							9	6
75								
95								
125								
9	6	30	35	7	24	116	75	
							115	
							135	
							155	
9	6	30	35	7	24	136	95	
							135	
9	6	30	35	7	24	156	155	
9	6	42	47	7	30	27	45	
							65	
							105	
							165	
							185	
							245	
							285	
9	6	42	47	7	30	36	55	
							75	
							95	
							115	
							155	
							245	
285								

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø30/46/45

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

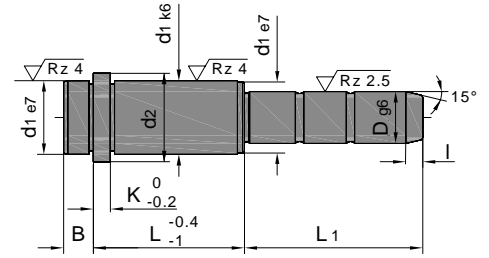
B	K	d1	d2	l	D	L	L1	€							
9	6	42	47	7	30	46	45								
							65								
							75								
							85								
							95								
							105								
							125								
							165								
							245								
							285								
9	6	42	47	7	30	56	55								
							75								
							95								
							115								
							135								
							155								
							175								
							245								
							295								
							9	6	42	47	7	30	66	55	
75															
95															
115															
135															
155															
175															
245															
275															
295															
9	6	42	47	7	30	76	55								
							75								
							95								
							115								
							155								
							225								
							235								
							9	6	42	47	7	30	86	55	
														75	
														95	
115															
155															
225															

B	K	d1	d2	l	D	L	L1	€
9	6	42	47	7	30	96	55	
							75	
							95	
							115	
							155	
							205	
9	6	42	47	7	30	116	75	
							115	
							155	
9	6	42	47	7	30	136	95	
							115	
							155	
9	6	42	47	7	30	156	115	
							155	
9	6	42	47	7	30	176	115	
							135	
							155	
9	6	42	47	7	30	196	155	
							195	
							9	6
65								
105								
165								
185								
245								
9	6	42	47	7	32	36	55	
							75	
							95	
							115	
							155	
							245	
9	6	42	47	7	32	36	285	

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø32/46/45

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

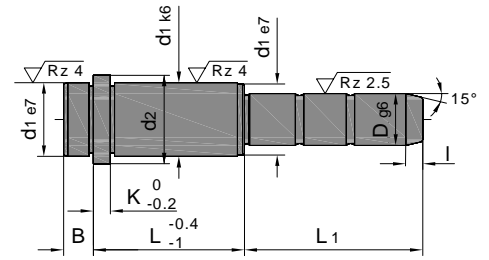
B	K	d1	d2	l	D	L	L1	€							
9	6	42	47	7	32	46	45								
							65								
							75								
							85								
							95								
							105								
							125								
							165								
							245								
							285								
9	6	42	47	7	32	56	55								
							75								
							95								
							115								
							135								
							155								
							175								
							245								
							295								
							9	6	42	47	7	32	66	55	
75															
95															
115															
135															
155															
175															
245															
275															
295															
9	6	42	47	7	32	76	55								
							75								
							95								
							115								
							155								
							225								
							235								
							9	6	42	47	7	32	86	55	
														75	
														95	
115															
155															
225															

B	K	d1	d2	l	D	L	L1	€							
9	6	42	47	7	32	96	55								
							75								
							95								
							115								
							155								
							205								
9	6	42	47	7	32	116	95								
							115								
							155								
9	6	42	47	7	32	136	75								
							115								
							155								
9	6	42	47	7	32	156	115								
							155								
9	6	42	47	7	32	176	115								
							135								
9	6	42	47	7	32	196	115								
							135								
							155								
12	10	54	59	10	40	36	75								
							115								
12	10	54	59	10	40	46	95								
							165								
12	10	54	59	10	40	56	75								
							95								
							115								
							155								
12	10	54	59	10	40	66	75								
							135								
							12	10	54	59	10	40	76	75	
														95	
115															
155															
12	10	54	59	10	40	86	75								
							135								

N021

Guide Pillar With Centring Collar With DLC Coating

Delivery Time: 10 - 12 Working Days / Exchange Excluded



Ordering-Example:

1 Piece N021 Ø40/96/75

Special Sizes Available On Request.

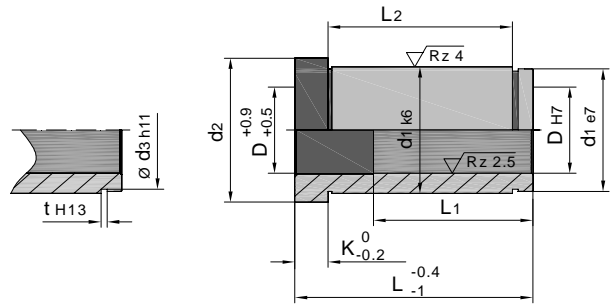
Material: 1.7139 ca. 700HV

B	K	d1	d2	l	D	L	L1	€
12	10	54	59	10	40	96	75	
							95	
							115	
							155	
							195	
12	10	54	59	10	40	116	95	
							115	
							135	
							155	
							195	
12	10	54	59	10	40	136	95	
							115	
							135	
							155	
							215	
12	10	54	59	10	40	156	115	
							155	
							195	
							215	
12	10	54	59	10	40	176	135	
							155	
							175	
							195	
12	10	54	59	10	40	196	115	
							155	
							195	
							235	
12	10	54	59	10	40	246	165	
							245	
12	10	54	59	10	42	36	75	
							115	
12	10	54	59	10	42	46	95	
							165	
12	10	54	59	10	42	56	75	
							95	
							115	
							155	
							195	
12	10	54	59	10	42	66	75	
							135	

B	K	d1	d2	l	D	L	L1	€
12	10	54	59	10	42	76	75	
							95	
							115	
							155	
							175	
12	10	54	59	10	42	86	75	
							135	
12	10	54	59	10	42	96	75	
							95	
							115	
							155	
12	10	54	59	10	42	116	95	
							115	
							135	
							155	
							195	
12	10	54	59	10	42	136	95	
							115	
							135	
							155	
							215	
12	10	54	59	10	42	156	115	
							155	
							195	
							215	
12	10	54	59	10	42	176	135	
							155	
							175	
							195	
12	10	54	59	10	42	196	115	
							155	
							195	
							235	
12	10	54	59	10	42	246	165	
							245	

N03

Guide Bushes



Ordering-Example:

1 Piece N03 Ø9/9

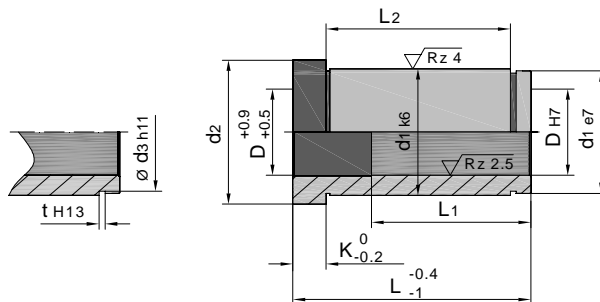
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

K	d1	d2	d3	t	L1	L2	D	L	€
3	14	16	-	-	-	-	9	9	
			13,4	1,10		5,5		12	
						10,5		17	
						15,5		22	
						20,5		27	
					27	29,5		36	
						39,5		46	
						49,5		56	
						59,5		66	
3	14	16	-	-	-	-	10	9	
			13,4	1,10		5,5		12	
						10,5		17	
						15,5		22	
						20,5		27	
					27	29,5		36	
						39,5		46	
						49,5		56	
						59,5		66	
6	18	23	17,0	1,30	-	7	12	17	
						12		22	
						17		27	
						26		36	
					36	36		46	
						46		56	
6	20	2	-	-	-	-	14	12	
			19,0	1,30		7		17	
						12		22	
						17		27	
						26		36	
						36		46	
					46	46		56	
						56		66	
						66		76	
						76		86	
						86	96		
6	20	2	-	-	-	-	15	12	
			19,0	1,30		7		17	
						12		22	
						17		27	
						26		36	
						36		46	
					46	46		56	
						56		66	
						66		76	
						76		86	
						86	96		

N03

Guide Bushes



Ordering-Example:

1 Piece N03 Ø16/17

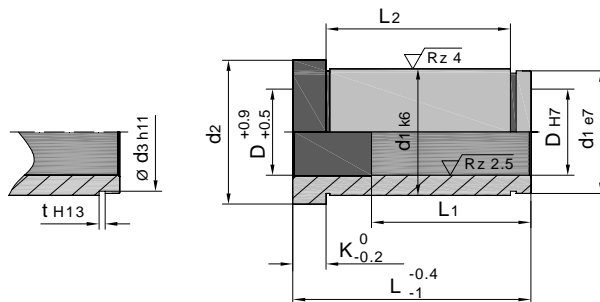
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

K	d1	d2	d3	t	L1	L2	D	L	€	
6	22	27	21,0	1,30	-	7	16	17		
						12		22		
						17		27		
						26		36		
						36		46		
						46		56		
					56	66		76		
6	26	31	24,9	1,30	-	7	18	17		
						12		22		
						17		27		
						26		36		
						36		46		
						46		56		
					56	56		66		
						66		76		
						76		86		
						86		96		
						106	116			
6	26	31	24,9	1,30	-	7	20	17		
						12		22		
						17		27		
						26		36		
						36		46		
						46		56		
					56	56		66		
						66		76		
						76		86		
						86		96		
						106	116			
6	30	35	-	-	-	-	22	17		
			28,6	1,60				11	22	
								16	27	
								25	36	
								35	46	
								45	56	
								55	66	
								65	76	
					76			75	86	
								85	96	
								105	116	
								125	136	
								145	156	

N03

Guide Bushes



Ordering-Example:

1 Piece N03 Ø24/17

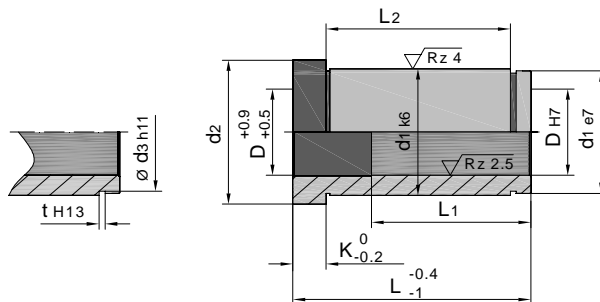
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

K	d1	d2	d3	t	L1	L2	D	L	€
6	30	35	-	-	-	-	24	17	
			28,6	1,60		11		22	
						16		27	
						25		36	
						35		46	
						45		56	
						55		66	
						65		76	
					76	75		86	
						85		96	
						105		116	
						125		136	
						145		156	
6	42	47	-	-	-	-		30	22
			39,5	1,85		14	27		
						23	36		
						33	46		
						43	56		
						53	66		
						63	76		
						73	86		
						83	96		
					96	103	116		
						123	136		
						143	156		
						163	176		
						173	186		
						183	196		
						223	236		
6	42	47	-	-	-	-	32	22	
			39,5	1,85		14		27	
						23		36	
						33		46	
						43		56	
						53		66	
						63		76	
						73		86	
						83		96	
					96	103		116	
						123		136	
						143		156	
						163		176	
						173		186	
						183		196	
						223	236		

N03

Guide Bushes



Ordering-Example:

1 Piece N03 Ø40/36

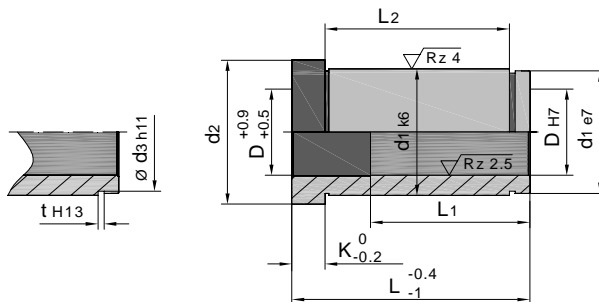
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

K	d1	d2	d3	t	L1	L2	D	L	€
10	54	59	51,0	2,15	-	18	40	36	
						28		46	
						38		56	
						48		66	
						58		76	
						68		86	
						78		96	
						98		116	
					116	118		136	
						138		156	
						158		176	
						178		196	
						198		216	
						228		246	
10	54	59	51,0	2,15	-	18		42	36
						28	46		
						38	56		
						48	66		
						58	76		
						68	86		
						78	96		
						98	116		
					116	118	136		
						138	156		
						158	176		
						178	196		
						198	216		
						228	246		
10	66	71	62,0	2,65	-	38	50		56
						58		76	
						78		96	
						98		116	
					116	118		136	
						138		156	
						158		176	
						178	196		
10	66	71	62,0	2,65	-	38	52	56	
						58		76	
						78		96	
						98		116	
					116	118		136	
						138		156	
						158		176	
						178	196		

N03

Guide Bushes



Ordering-Example:

1 Piece N03 Ø60/56

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

K	d1	d2	d3	t	L1	L2	D	L	€
20	80	86	76,5	2,65	-	28	60	56	
						48		76	
						68		96	
						88		116	
						108		136	
					136	128		156	
						148		176	
						168		196	
						188		216	
						218		246	
20	80	86	76,5	2,65	-	28		62	56
						48	76		
						68	96		
						88	116		
						108	136		
					136	128	156		
						148	176		
						168	196		
						188	216		
						218	246		
20	104	112	-	-	-	-	80		96
								116	
								136	
								156	
					156			176	
								196	
								216	
							246		

N035

Guide Bushes

Made Of Bronze

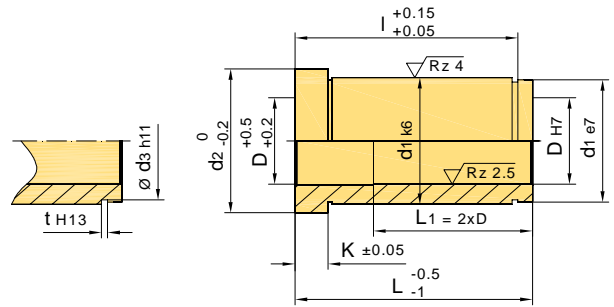
Alternative To Solid Lubricant Bushings

Ordering-Example:

1 Piece N035 Ø9/12

Special Sizes Available On Request.

t max = 200°C
Material: Bronze



K	d1	d2	d3	t	l	D	L	€
3	14	16	13,4	1,10	9,6	9	12	
					14,6		17	
					19,6		22	
					24,6		27	
					33,6		36	
					43,6		46	
					53,6		56	
3	14	16	13,4	1,10	9,6	10	12	
					14,6		17	
					19,6		22	
					24,6		27	
					33,6		36	
					43,6		46	
					53,6		56	
6	18	23	17,0	1,30	14,3	12	17	
					19,3		22	
					24,3		27	
					33,3		36	
					43,3		46	
					53,3		56	
6	20	25	19,0	1,30	14,3	14	17	
					19,3		22	
					24,3		27	
					33,3		36	
					43,3		46	
					53,3		56	
6	20	25	19,0	1,30	14,3	15	17	
					19,3		22	
					24,3		27	
					33,3		36	
					43,3		46	
					53,3		56	
6	22	27	21,0	1,30	19,3	16	22	
					24,3		27	
					33,3		36	
					43,3		46	
					53,3		56	
6	26	31	24,9	1,30	14,3	18	17	
					19,3		22	
					24,3		27	
					33,3		36	
					43,3		46	
					53,3		56	
					63,3		66	
					73,3		76	

K	d1	d2	d3	t	l	D	L	€
6	26	31	24,9	1,30	14,3	20	17	
					19,3		22	
					24,3		27	
					33,3		36	
					43,3		46	
					53,3		56	
					63,3		66	
					73,3		76	
6	30	35	28,6	1,60	18,6	22	22	
					23,6		27	
					32,6		36	
					42,6		46	
					52,6		56	
					62,6		66	
					72,6		76	
82,6	86							
92,6	96							
6	30	35	28,6	1,60	18,6	24	22	
					23,6		27	
					32,6		36	
					42,6		46	
					52,6		56	
					62,6		66	
					72,6		76	
82,6	86							
92,6	96							
6	42	47	39,5	1,85	21,9	30	27	
					30,9		36	
					40,9		46	
					50,9		56	
					60,9		66	
					70,9		76	
					80,9		86	
90,9	96							
110,9	116							
6	42	47	39,5	1,85	21,9	32	27	
					30,9		36	
					40,9		46	
					50,9		56	
					60,9		66	
					70,9		76	
					80,9		86	
90,9	96							
110,9	116							

N035

Guide Bushes Made Of Bronze

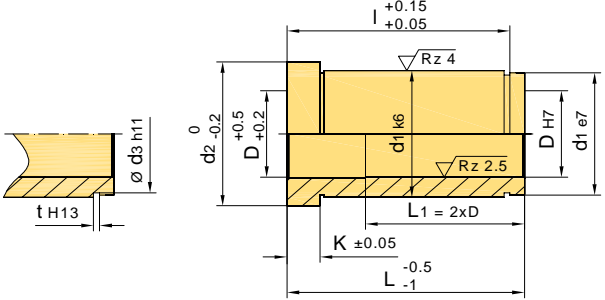
Alternative To Solid Lubricant Bushings

Ordering-Example:

1 Piece N035 Ø40/46

Special Sizes Available On Request.

t max = 200°C
Material: Bronze



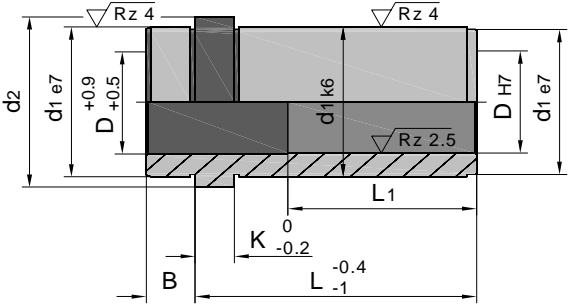
K	d1	d2	d3	t	l	D	L	€
10	54	60	51,0	2,15	40,2	40	46	
					50,2		56	
					60,2		66	
					70,2		76	
					80,2		86	
					90,2		96	
					110,2		116	
					130,2		136	

K	d1	d2	d3	t	l	D	L	€
10	54	60	51,0	2,15	40,2	42	46	
					50,2		56	
					60,2		66	
					70,2		76	
					80,2		86	
					90,2		96	
					110,2		116	
					130,2		136	

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N04

Guide Bushes With Centring Collar



Ordering-Example:

1 Piece N04 Ø9/12

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

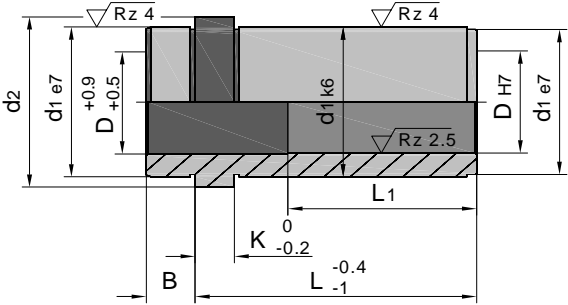
B	K	d1	d2	L1	D	L	€
3	3	14	16	-	9	12	
						17	
						22	
						27	
						36	
						46	
						56	
						66	
3	3	14	16	-	10	12	
						17	
						22	
						27	
						36	
						46	
						56	
						66	
9	6	20	25	-	14	17	
						22	
						27	
						36	
						46	
						56	
						66	
						76	
						86	
						96	
116							
9	6	20	25	-	15	17	
						22	
						27	
						36	
						46	
						56	
						66	
						76	
						86	
						96	
116							

B	K	d1	d2	L1	D	L	€
9	6	26	31	-	18	17	
						22	
						27	
						36	
						46	
						56	
						66	
						76	
						86	
						96	
9	6	26	31	-	20	17	
						22	
						27	
						36	
						46	
						56	
						66	
						76	
						86	
						96	
9	6	30	35	-	22	17	
						22	
						27	
						36	
						46	
						56	
						66	
						76	
						86	
						96	
116							
136							
156							

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N04

Guide Bushes With Centring Collar



Ordering-Example:

1 Piece N04 Ø24/17

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

B	K	d1	d2	L1	D	L	€
9	6	30	35	-	24	17	
						22	
						27	
						36	
						46	
						56	
						66	
						76	
				76		86	
						96	
						116	
						136	
						156	
9	6	42	47	-	30	22	
						27	
						36	
						46	
						56	
						66	
						76	
						86	
				96		96	
						116	
						136	
						156	
						176	
						196	
9	6	42	47	-	32	22	
						27	
						36	
						46	
						56	
						66	
						76	
						86	
						96	
				96		116	
						136	
						156	
						176	
						196	

B	K	d1	d2	L1	D	L	€
12	10	54	59	-	40	36	
						46	
						56	
						66	
						76	
						86	
						96	
						116	
				116		136	
						156	
						176	
						196	
						216	
						246	
12	10	54	59	-	42	36	
						46	
						56	
						66	
						76	
						86	
						96	
						116	
				116		136	
						156	
						176	
						196	
						216	
						246	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N045

Guide Bushes

With Centring Collar Made Of Bronze

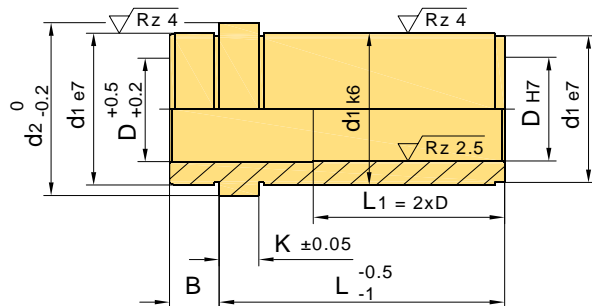
Alternative To Solid Lubricant Bushings

Ordering-Example:

1 Piece N045 Ø9/12

Special Sizes Available On Request.

t max = 200°C
Material: Bronze



B	K	d1	d2	D	L	€
5	3	14	16	9	12	
					17	
					22	
					27	
					36	
					46	
					56	
5	3	14	16	10	12	
					17	
					22	
					27	
					36	
					46	
					56	
6	6	20	25	14	17	
					22	
					27	
					36	
					46	
					56	
					66	
6	6	20	25	15	17	
					22	
					27	
					36	
					46	
					56	
					66	
8	6	26	31	18	17	
					22	
					27	
					36	
					46	
					56	
					66	
8	6	26	31	20	17	
					22	
					27	
					36	
					46	
					56	
					66	
76						

B	K	d1	d2	D	L	€
8	6	30	35	22	22	
					27	
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
8	6	30	35	24	22	
					27	
					36	
					46	
					56	
					66	
8	6	42	47	30	27	
					36	
					46	
					56	
					66	
					76	
8	6	42	47	32	27	
					36	
					46	
					56	
					66	
					76	

N045

Guide Bushes

With Centring Collar Made Of Bronze

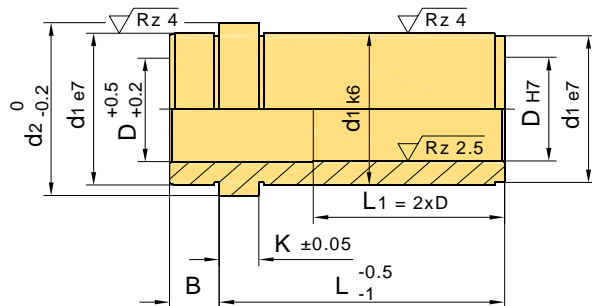
Alternative To Solid Lubricant Bushings

Ordering-Example:

1 Piece N045 Ø40/46

Special Sizes Available On Request.

t max = 200°C
Material: Bronze



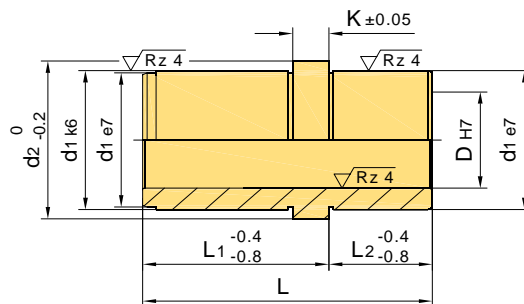
B	K	d1	d2	D	L	€
10	10	54	60	40	46	
					56	
					66	
					76	
					86	
					96	
					116	
					136	
					156	
					196	

B	K	d1	d2	D	L	€
10	10	54	60	42	46	
					56	
					66	
					76	
					86	
					96	
					116	
					136	
					156	
					196	

N046

Guide Bushes Made Of Bronze

For Ejector Set



Ordering-Example:

1 Piece N046 Ø14/17

Special Sizes Available On Request.

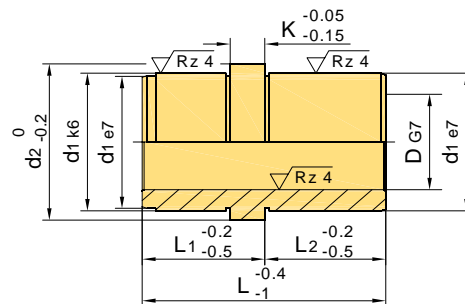
t max = 200°C
Material: Bronze

K	d1	d2	L	L2	D	L1	€
6	20	25	24,3	8,5	14	17	
					15		
	26	31	37,3	16,5	18	22	
					20		
	30	35	47,3	21,5	22	27	
					24		
42	46	61,3	26,5	30	36		
				32			

N047

Guide Bushes Made Of Bronze

For Ejector Set



Ordering-Example:

1 Piece N047 Ø12/6

Special Sizes Available On Request.

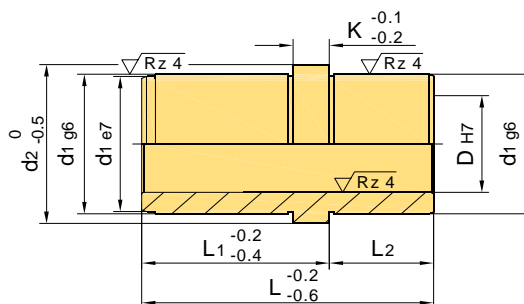
t max = 200°C
Material: Bronze

K	d1	d2	L	L2	D	L1	€
3	16	19	15	9	12	6	
			21	12		9	
			29	17		12	
6	25	29	39	22	18	17	
			49	27		22	
			39	22		17	
	42	46	49	27	30	22	
			63	36		27	

N048

Guide Bushes Made Of Bronze

For Ejector Set



Ordering-Example:

1 Piece N048 Ø10/5/10

Special Sizes Available On Request.

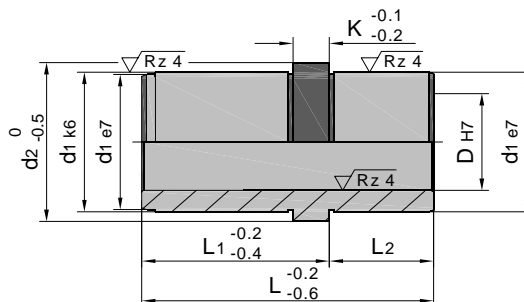
t max = 200°C
Material: Bronze

K	d1	d2	L	D	L2	L1	€	
3	14	16	15	10	5	10		
6		17	21		9	12		
			26				17	
3		16	20		10	10		
6	16	19	26	12	9	17		
			29		12			
	18	21	34	14		22		
			39		17			
			24		27		29	18
	34	22						
	39	17						
	44	27						
		49	22					
	26	29	39	20	17	22	22	
			49		22		27	
	28	31	39	22	17	22	22	
49			22		27			
30			33		39		24	17
44	27							
49	22							
63	27	36						
38	41	49	30	22	27	27		
		63		36				
		73		46				
	82							
48	51		40	36				

N0481

Guide Bushes

For Ejector Set



Ordering-Example:

1 Piece N0481 Ø10/9/12

Special Sizes Available On Request.

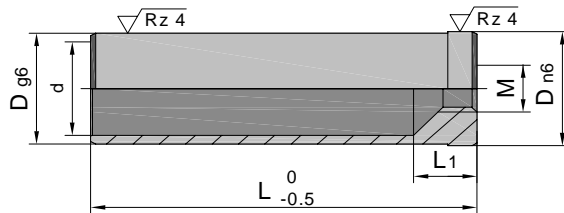
Material: 1.7139 ca. 700HV

K	d1	d2	L	D	L2	L1	€	
6	14	17	21	10	9	12		
			26				17	
	16	19	29	12	12	22		
			34				22	
	18	21	29	14	17	17		
			34				22	
	24	27	27	39	18	12	17	
				44				22
				49				27
				49				27
	26	29	29	39	20	17	22	
				49				27
	28	31	31	39	22	17	22	
				49				27
	30	33	33	39	24	17	22	
				44				27
				49				27
				63				36
	38	41	41	49	30	22	27	
				63				36
73				46				
48	51	51	82	40	36	46		

NEW

N05

Centring Sleeves



Ordering-Example:

1 Piece N05 Ø14/20

Special Sizes Available On Request.

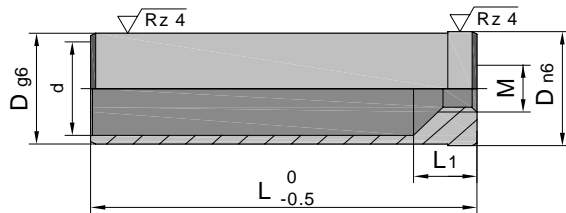
Material: 1.7139 ca. 700HV

L1	M	d	D	L	€
8	M8	11	14	20	
				30	
				40	
				50	
				60	
				70	
				80	
				100	
14	M12	16	20	30	
				40	
				50	
				60	
				70	
				80	
				100	
				110	
				120	
				140	
				160	
14	M12	21	26	30	
				40	
				50	
				60	
				70	
				80	
				90	
				100	
				110	
				120	
				130	
				140	
				160	
				180	

NEW

N05

Centring Sleeves



Ordering-Example:

1 Piece N05 Ø30/40

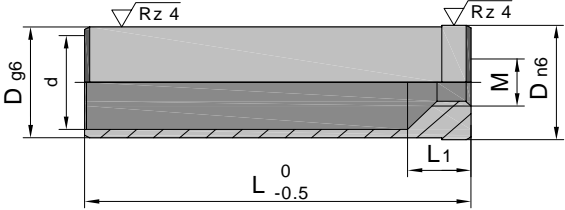
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

L1	M	d	D	L	€
14	M12	25	30	40	
				50	
				60	
				70	
				80	
				90	
				100	
				110	
				120	
				130	
				140	
				160	
				180	
				200	
				220	
				240	
18	M12	33	42	40	
				60	
				80	
				100	
				120	
				140	
				160	
				180	
				200	
				220	
				240	
				260	
				280	
				300	
18	M12	43	54	60	
				80	
				100	
				120	
				140	
				160	
				180	
				200	
				220	
				240	
				260	
				280	
				300	
				320	

N05

Centring Sleeves



Ordering-Example:

1 Piece N05 Ø66/80

Special Sizes Available On Request.

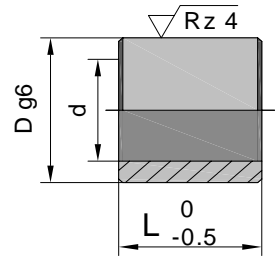
Material: 1.7139 ca. 700HV

L1	M	d	D	L	€
18	M12	54	66	80	
				100	
				120	
				140	
				160	
				180	
				200	
				240	
				280	
				320	
18	M20	64	80	100	
				120	
				140	
				160	
				200	
				240	
				280	
				320	

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N051

Centring Sleeves



Ordering-Example:

1 Piece N051 Ø14

Special Sizes Available On Request.

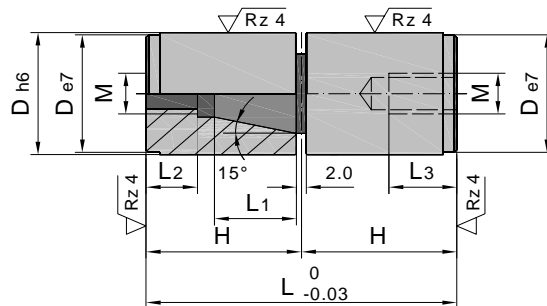
Material: 1.7139 ca. 700HV

d	D	L	€
6	10	9,5	
7	12	10,5	
9	14	11,5	
11	16	13,5	
13	20	15,5	
16	26	17,5	
18	30	19,5	
22	36		
26	42		
32	54		

N06

Centring Elements As Set

Interchangeable



Ordering-Example:

1 Piece N06 Ø12

Special Sizes Available On Request.
Also Available In Stainless Steel.

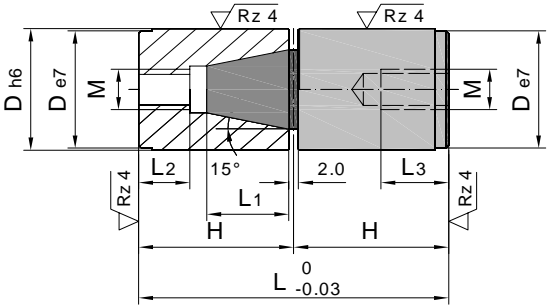
Material: 1.7139 ca. 700HV

L1	L2	M	L3	H	L	D	€
4	9	M4	10	17	34	12	
6		M5				14	
9	11	M8	16	27	54	16	
10						20	
14	13	M10	20	36	72	25	
18						26	
						30	
				46	92	32	
						42	

N06 M

Centring Elements Separately

Interchangeable



Ordering-Example:

1 Piece N06 Ø12 M

Special Sizes Available On Request.
Also Available In Stainless Steel.

Material: 1.7139 ca. 700HV

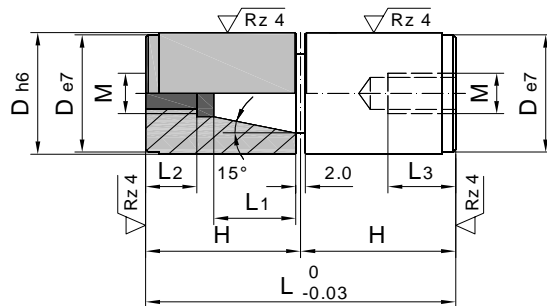
L1	L2	M	L3	H	L	D	€
4	9	M4	10	17	34	12	
6		M5				14	
9	11	M8	16	27	54	16	
10						20	
14	13	M10	20	36	72	25	
18						26	
						30	
				46	92	32	
						42	

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N06 W

Centring Elements Separately

Interchangeable



Ordering-Example:

1 Piece N06 Ø12 W

Special Sizes Available On Request.
Also Available In Stainless Steel.

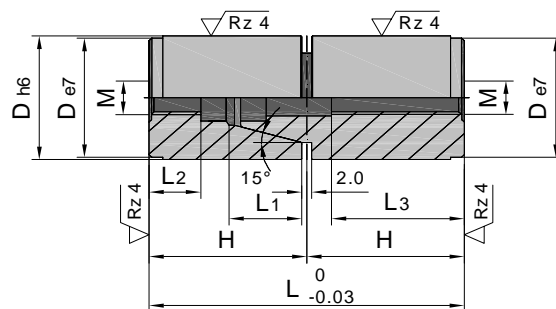
Material: 1.7139 ca. 700HV

L1	L2	M	L3	H	L	D	€
4	9	M4	10	17	34	12	
6		M5				14	
9	11	M8	16	27	54	16	
10						20	
14						25	
18	13	M10	20	36	72	30	
						32	
						42	

N065

Centring Elements As Set

Interchangeable



Ordering-Example:

1 Piece N065 Ø10

Special Sizes Available On Request.
Also Available In Stainless Steel.

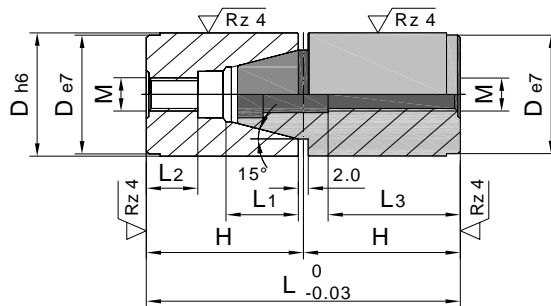
Material: 1.7139 ca. 700HV

L1	L2	M	L3	H	L	D	€
3,7	5,0	M4	11,5	12	24	10	
5,0	8,5		9,6	17	34	12	
7,0	6,0	M5	12,4			14	
						16	
10,0	10,5	M8	19,7	27	54	20	
11,0	9,0		25			26	
						30	
16,0	12,2	M10	25,0	36	72	32	
			27,0	46	92	42	
20,0	16,5						

N065 M

Centring Elements Separately

Interchangeable



Ordering-Example:

1 Piece N065 Ø10 M

Special Sizes Available On Request.
Also Available In Stainless Steel.

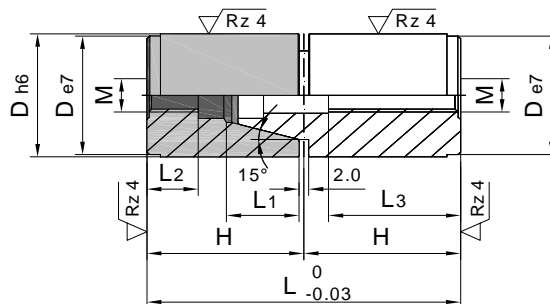
Material: 1.7139 ca. 700HV

L1	L2	M	L3	H	L	D	€
3,7	5,0	M4	11,5	12	24	10	
5,0	8,5		9,6	17	34	12	
7,0	6,0	M5	12,4			14	
						16	
10,0	10,5	M8	19,7	27	54	20	
11,0	9,0		25			26	
						30	
16,0	12,2	M10	25,0	36	72	32	
			27,0	46	92	42	
20,0	16,5						

N065 W

Centring Elements Separately

Interchangeable



Ordering-Example:

1 Piece N065 Ø10 W

Special Sizes Available On Request.
Also Available In Stainless Steel.

Material: 1.7139 ca. 700HV

L1	L2	M	L3	H	L	D	€
3,7	5,0	M4	11,5	12	24	10	
5,0	8,5		9,6	17	34	12	
7,0	6,0	M5	12,4			14	
						16	
10,0	10,5	M8	19,7	27	54	20	
11,0	9,0		25			26	
16,0	12,2	M10	25,0	36	72	30	
			32			42	
20,0	16,5		27,0	46	92		

NEW

N0661

Rectangular Guide Unit As Set

guide self-lubricating

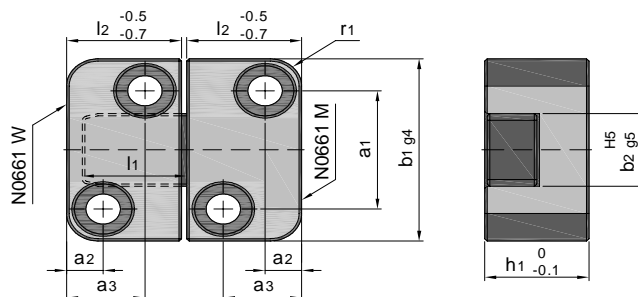
Interchangeable

Ordering-Example:

1 Piece N0661 22x16x20

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV



r1	a3	a2	a1	h1	b1	l2	b2	l1	N0661 W	N0661 M	€
6	15	7	26	20	40	22	16	20	22 x 16	22 x 16 x 20	
			31	22	45	27	20	25		27 x 20	22 x 16 x 40
	19	50	27 x 20 x 25						27 x 20 x 50		
8	27	9	35	25	50	36	25	32	36 x 25	36 x 25 x 32	
			45	32	63	46	32	40		46 x 32	36 x 25 x 63
	35	80	46 x 32 x 40						46 x 32 x 80		
10	40	15	60	36	85	56	40	50	56 x 40	56 x 40 x 50	
			74	40	100	66	50	56		66 x 50	56 x 40 x 100
	48	112	66 x 50 x 56						66 x 50 x 112		

NEW

N0661 M

Square Guide Bar

self-lubricating

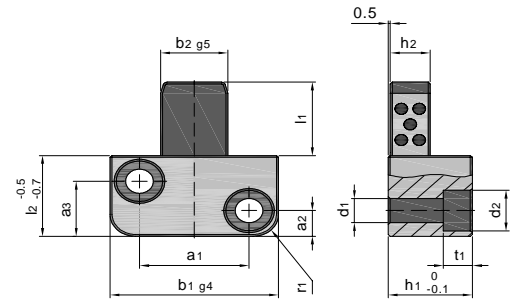
Interchangeable

Ordering-Example:

1 Piece N0661 22x16x20 M

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV



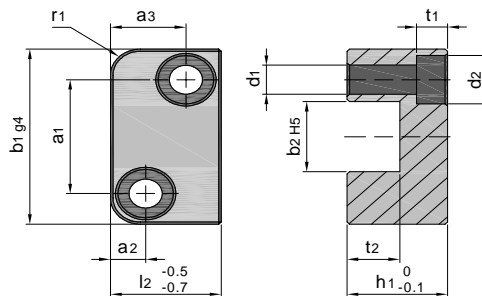
r1	h2	h1	t1	b1	a3	a2	a1	d2	d1	l2	b2	l1	€
6	11	20	6,9	40	15	7	26	11	6,6	22	16	20	
	13	22		45	19		31			27	20	25	
		50											
8	14	25	50	27	9	35			36	25	32		
	19	32	9,0	63	35	11	45	15	9,0	46	32	40	
		80											
10	22	36	11,0	85	40	15	60	18	11,0	56	40	50	
	24	40	13,0	100	48	18	74	20	14,0	66	50	56	
												100	
												112	

NEW

N0661 W

Guide Retainer, Rectangular

Interchangeable



Ordering-Example:

1 Piece N0661 22x16 W

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

r1	h1	t2	t1	a3	a2	a1	b1	d2	d1	l2	b2	€
6	20	12	6,2	15	7	26	40	10,3	6,3	22	16	
	22	14		19		27				20		
8	25	15	6,9	27	9	35	50	11,0	6,6	36	25	
	32	20	9,0	35	11	45	63	15,0	9,0	46	32	
10	36	23	11,0	40	15	60	85	18,0	11,0	56	40	
	40	25	13,0	48	18	74	100	20,0	14,0	66	50	

NEW

N0662

Top Lock

Guide DLC-coated

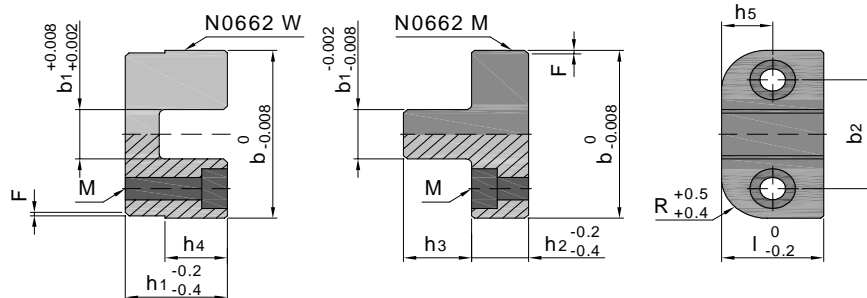
Interchangeable

Ordering-Example:

1 Piece N0662 34

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV



F	R	M	b1	b2	h1	h2	h3	h4	h5	l	b	€
0,7	8	M4	10	22	18	10	12	11	9	18	34	
	10	M5	12	26	22	12	14	13	11	22	40	
M6		18	34	30	15	18	17	15	30	50		
M8		22	42	40	18	24	23	20	40	64		
		26	48	46	20	28	27	26	52	72		
M10		36	66	57	22	36	31	28	56	96		

NEW

N0662 M

Top Lock

Guide DLC-coated

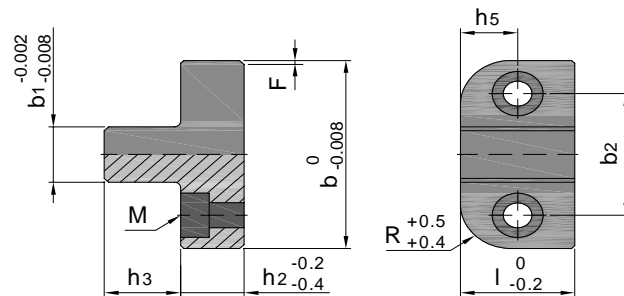
Interchangeable

Ordering-Example:

1 Piece N0662 34 M

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV



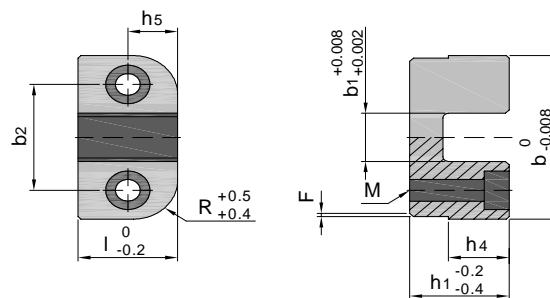
F	R	M	b1	b2	h2	h3	h5	l	b	€
0,7	8	M4	10	22	10	12	9	18	34	
	1,2	10	M5	12	26	12	14	11	22	40
M6			18	34	15	18	15	30	50	
M8			22	42	18	24	20	40	64	
			26	48	20	28	26	52	72	
M10			36	66	22	36	28	56	96	

NEW

N0662 W

Top Lock

Interchangeable



Ordering-Example:

1 Piece N0662 34 W

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

F	R	M	b1	b2	h1	h4	h5	l	b	€
0,7	8	M4	10	22	18	11	9	18	34	
	10	M5	12	26	22	13	11	22	40	
M6		18	34	30	17	15	30	50		
M8		22	42	40	23	20	40	64		
		26	48	46	27	26	52	72		
M10		36	66	57	31	28	56	96		

NEW

N0663

Fine Centring Unit

Guide DLC-coated

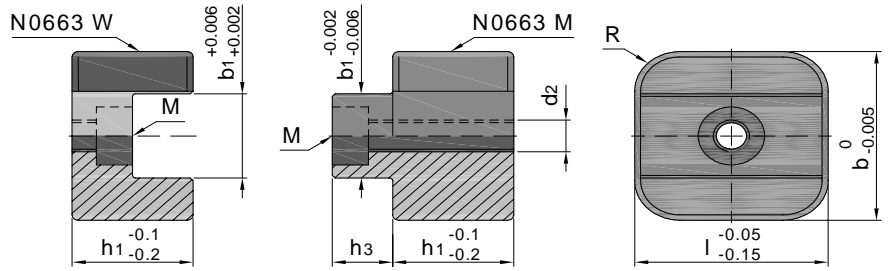
Interchangeable

Ordering-Example:

1 Piece N0663 16

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV



R max.	M	b1	d2	h1	h3	l	b	€
3,25	M3	8	M4	12	6	16	16	
4,50	M4	10	M5	14	7	20	20	
5,50	M5	12	M6	16	8	25	25	
7,20	M6	16	M8	20	10	32	32	
8,20		20		23	12	40	40	

NEW

N0663 M

Fine Centring Unit

Guide DLC-coated

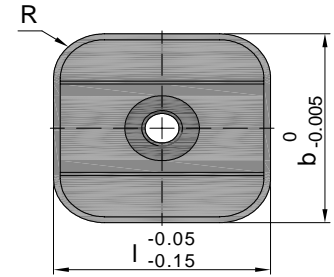
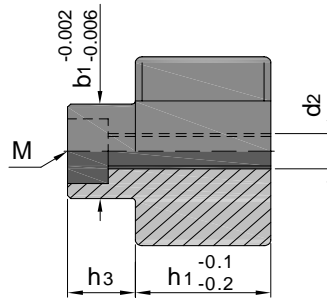
Interchangeable

Ordering-Example:

1 Piece N0663 16 M

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV



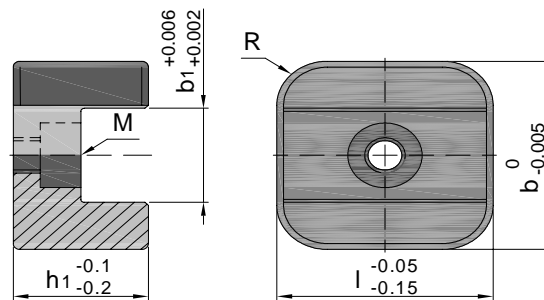
R max.	M	b1	d2	h1	h3	l	b	€
3,25	M3	8	M4	12	6	16	16	
4,50	M4	10	M5	14	7	20	20	
5,50	M5	12	M6	16	8	25	25	
7,20	M6	16	M8	20	10	32	32	
8,20		20		23	12	40	40	

NEW

N0663 W

Fine Centring Unit

Interchangeable



Ordering-Example:

1 Piece N0663 16 W

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

R max.	M	b1	d2	h1	l	b	€
3,25	M3	8	M4	12	16	16	
4,50	M4	10	M5	14	20	20	
5,50	M5	12	M6	16	25	25	
7,20	M6	16	M8	20	32	32	
8,20		20		23	40	40	

NEW

N0664

Flat Guiding Unit With Final Centring Horizontal

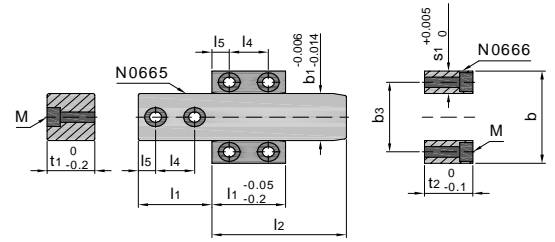
Jaws DLC-coated

Ordering-Example:

1 Piece N0664 16x10x44

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

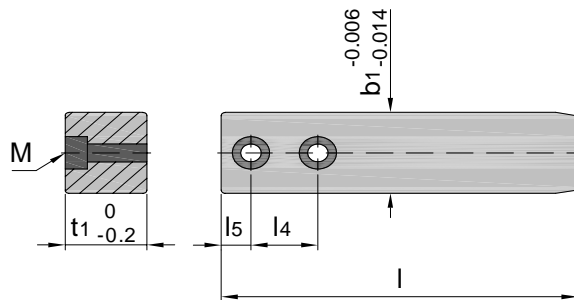


b	b3	l1	l4	l5	t1	t2	M	b1	s1	l2	€
36	26	26	14	6	14	14,2	M4	16	10	44	
										54	
										64	
49	37	34	18	8	22	22,3	M5	25	12	54	
										74	
										94	
64	48	44	28		30	30,4	M6	32	16	54	
										94	
										134	
										174	
66	50							34		54	
										94	
										134	
										174	
84	64	62	38	12	38	38,7	M8	44	20	74	
										114	
										154	
										194	
86	66							46		74	
										114	
										154	
										194	
108	83	80	48	16	50	51,1	M10	58	25	94	
										134	
										174	
										214	
										254	
110	85							60		94	
										134	
										174	
										214	
										254	
142	110	98	58	20	70	71,5	M12	78	32	114	
										154	
										194	
										234	
										274	
										314	
144	112							80		114	
										154	
										194	
										234	
										274	
										314	

NEW

N0665

Flat Guiding Stock



Ordering-Example:

1 Piece N0665 16x70

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

l4	l5	t1	M	b1	l	€
14	6	14	M4	16	70	
					80	
					90	
18	8	22	M5	25	88	
					108	
					128	
					138	
28	30	M6	32	98		
				178		
				218		
			34	98		
				138		
				178		
38	12	38	M8	44	136	
					176	
					216	
			46	256		
				136		
				176		
48	16	50	M10	58	216	
					256	
					294	
			60	334		
				174		
				214		
58	20	70	M12	78	254	
					294	
					334	
			80	372		
				412		
				212		
				80	252	
					292	
					332	
				372		
				412		
				212		
					252	
					292	
					332	
				372		
				412		
				212		

NEW

N0666

Gliding Plate For Flat Guiding Unit Horizontal

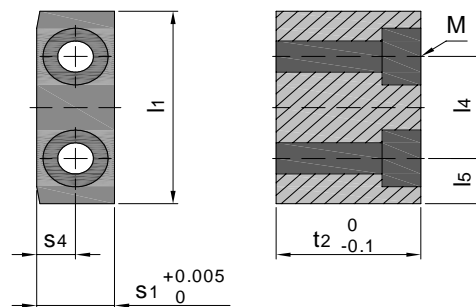
DLC-coated

Ordering-Example:

1 Piece N0666 10

Special Sizes Available On Request.

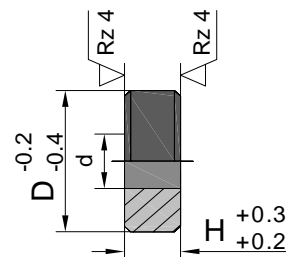
Material: 1.7139 ca. 700HV



l1	l4	l5	M	s4	t2	s1	€
26	14	6	M4	5,0	14,2	10	
34	18	8	M5	6,0	22,3	12	
44	28		M6	8,0	30,4	16	
62	38	12	M8	10,0	38,7	20	
80	48	16	M10	12,5	51,1	25	
98	58	20	M12	16,0	71,5	32	

N61

Spacer Piece



Ordering-Example:

1 Piece N61 Ø12/3

Special Sizes Available On Request.

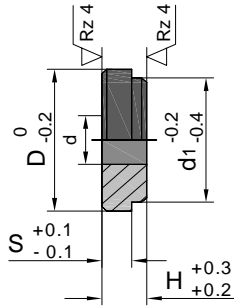
Material: 1.7139 ca. 700HV

d	D	H	€
4,5	12	3	
		9	
		10	
5,5	14	3	
		5	
		9	
		10	
		14	
5,5	16	3	
		5	
		9	
		10	
		19	
8,5	20	3	
		9	
		10	
		20	
8,5	25	9	
		10	
		20	
8,5	26	3	
		9	
		10	
		20	
		30	
11,0	30	4	
		10	
		20	
		30	
11,0	32	10	
		20	
11,0	42	4	
		10	
		20	
		30	
13,5	54	20	
		40	
17,5	80	20	
		40	

N62

Retaining Disc

discontinued



Ordering-Example:

1 Piece N62 Ø14

Special Sizes Available On Request.

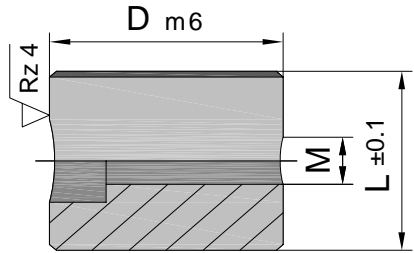
Material: 1.7139 ca. 700HV

H	S	d	D	d1	€
5	3,2	5,5	16,0	14	
9	6,3	8,5	25,5	20	
10		11,0	31,5	26	
			35,5	30	
			47,5	42	

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N63

Centring Piece



Ordering-Example:

1 Piece N63 Ø20

Special Sizes Available On Request.

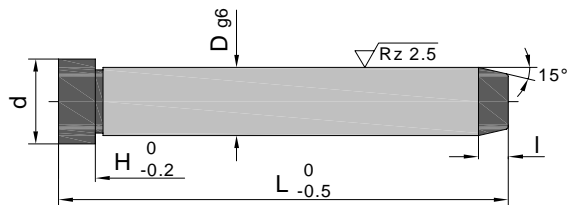
Material: 1.7139 ca. 700HV

M	L	D	€
M6	20	20	
	25	26	
M8	30	30	
	40	42	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N07

Guide Pin



Ordering-Example:

1 Piece N07 Ø8/40

Special Sizes Available On Request.

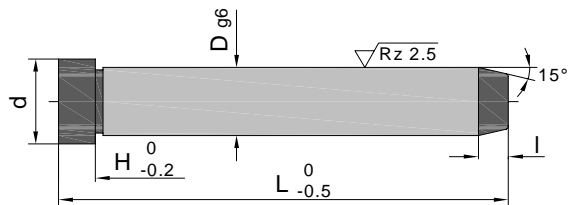
Material: 1.7139 ca. 700HV

d	l	H	D	L	€
10	4	3	8	40	
				50	
				60	
				80	
				100	
12	4	3	9	40	
				60	
				80	
				100	
				120	
12	4	3	10	40	
				60	
				80	
				100	
				120	
				140	
16	5	6	12	40	
				60	
				80	
				100	
				120	
				140	
				160	
				180	
				200	
18	5	8	14	60	
				80	
				100	
				120	
				140	
				160	
				180	
				200	
				220	
				240	
18	5	8	15	60	
				80	
				100	
				120	
				140	
				160	
				180	
				200	
				240	

d	l	H	D	L	€
20	5	8	16	40	
				60	
				80	
				100	
				120	
				140	
				160	
				180	
				200	
				300	
22	7	8	18	60	
				80	
				100	
				120	
				140	
				160	
24	7	8	20	60	
				80	
				100	
				120	
				140	
				160	
				180	
				200	
				220	
				240	
280					
300					
320					

N07

Guide Pin



Ordering-Example:

1 Piece N07 Ø22/80

Special Sizes Available On Request.

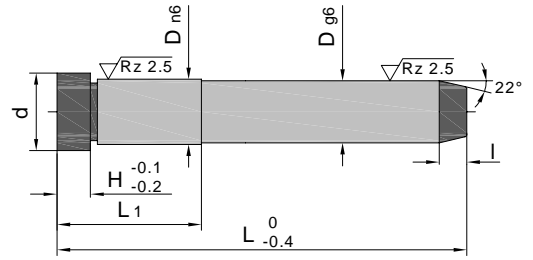
Material: 1.7139 ca. 700HV

d	l	H	D	L	€
26	7	15	22	80	
				100	
				120	
				140	
				160	
				180	
				200	
				220	
				240	
				260	
				280	
				300	
				320	
				340	
360					
28	7	15	24	80	
				100	
				120	
				140	
				160	
				180	
				200	
				220	
				240	
				260	
				280	
				300	
				320	
				340	
360					
36	7	15	30	100	
				120	
				140	
				160	
				180	
				200	
				240	
				300	
				360	
				400	

d	l	H	D	L	€
36	7	15	32	100	
				120	
				140	
				160	
				180	
				200	
				240	
				300	
				360	
				400	
48	10	15	40	160	
				200	
				240	
				300	
				360	
				400	
				500	
58	15	15	50	160	
				200	
				240	
				300	
				360	
				400	
68	20	20	60	280	
				300	
				340	
				360	
				400	

N071

Guide Pin With Press Fit



Ordering-Example:

1 Piece N071 Ø9/40

Special Sizes Available On Request.

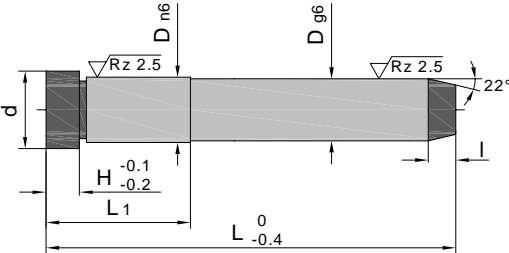
Material: 1.7139 ca. 700HV

d	H	l	L1	D	L	€
11	3	4	11	9	40	
					60	
					70	
					80	
					90	
					100	
					120	
12	3	4	11	10	40	
					50	
					60	
					70	
					80	
					90	
					100	
				120		
15	6	5	16	12	60	
					70	
					80	
					90	
					100	
					110	
					120	
				140		
				160		
17	8	5	21	14	60	
					70	
					80	
					90	
					100	
					110	
					120	
				140		
				160		
				180		
19	8	5	21	16	60	
					70	
					80	
					90	
					100	
					110	
					120	
				140		
				160		
				180		
				200		
				220		

d	H	l	L1	D	L	€
21	8	7	21	18	60	
					70	
					80	
					90	
					100	
					110	
					120	
				140		
				160		
				180		
				200		
				220		
				240		
23	8	7	21	20	80	
					90	
					100	
					110	
					120	
					140	
					160	
				180		
				200		
				220		
				240		
				260		
				280		
25	10	7	26	22	80	
					100	
					120	
					140	
					160	
					180	
					200	
				220		
				240		
				280		
27	10	7	26	24	80	
					100	
					120	
					140	
					160	
					180	
					200	
				220		
				240		
				280		

N071

Guide Pin With Press Fit



Ordering-Example:

1 Piece N071 Ø30/100

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

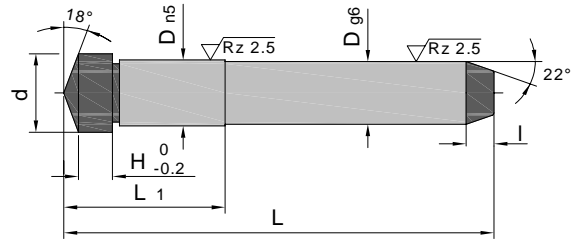
d	H	l	L1	D	L	€
35	10	7	35	30	100	
					120	
					140	
					160	
					180	
					200	
					220	
					240	
					280	
					320	
					360	
				400		

d	H	l	L1	D	L	€
35	10	7	35	32	100	
					120	
					140	
					160	
					180	
					200	
					220	
					240	
					280	
					320	
				360		
				400		
45	10	7	35	40	140	
					160	
					180	
					200	
					250	
					280	
					320	
					360	
				400		

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N072

Inclined Pin With Collar



Ordering-Example:

1 Piece N072 Ø10/40

Special Sizes Available On Request.

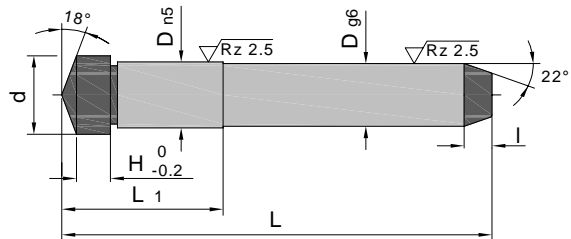
Material: 1.7139 ca. 700HV

d	H	l	L1	D	L	€
12	2	4	13	10	40	
					50	
					60	
					70	
					80	
					90	
					100	
					120	
					140	
15	3	5	17	12	50	
					60	
					70	
					80	
					90	
					100	
					110	
					120	
					140	
				160		
				180		
17	3	5	17	14	60	
					70	
					80	
					90	
					100	
					110	
					120	
					140	
					160	
					180	
				200		
19	3	5	22	16	60	
					70	
					80	
					90	
					100	
					110	
					120	
					140	
					160	
					180	
				200		
				220		
				240		

d	H	l	L1	D	L	€
21	3	7	22	18	60	
					70	
					80	
					90	
					100	
					110	
					120	
					140	
					160	
				180		
				200		
23	4	7	22	20	80	
					90	
					100	
					110	
					120	
					140	
					160	
					180	
					200	
25	4	7	27	22	60	
					80	
					100	
					120	
					140	
					160	
					180	
					200	
					240	
27	4	7	27	24	80	
					100	
					120	
					140	
					160	
					180	
					200	
					220	
					240	
				260		
				280		

N072

Inclined Pin With Collar



Ordering-Example:

1 Piece N072 Ø30/100

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

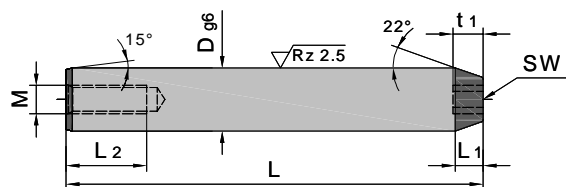
d	H	l	L1	D	L	€
35	5	7	36	30	100	
					120	
					140	
					160	
					180	
					200	
					220	
					240	
					280	
					320	
					360	

d	H	l	L1	D	L	€

N074

Inclined Pin

See Data Sheet Tightening Torques Group 19



Ordering-Example:

1 Piece N074 Ø8/40/M5

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

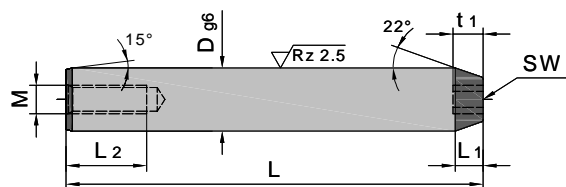
L2	L1	SW	t1	D	L	M	€
16	2,3	4	4	8	40	M5	
					60		
					80		
					100		
16	4,0	4	4	10	40	M6	
					50		
					60		
					70		
					80		
					100		
					120		
					140		
16	5,0	5	5	12	40	M6	
					50		
					60		
					70		
					80		
					90		
					100		
					110		
					120		
					140		
					180		
16	5,0	5	5	14	50	M6	
					60		
					70		
					75		
					80		
					90		
					100		
					110		
					120		
					140		
10	5,0	5	5	15	50	M8	
					60		
					70		
					80		
					90		

L2	L1	SW	t1	D	L	M	€
25	5,0	6	6	16	60	M8	
					70		
					80		
					90		
					100		
					110		
					120		
					130		
					140		
					160		
25	7,0	6	6	18	60	M8	
					70		
					80		
					90		
					100		
					110		
					120		
					125		
					140		
					150		
20	7,0	6	6	18	60	M10	
					70		
					80		
					90		
					100		
					125		
					140		
					150		
					170		

N074

Inclined Pin

See Data Sheet Tightening Torques Group 19



Ordering-Example:

1 Piece N074 Ø22/60/M10

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

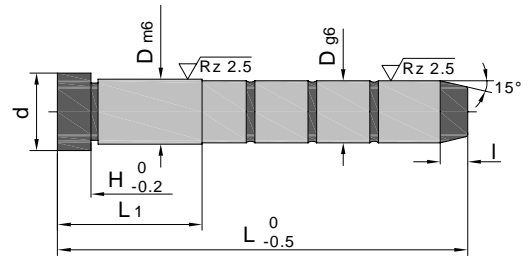
L2	L1	SW	t1	D	L	M	€
30	7,0	8	8	20	60	M10	
					70		
					80		
					90		
					100		
					110		
					120		
					125		
					140		
					150		
					160		
					165		
					170		
					180		
					190		
					200		
					210		
					220		
					240		
					260		
30	7,0	8	8	22	60	M10	
					70		
					80		
					90		
					100		
					120		
					140		
					160		
					180		
					200		
					220		
					240		

L2	L1	SW	t1	D	L	M	€
35	7,0	8	8	24	60	M12	
					70		
					80		
					90		
					100		
					120		
					140		
					145		
					160		
					180		
					190		
					200		
					220		
					240		
					260		
					280		
30	7,0	10	10	30	80	M16	
					90		
					100		
					120		
					140		
					180		
					220		
					240		
					260		
30	7,0	10	10	32	80	M16	
					90		
					100		
					120		
					140		
					180		
					220		

N08

Guide Pin

With Press Fit



Ordering-Example:

1 Piece N08 Ø10/40

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

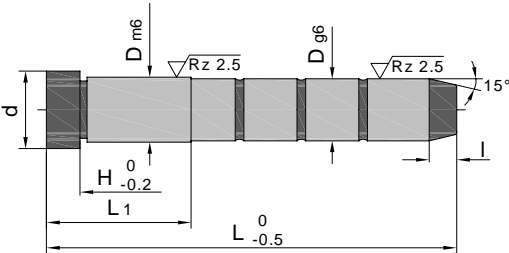
d	H	l	L1	D	L	€
12	3	5	17	10	40	
					60	
			22		80	
			27		100	
16	6	5	17	12	60	
			22		80	
			27		100	
					120	
18	8	5	17	14	60	
			22		80	
			27		100	
			36		120	
					140	
20	8	5	17	16	60	
			22		80	
			27		100	
					120	
			36		140	
					160	
					180	
			46		200	
				240		
22	8	7	22	18	80	
			27		100	
			36		120	
					140	
			46		160	
			56		180	
					200	
				240		
24	8	7	22	20	80	
			27		100	
			36		120	
					140	
			56		160	
					180	
					200	
				240		
				280		

d	H	l	L1	D	L	€
26	15	7	27	22	100	
					120	
			36		140	
					160	
			46		180	
			56		200	
					220	
				240		
				280		
				300		
				320		
				360		
28	15	7	27	24	100	
					120	
			36		140	
			46		160	
			56		180	
				200		
				220		
				240		
				280		
				300		
				320		
				360		
36	15	7	36	30	160	
			56		200	
					240	
					280	
					300	
				360		
36	15	7	36	32	160	
			56		200	
					240	
					280	
					300	
				360		
48	15	10	56	40	200	
					240	
					300	
			76		360	
					400	
			96		500	

N08

Guide Pin

With Press Fit



Ordering-Example:

1 Piece N08 Ø50/200

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

d	H	l	L1	D	L	€
58	15	15	46	50	200	
			56		240	
					300	
			76		360	
					400	
			96	500		

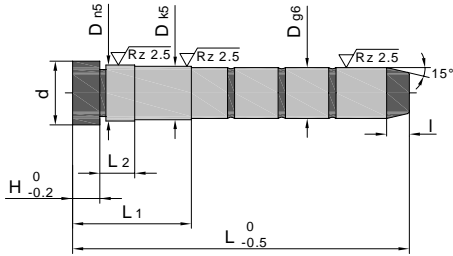
d	H	l	L1	D	L	€
68	20	20	56	60	240	
					300	
			76		360	
					400	
			96		500	

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N081

Guide Pin

With Press Fit



Ordering-Example:

1 Piece N081 Ø9/40

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

d	H	l	L1	L2	D	L	€
12	3	4	17	6	9	40	
						60	
			22			80	
			27	10		100	
12	3	4	17	6	10	40	
						60	
			22			80	
			27	10		100	
15	6	5	22	6	12	60	
						80	
						100	
						120	
			27	10		140	
						160	
17	6	5	22	6	14	60	
						80	
						100	
						120	
			27	10		140	
						160	
18	6	5	22	6	15	60	
						80	
						100	
						120	
			27	10		140	
						160	
19	6	5	22	6	16	80	
						100	
						120	
			27	10		140	
						160	
21	6	7	22	6	18	80	
						100	
						120	
						140	
			27	10		160	
						180	
						200	
			36			220	

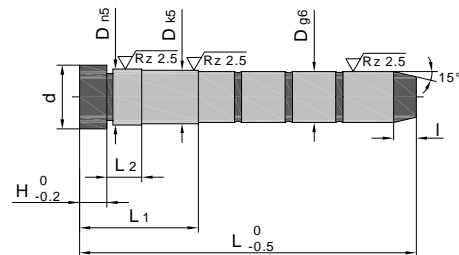
d	H	l	L1	L2	D	L	€
23	6	7	22	6	20	80	
						100	
						120	
			27	10		140	
						160	
						180	
23	6	7	22	6	20	200	
						220	
						250	
						280	
25	6	7	27	10	22	100	
						120	
						140	
						160	
			36			200	
						220	
25	6	7	27	10	22	250	
						280	
27	6	7	27	10	24	100	
						120	
						140	
						160	
						180	
						200	
27	6	7	27	10	24	220	
						250	
						280	
35	6	7	36	10	30	120	
						140	
						160	
						180	
						200	
						220	
35	6	7	36	10	30	250	
						280	
						320	
						360	
37	6	7	36	10	32	120	
						140	
						160	
						180	
						200	
						220	
						250	
						280	
						320	
						360	

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N081

Guide Pin

With Press Fit



Ordering-Example:

1 Piece N081 Ø40/160

Special Sizes Available On Request.

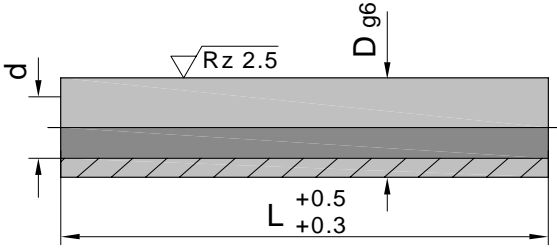
Material: 1.7139 ca. 700HV

d	H	l	L1	L2	D	L	€
45	10	10	46	15	40	160	
						180	
						200	
						220	
						250	
						280	
		56				320	
						360	
		66				400	
						450	
47	10	10	46	15	42	160	
						180	
						200	
						220	
						250	
						280	
		56				320	
						360	
		66				400	
						450	

d	H	l	L1	L2	D	L	€
55	10	10	56	15	50	200	
						250	
						280	
						320	
			66			360	
						400	
			76			450	
					500		
57	10	10	56	15	52	200	
						250	
						280	
						320	
			66			360	
			76			400	
					450		
					500		

N09

Guide Tube



Ordering-Example:

1 Piece N09 Ø10/20

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

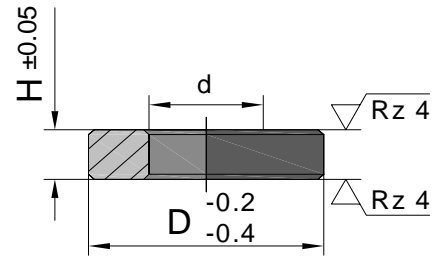
d	D	L	€
6,2	10	20	
		30	
		40	
		50	
		60	
		70	
		80	
		100	
		120	
		140	
8,5	14	30	
		40	
		50	
		60	
		70	
		80	
		100	
		120	
		140	
		160	
10,5	18	40	
		60	
		80	
		100	
		120	
		140	
		160	
		180	
		200	
		220	
240			

d	D	L	€
13,0	24	60	
		80	
		100	
		120	
		140	
		160	
		180	
		200	
17,0	30	80	
		100	
		120	
		140	
		160	
		180	
		200	
		220	
		240	
		260	
280			
300			

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N091

Disc For N09



Ordering-Example:

1 Piece N091 Ø14

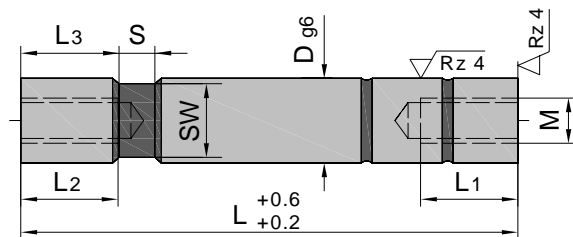
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

d	H	D	€
6,2	3	14	
8,5	4	18	
10,5	5	24	
13,0	6	30	
17,0	8	40	

N10

Ejection Pin



Ordering-Example:

1 Piece N10 Ø10/60/M6

Special Sizes Available On Request.

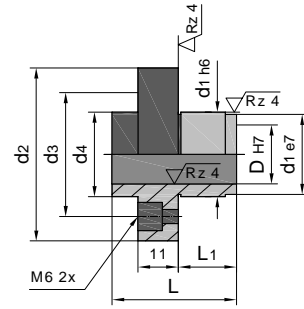
Material: 1.7139 ca. 700HV

L1	L2	L3	S	SW	D	L	M	€
10	16	14	8	8	10	60	M6	
						70		
						80		
						100		
						120		
						140		
						160		
17	25	14	8	12	14	60	M8	
						70		
						80		
						100		
						120		
						140		
						160		
						180		
						200		
20	30	16	8	14	18	70	M10	
						80		
						100		
						120		
						140		
						160		
						180		
						200		
						220		
						240		
20	30	16	8	14	18	70	M12	
						80		
						100		
						120		
						140		
						160		
						180		
						200		
						220		
						240		

L1	L2	L3	S	SW	D	L	M	€
20	30	16	10	17	20	70	M12	
						80		
						100		
						120		
						140		
						160		
						180		
						200		
						220		
						240		
25	35	22	12	19	24	70	M12	
						80		
						100		
						120		
						140		
						160		
						180		
						200		
						220		
						240		
30	45	28	16	24	30	100	M16	
						120		
						140		
						160		
						180		
						200		
						220		
						240		
						260		
						280		
30	45	28	16	24	30	100	M16	
						120		
						140		
						160		
						180		
						200		
						220		
						240		
						260		
						280		
35	55	36	20	36	40	160	M20	
						180		
						200		
						220		
						240		
						260		
						280		
						300		
						340		
						380		

N11

Ejection Bush



Ordering-Example:

1 Piece N11 Ø14

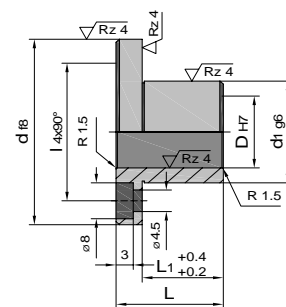
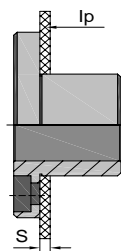
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

L1	L	d4	d3	d2	d1	D	€
12	29	19	32	46	18	14	
16	34	25	38	52	24	18	
21	40	31	44	58	30	24	
26	46	39	52	68	38	30	

N12

Ejection Bush



Ordering-Example:

1 Piece N12 Ø10/17/40

Special Sizes Available On Request.

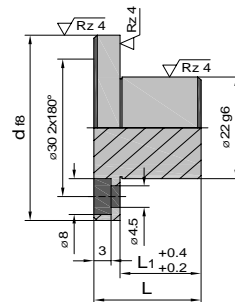
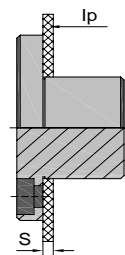
lp = insulating board

Material: 1.7139 ca. 700HV

I	d1	S	L1	D	L	d	€				
30	22	-	11,9	10	17	40					
				14							
			16,9	10	22						
				14							
			11,9	17	60						
							16,9	22			
50	32	-	22,0	18		27	100				
				20							
				24							
			22,0	18		110					
					31,0			20	36		
					24						
			22,0	18	125						
							31,0	20	36		
							24				
			30	22		3	14,9	10		20	40
								14			
							19,9	25	60		
21,9	27										

N121

Ejection Bush



Ip = insulating board

Ordering-Example:

1 Piece N121 17/40

Special Sizes Available On Request.

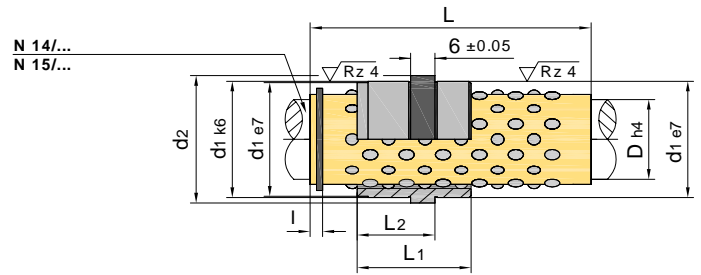
Material: 1.7139

S	L1	L	d	€
-	12	17	40	
			60	
3	15	20	40	
5	17	22		
3	15	20	60	
5	17	22		
3	20	25		
5	22	27		

N13

Ball Guiding Complete

Without Pin



Ordering-Example:

1 Piece N13 Ø12/40

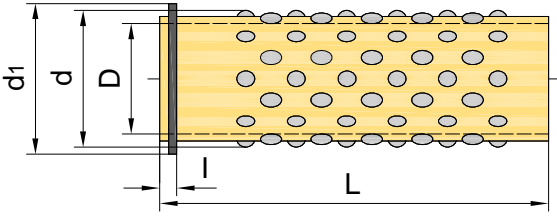
Special Sizes Available On Request.

H = max. Stroke

l	d1	d2	L1	L2	H	D	L	€
2,5	22	26	24	18	50	12	40	
					82		56	
2,8	30	35	34	23	44	18	45	
					66		56	
					96		71	
4,8	46	52	54	33	32	30	56	
					70		75	
					110		95	

N131

Ball Cage



Ordering-Example:

1 Piece N131 Ø12/40

Special Sizes Available On Request.

Material: Brass

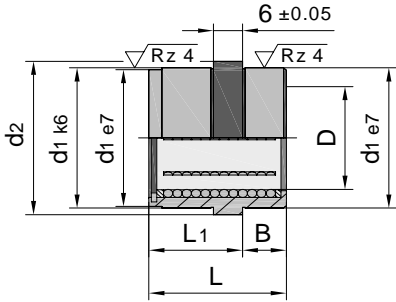
l	d	d ₁	D	L	€
2,5	16	20,5	12	40	
				56	
2,8	24	28,6	18	45	
				56	
				71	
4,8	38	43,5	30	56	
				75	
				95	

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N1310

Recirculating Ball Bushing

With Unlimited Stroke Length For N14, N140 And N15



Ordering-Example:

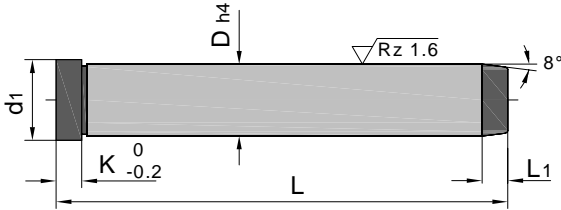
1 Piece N1310 Ø12/17/9

Special Sizes Available On Request.

d1	d2	L	D	L1	B	€
24	28	26	12	17	9	
32	36	39	18	22	17	
39	43	29	24	17	12	
50	54	39	30	22	17	

N14

Ball Guiding Pin With Collar



Ordering-Example:

1 Piece N14 Ø12/80

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

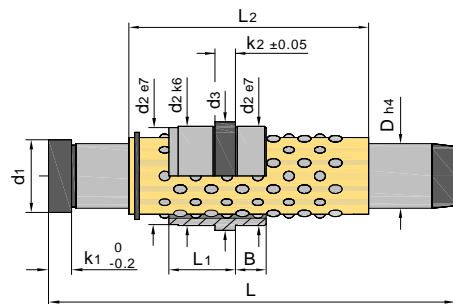
K	L1	d1	D	L	€
4	4	16	12	80	
				100	
				120	
				140	
6	7	22	18	80	
				100	
				120	
				140	
				160	
				180	
			200		
			240		
6	7	35	30	160	
				200	
				240	
				280	
				300	

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N146

Ball Guiding Complete

With N14 Ball Guiding Pin With Collar



Ordering-Example:

1 Piece N146 Ø12/80/50

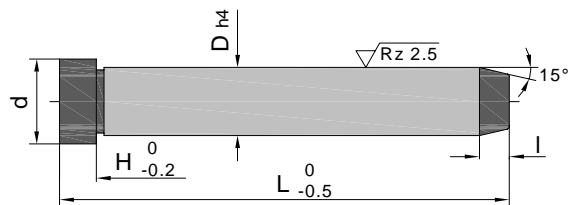
Special Sizes Available On Request.

H = max. Stroke

k2	k1	L2	B	L1	d3	d2	d1	D	L	H	€
6	4	40	6	18	26	22	16	12	80	50	
		56							100	50	
		40							100	82	
		56							120	50	
									120	82	
6	6	45	11	23	35	30	22	18	120	44	
		56							120	66	
		45							140	44	
		56							140	66	
		71							140	96	
		45							160	44	
		56							160	66	
		71							160	96	
6	6	56	21	33	52	46	35	30	160	32	
		75							160	70	
		56							200	32	
		75							200	70	
		95							200	110	
		56							240	32	
		75							240	70	
		95							240	110	

N140

Ball Guiding Pin With Collar



Ordering-Example:

1 Piece N140 Ø9/60

Special Sizes Available On Request.

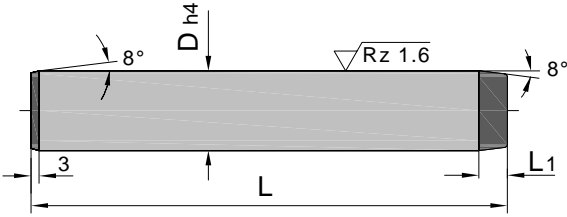
Material: 1.7139 ca. 700HV

d	l	H	D	L	€
12	4	3	9	60	
				80	
				100	
				120	
16	5	6	12	60	
				80	
				100	
				120	
				140	
				160	
18	5	8	14	60	
				80	
				100	
				120	
				140	
				160	
				180	
22	7	8	18	80	
				100	
				120	
				140	
				160	
				180	
				200	
				240	

d	l	H	D	L	€
28	7	15	24	100	
				120	
				140	
				160	
				180	
				200	
36	7	15	30	100	
				120	
				160	
				200	
				240	
				300	
36	7	15	32	100	
				120	
				160	
				200	
				240	
				300	
				360	

N15

Ball Guiding Pin Without Collar



Ordering-Example:

1 Piece N15 Ø12/80

Special Sizes Available On Request.

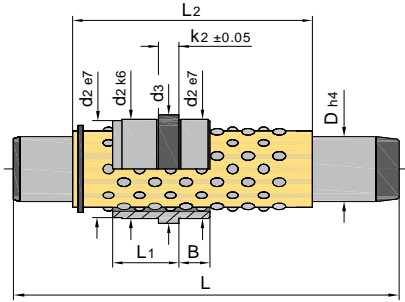
Material: 1.7139 ca. 700HV

L1	D	L	€
4	12	80	
		100	
		125	
7	18	100	
		125	
		140	
		160	
		180	
		200	
7	30	160	
		240	

N156

Ball Guiding Complete

With N15 Ball Guiding Pin Without Collar



Ordering-Example:

1 Piece N156 Ø12/100/50

Special Sizes Available On Request.

H = max. Stroke

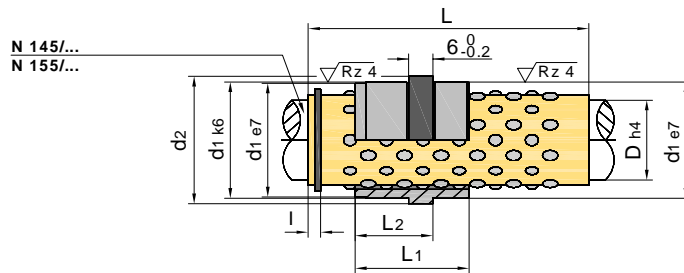
k2	L2	B	L1	d2	d3	D	L	H	€
6	40	6	18	22	26	12	100	50	
	56						100	82	
	40						125	50	
	56						125	82	
6	45	11	23	30	35	18	125	44	
	56						125	66	
	45						160	44	
	56						160	66	
	71						160	96	
6	56	21	33	46	52	30	160	32	
	75						160	70	
	56						240	32	
	75						240	70	
	95						240	110	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N135

Ball Guiding Complete

Without Pin



Ordering-Example:

1 Piece N135 Ø12/35

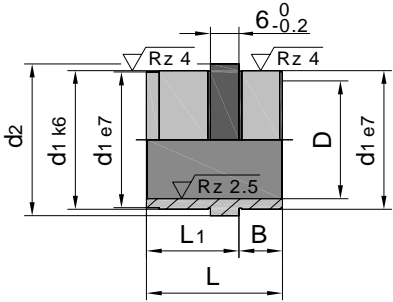
Special Sizes Available On Request.

H = max. Stroke

I	d1	d2	L1	L2	H	D	L	€
2,5	22	25	26	17	35	12	35	
					55		48	
					80		56	
2,8	30	33	34	22	45	18	45	
					65		56	
					90		71	
2,8	38	41	44	27	45	24	50	
					75		70	
					105		84	
4,8	46	49	54	32	32	30	56	
					55		70	
					95		95	
					135		110	

N1305

Bush



Ordering-Example:

1 Piece N1305 Ø17

Special Sizes Available On Request.

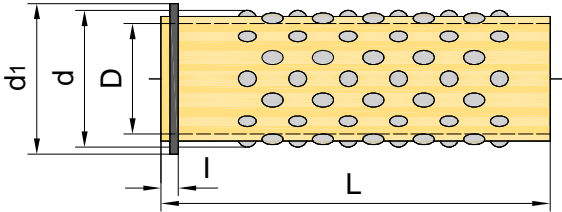
Material: 1.7139 ca. 700HV

d1	d2	B	L1	L	D	€
22	25	9	17	26	17	
30	33	12	22	34	24	
38	41	17	27	44	30	
46	49	22	32	54	38	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N1315

Ball Cage



Ordering-Example:

1 Piece N131 Ø12/35

Special Sizes Available On Request.

Material: Brass

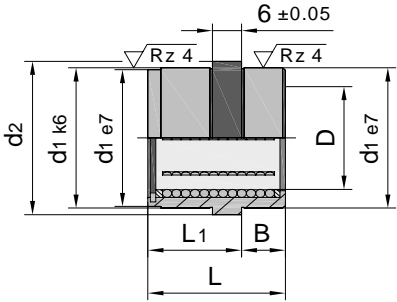
l	d	d ₁	D	L	€
2,5	17	20,5	12	35	
				48	
				56	
2,8	24	28,6	18	45	
				56	
				71	
2,8	30	35,7	24	50	
				70	
				84	
4,8	38	43,5	30	56	
				70	
				95	
				110	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N1320

Recirculating Ball Bushing

With Unlimited Stroke Length For N145 And N155



Ordering-Example:

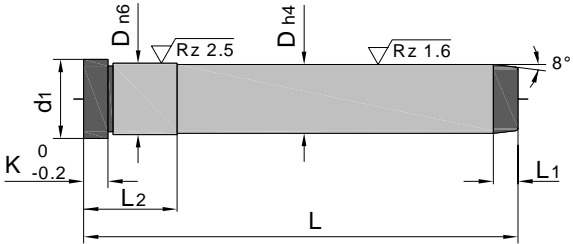
1 Piece N1320 Ø10/9/12

Special Sizes Available On Request.

d1	d2	D	L1	L2	€
17	20	10	9	12	
17	20	10	9	17	
22	25	12	9	17	
22	25	12	12	17	
30	33	18	12	22	
30	33	18	17	22	
38	41	24	17	27	
38	41	24	22	27	
46	49	30	22	32	
46	49	30	27	36	

N145

Ball Guiding Pin With Collar And Press Fit



Ordering-Example:

1 Piece N145 Ø10/60

Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

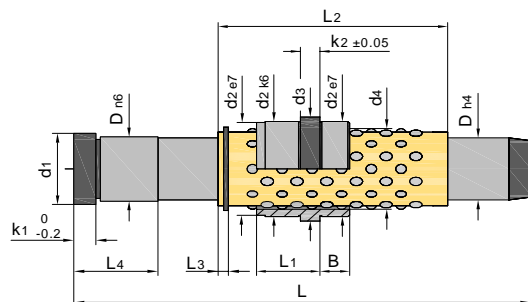
K	L ₁	L ₂	d ₁	D	L	€
3	4	12	12	10	60	
					80	
					100	
					120	
					140	
4	4	17	15	12	80	
					100	
					120	
					140	
					160	
6	5	22	21	18	80	
					100	
					120	
					140	
					160	
6	6	27	27	24	100	
					120	
					140	
					160	
					180	
6	7	36	35	30	140	
					160	
					180	
					200	
					250	

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N1456

Ball Guiding Complete

With N145 Ball Guiding Pin With Collar And Press Fit



Ordering-Example:

1 Piece N1456 Ø12/80/35

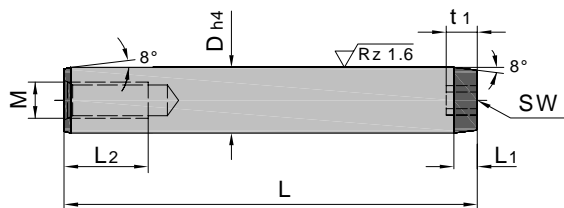
Special Sizes Available On Request.

H = max. Stroke

k2	L1	L2	B	L3	L4	k1	d1	d3	d4	d2	D	L	H	€
6	17	35	9	2,5	17	4	15	25	17	22	12	80	35	
		48										100	35	
		35										100	55	
		48										120	35	
		56										120	55	
												140	55	
												140	80	
												160	80	
6	22	45	12	2,8	22	6	21	33	24	30	18	80	45	
		56										100	45	
		45										120	45	
		56										120	65	
		71										140	45	
												140	65	
												160	65	
												160	90	
												180	90	
6	27	50	17	2,8	27	6	27	41	30	38	24	100	45	
		70										120	45	
		50										140	45	
		70										140	75	
		84										160	45	
												160	75	
												180	75	
												180	105	
												200	105	
6	32	70	22	4,8	36	6	35	49	38	46	30	140	55	
		95										160	55	
		110										180	55	
												180	95	
												200	95	
												250	135	

N155

Ball Guiding Pin Without Collar Screwable



See Data Sheet Tightening Torques Group 19

Ordering-Example:

1 Piece N155 Ø12/60

Special Sizes Available On Request.

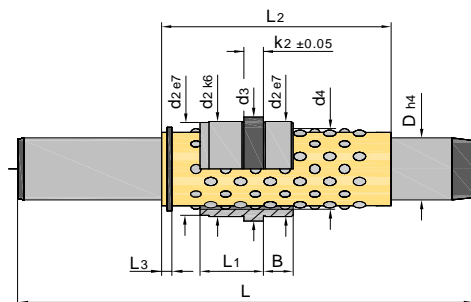
Material: 1.7139 ca. 700HV

M	L1	L2	SW	T1	D	L	€
M6	4	16	4	4	10	60	
						80	
						100	
						120	
						140	
M8	4	17	5	5	12	80	
						100	
						120	
						140	
						160	
M10	5	20	6	6	18	80	
						100	
						120	
						140	
						160	
						180	
M12	6	25	8	8	24	100	
						120	
						140	
						160	
						180	
						200	
						220	
250							
M16	7	30	8	8	30	140	
						160	
						180	
						200	
						220	
						250	

N1556

Ball Guiding Complete

With N155 Ball Guiding Pin Without Collar Screwable



Ordering-Example:

1 Piece N1556 Ø12/80/35

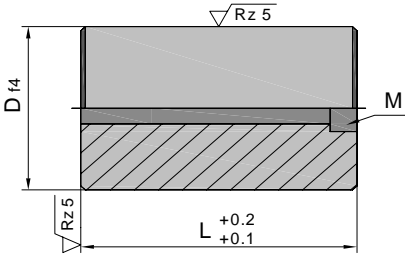
Special Sizes Available On Request.

H = max. Stroke

k2	L1	L2	B	L3	d3	d4	d2	D	L	H	€
6	17	35	9	2,5	25	17	22	12	80	35	
									100	35	
									100	55	
									120	35	
									120	55	
									140	55	
									140	80	
									160	80	
6	22	45	12	2,8	33	24	30	18	80	45	
									100	45	
									120	45	
									120	65	
									140	45	
									140	65	
									160	65	
									160	90	
6	27	50	17	2,8	41	30	38	24	100	45	
									120	45	
									140	45	
									140	75	
									160	45	
									160	75	
									180	75	
									180	105	
6	32	70	22	4,8	49	38	46	30	140	55	
									160	55	
									180	55	
									180	95	
									200	95	
									250	135	

N165

Support Pillar With Guiding Diameter



Ordering-Example:

1 Piece N165 Ø24/50

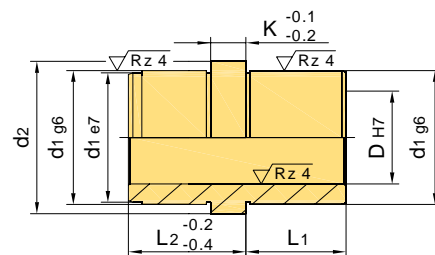
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

M	D	L	€
M8	24	50	
		60	
		70	
		80	
		90	
		100	
		120	
		140	
		160	
		180	
M10	36	50	
		60	
		70	
		80	
		90	
		100	
		120	
		140	
		160	
		180	
M12	48	60	
		70	
		80	
		90	
		100	
		120	
		140	
		160	
		180	

N166

Guide Bushes Made Of Bronze For Support Pillar N165



Ordering-Example:

1 Piece N166 Ø24/9/17

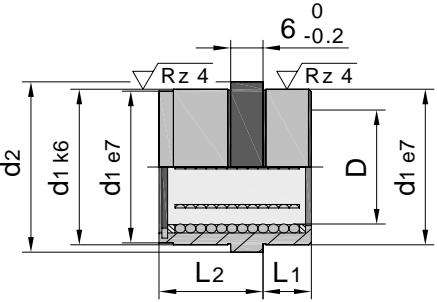
Special Sizes Available On Request.

t max = 200°C
Material: Bronze

K	d1	d2	D	L1	L2	€
5	32	36	24	9	17	
				12		
				6	20	
5	44	48	36	12	17	
					22	
				17		
6	58	62	48	6	24	
				17	22	
				10	30	

N167

Recirculating Ball Bushing For Support Pillar N165



Ordering-Example:

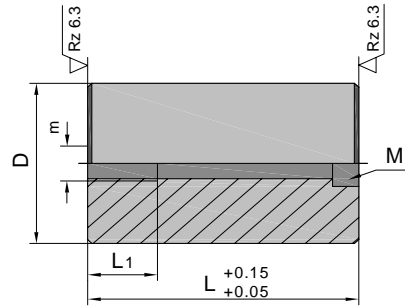
1 Piece N167 Ø24/12/17

Special Sizes Available On Request.

d1	d2	D	L1	L2	€
38	41	24	12	17	
			17	22	
54	58	36	22	27	
68	73	48	27	36	

N16

Support Pillar



Ordering-Example:

1 Piece N16 Ø25/36/M8

Special Sizes Available On Request.

Material: 1.7139

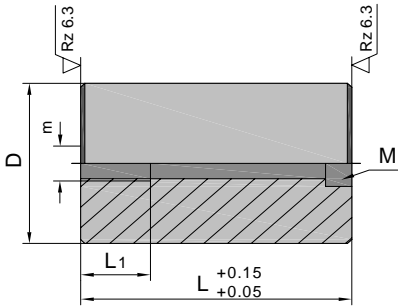
M	L1	D	L	m	€
M6	16	25	36	M8	
			46		
			56		
			66		
			76		
			86		
			96		
			116		
			136		
			156		
M6	15	32	36	M8	
			46		
			56		
			66		
			76		
			86		
			96		
			116		
			136		
			156		
M8	20	32	36	M10	
			46		
			56		
			66		
			76		
			86		
			96		
			116		
			136		
			156		
M8	20	40	46	M10	
			56		
			66		
			76		
			86		
			96		
			116		
			136		
			156		
			176		

M	L1	D	L	m	€				
M8	20	50	46	M10					
			56						
			66						
			76						
			86						
			96						
			116						
			136						
			156						
			176						
M8	20	60	56	M10					
			66						
			76						
			86						
			96						
			116						
			136						
			156						
			176						
			196						
M8	20	63	56	M10					
			66						
			76						
			86						
			96						
			116						
			136						
			156						
			M10		25	70	66	M12	
							76		
86									
96									
116									
136									
156									
176									
196									
236									
M10	25	70	276	M12					

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N16

Support Pillar



Ordering-Example:

1 Piece N16 Ø80/66/M12

Special Sizes Available On Request.

Material: 1.7139

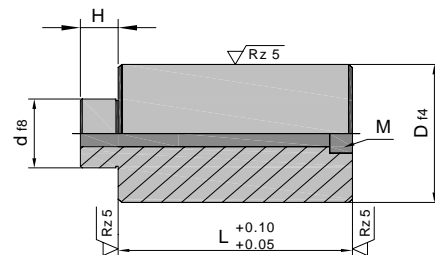
M	L1	D	L	m	€
M10	25	80	66	M12	
			76		
			86		
			96		
			116		
			136		
			156		
			176		
			196		
			236		
			276		

M	L1	D	L	m	€
M10	25	100	96	M12	
			116		
			136		
			156		
			176		
			196		
			236		
			276		

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N161

Support Pillar With Guiding Diameter Offset



Ordering-Example:

1 Piece N161 Ø24/36

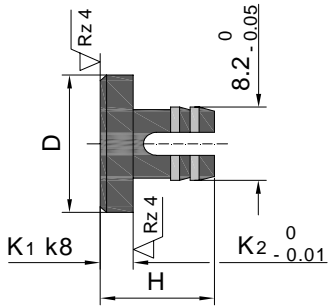
Special Sizes Available On Request.

Material: 1.7139 ca. 700HV

M	H	d	D	L	€
M8	7	14	24	36	
				46	
				56	
				66	
				76	
				86	
				96	
				116	
M10	9	18	36	46	
				56	
				66	
				76	
				86	
				96	
			116		
			136		
M12	10	20	48	46	
				56	
				66	
				76	
				86	
				96	
				116	
				136	
			156		

N17

Elastic Washer



Ordering-Example:

1 Piece N17 Ø16

Special Sizes Available On Request.

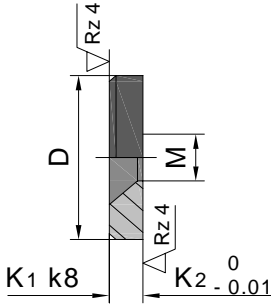
Material: 1.7139 ca. 980 N/mm²

H	K1	D	€
11	3	16	
		25	

H	K2	D	€
12	4	20	
		30	

N18

Disc



Ordering-Example:

1 Piece N18 Ø18

Special Sizes Available On Request.

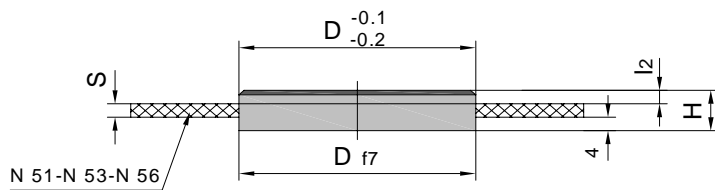
Material: 1.7139 ca. 980 N/mm²

M	K1	D	€
M4	3	18	
		28	

M	K2	D	€
M5	4	20	
		30	

N19

Locating Ring



Ordering-Example:

1 Piece N19 Ø40/6

Special Sizes Available On Request.

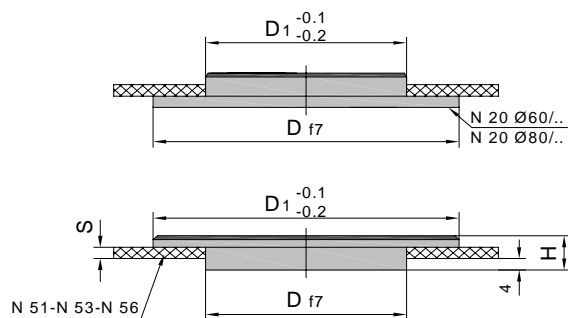
Material: 1.1191

S	l ₂	D	H	€
-	-	40	6	
3			9	
-	4	60	8	
3			11	
5			13	
-	4	80	8	
3	8		15	
5			17	
-	8	90	12	
3			15	
5			17	
6			18	
7			19	
8,5	8,5		21	
-	4	100	8	
	8		12	
6			18	
8,5	8,5		21	
-	8	110	12	
6			18	
8,5	8,5		21	
-	8	120	12	
8,5	8,5		21	

S	l ₂	D	H	€
-	4	125	8	
	8		12	
6			18	
8			20	
8,5	8,5		21	
8	18		30	
-	8	130	12	
-	8	140	12	
-	8	150	12	
8,5	8,5		21	
-	4	160	8	
	8		12	
6	10		20	
8			22	
8,5	10,5		23	
-	8	175	12	
8,5	8,5		21	
-	8	200	12	
5	11		20	
8	10		22	
8,5	10,5		23	
-	8	250	12	
8	10		22	
8,5	10,5		23	

N20

Locating Ring



Ordering-Example:

1 Piece N20 Ø60/8

Special Sizes Available On Request.

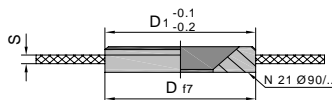
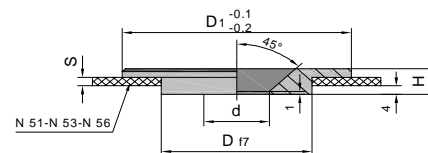
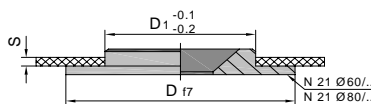
Material: 1.1191

S	D	D1	H	€
-	90	60	8	
3			11	
5			13	
6			14	
-	90	80	12	
3			15	
5			17	
-	90	100	8	
			12	
3			15	
5			17	
6			18	
7			19	
8,5			21	
-	90	110	12	
3			15	
5			17	
6			18	
7			19	
8			20	
8,5			21	
-	90	120	12	
3			15	
5			17	
6			18	
7			19	
8			20	
8,5			21	

S	D	D1	H	€
-	90	125	12	
3			15	
5			17	
6			18	
7			19	
8			20	
8,5			21	
-	90	140	12	
-	90	150	12	
-	90	160	12	
3			15	
5			17	
6			18	
7			19	
8			20	
8,5			21	
-	90	175	12	
3			15	
5			17	
6			18	
7			19	
8			20	
8,5			21	
-	90	200	12	
8	160		22	
-	90	250	12	
8	160		22	

N21

Locating Ring



Ordering-Example:

1 Piece N21 Ø60/8/36

Special Sizes Available On Request.

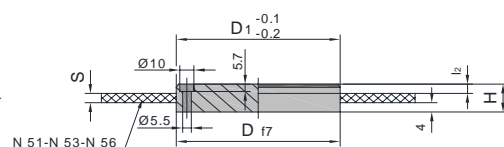
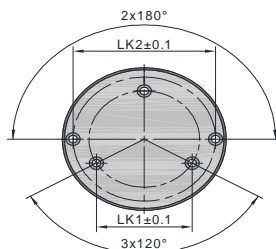
Material: 1.1191

S	D	D1	H	d	€
-	90	60	8	36	
3			11	26	
5			13		
6			14		
-	90	80	12	36	
3			15	26	
5			17		
-	90	90	12	36	
3			15		
5			17		
6			18		
7			19		
8,5			21		
-	90	100	8	36	
			12		
3			15		
5			17		
6			18		
7			19		
8,5			21		
-	90	110	12	36	
3			15		
5			17		
6			18		
7			19		
8			20		
8,5			21		
-	90	120	12	36	
3			15		
5			17		
6			18		
7			19		
8			20		
8,5			21		

S	D	D1	H	d	€
-	90	125	12	26	
				36	
3			15		
5			17	26	
				36	
6			18	26	
				36	
7			19	26	
				36	
8			20	26	
				36	
8,5			21	26	
				36	
-	90	130	12	36	
-	90	140	12	36	
-	90	150	12	36	
-	90	160	12	36	
3			15		
5			17		
6			18		
7			19		
8			20		
8,5			21		
-	90	175	12	36	
3			15		
5			17		
6			18		
7			19		
8			20		
8,5			21		
-	90	180	12	36	
-	90	200	12	36	
-	90	250	12	36	

N22

Locating Ring With Screw Holes



Ordering-Example:

1 Piece N22 Ø60/8

Special Sizes Available On Request.

LK = Bolt Pitch Circle Diameter

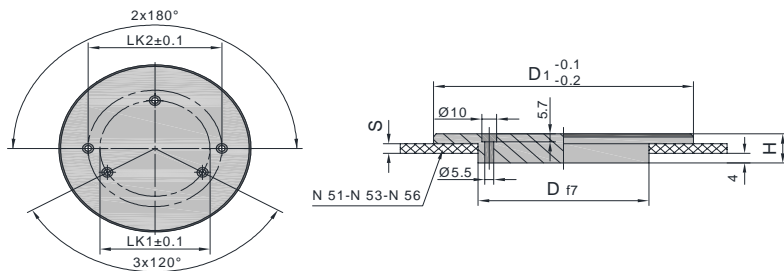
Material: 1.1191

S	l ₂	LK ₁	LK ₂	D	H	€
-	4	48	48	60	8	
3			11			
5			13			
-	4	68	-	80	8	
3	8				15	
5					17	
-	8	78	76	90	12	
3					15	
5					17	
6					18	
7					19	
8,5	8,5				21	
-	4	82	82	100	8	
	8				12	
6					18	
8,5	8,5				21	
-	8	90	90	110	12	
6					18	
8,5	8,5				21	
-	8	104	104	120	12	
8,5	8,5				21	

S	l ₂	LK ₁	LK ₂	D	H	€
-	4	104	104	125	8	
	8				12	
6					18	
8					20	
8,5	8,5	21				
-	8	109	-	130	12	
-	8	119	-		140	12
-	4	144	144	160		8
	8				12	
6	10				20	
8					22	
8,5	10,5				23	
-	8	144	-	175	12	
8,5	8,5				21	
-	8	144	144	200	12	
5	11				20	
8	10				22	
8,5	10,5				23	
-	8	194	194	250	12	
8	10				22	
8,5	10,5				23	

N23

Locating Ring With Screw Holes



Ordering-Example:

1 Piece N23 Ø100/8

Special Sizes Available On Request.

LK = Bolt Pitch Circle Diameter

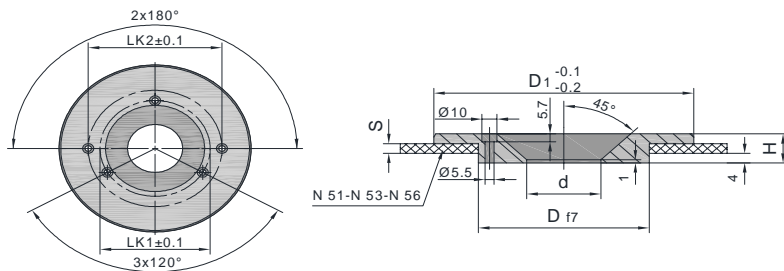
Material: 1.1191

S	LK1	LK2	D	D1	H	€
-	78	-	90	100	8	
		82			12	
3					15	
5					17	
6					18	
7					19	
8,5					21	
-	78	98	90		110	12
3				15		
5				17		
6				18		
7				19		
8				20		
8,5				21		
-	78	104	90	120		12
3					15	
5					17	
6					18	
7					19	
8					20	
8,5					21	
-	78	104	90		125	12
3				15		
5				17		
6				18		
7				19		
8				20		
8,5				21		

S	LK1	LK2	D	D1	H	€
-	78	-	90	140	12	
-	78	-	90	150	12	
3						
5						
6						
7						
8,5						
-	78	128	90	160	12	
3						15
5						17
6						18
7						19
8,5						21
-	78	128	90	175	12	
3						15
5						17
6						18
7						19
8,5						21
-	78	144	90	200	12	
-	78	144	90	250	12	

N24

Locating Ring With Screw Holes



Ordering-Example:

1 Piece N24 Ø90/12/36

Special Sizes Available On Request.

LK = Bolt Pitch Circle Diameter

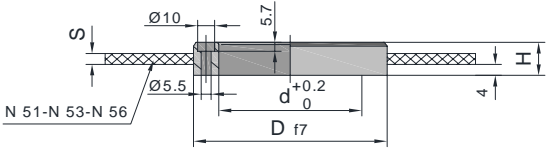
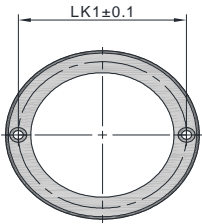
Material: 1.1191

S	LK1	LK2	D	D1	H	d	€
-	78	76	90	90	12	36	
3					15		
5					17		
6					18		
7					19		
8,5					21		
-	78	-	90	100	8	36	
		82			12		
3					15		
5					17		
6					18		
7					19		
8,5					21		
-	78	98	90	110	12	36	
3					15		
5					17		
6					18		
7					19		
8					20		
8,5					21		
-	78	104	90	120	12	36	
3					15		
5					17		
6					18		
7					19		
8					20		
8,5					21		

S	LK1	LK2	D	D1	H	d	€
-	78	104	90	125	12	26	
						36	
3					15		
5					17	26	
						36	
6					18	26	
						36	
7					19	26	
						36	
8					20	26	
						36	
8,5					21	26	
						36	
-	78	-	90	130	12	36	
-	78	-	90	140	12	36	
-	78	-	90	150	12	36	
-	78	128	90	160	12	36	
3					15		
5					17		
6					18		
7					19		
8					20		
8,5					21		
-	78	128	90	175	12	36	
3					15		
5					17		
6					18		
7					19		
8					20		
8,5					21		
-	78	-	90	180	12	36	
-	78	-	90	200	12	36	
-	78	-	90	250	12	36	

N25

Locating Ring With Screw Holes



Ordering-Example:

1 Piece N25 Ø125/12

Special Sizes Available On Request.

LK = Bolt Pitch Circle Diameter

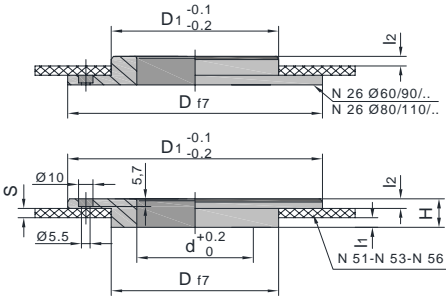
Material: 1.1191

S	LK1	d	D	H	€
-	104	82	125	12	
6				18	
8				20	
-	144	120	160	14	
6				20	
8				22	

S	LK1	d	D	H	€
-	144	120	200	14	
8				22	
-	144	120	250	14	
8				22	

N26

Locating Ring With Screw Holes



Ordering-Example:

1 Piece N26 Ø60/90/18

Special Sizes Available On Request.

LK = Bolt Pitch Circle Diameter

Material: 1.1191

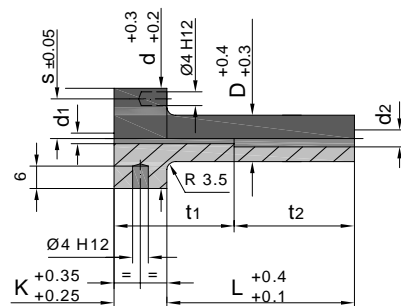
l1	l2	S	LK1	d	D1	D	H	€
8	10	-	75	50	60	90	18	
		6					24	
		8					26	
4	8	-	98	82	110	90	12	
		6					18	
		8					20	
4	8	-	104	82	120	90	12	
		6					18	
		8					20	
4	8	-	104	82	125	90	12	
		6					18	
		8					20	
4	8	-	104	82	160	90	12	
		6					18	
		8					20	

l1	l2	S	LK1	d	D1	D	H	€
4	8	-	104	82	175	90	12	
		6					18	
		8					20	
8	10	-	95	70	80	110	18	
		6					24	
		8					26	
4	10	-	144	120	175	160	14	
		6					20	
		8					22	
4	10	-	144	120	200	160	14	
		8					22	
4	10	-	144	120	250	160	14	
		8					22	

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N30R

Sprue Bush Blank Without Radius With Machining Allowance And Pilot Hole Drilling



Ordering-Example:

1 Piece N30 Ø12/22/R

Special Sizes Available On Request.

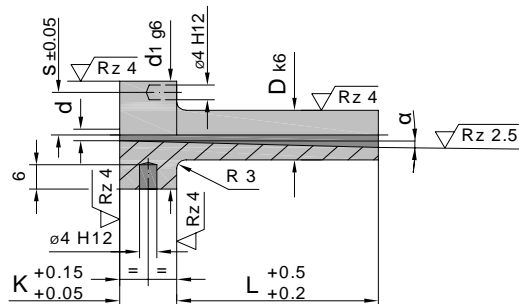
Material: 1.2826 ca. 580 HV

s	K	d	d1	t1	d2	t2	D	L	€
11	13	28	2,0	35	-	-	12	22	
				40				27	
				49	2,5			36	
						10		46	
						20		56	
						30		66	
					40	76			
15	18	38	2,0	45	-	-	18	27	
				54				36	
				49	2,5	15		46	
						25		56	
						35		66	
						45		76	
						55		86	
						65		96	
					85	116			
20	23	48	3,5	69	-	-	24	46	
				79				56	
				89				66	
				99				76	
				106				86	
				119				96	
				139				116	
				159				136	

N30

Sprue Bush Without Radius

$\alpha = 0,5^\circ$



Ordering-Example:

1 Piece N30 Ø12/22/2,5/0,5°

Special Sizes Available On Request.

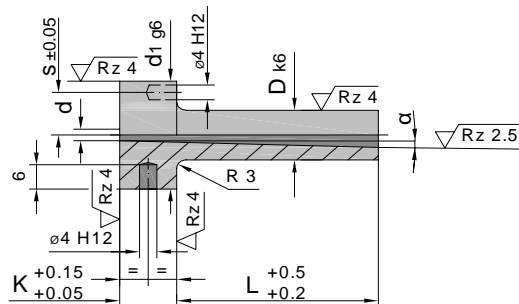
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
11	13	28	12	22	2,5	0,5°	
				27			
				36			
				46			
				56			
11	13	28	12	27	3,5	0,5°	
				36			
				46			
				56			
				66			
				76			
15	18	38	18	46	3,0	0,5°	
				56			
				66			
				76			
				86			
				96			
				116			
15	18	38	18	46	4,0	0,5°	
				56			
				66			
				76			
				86			
				96			
				116			

N30

Sprue Bush Without Radius

$\alpha = 1,0^\circ$



Ordering-Example:

1 Piece N30 Ø12/22/2,5/1,0°

Special Sizes Available On Request.

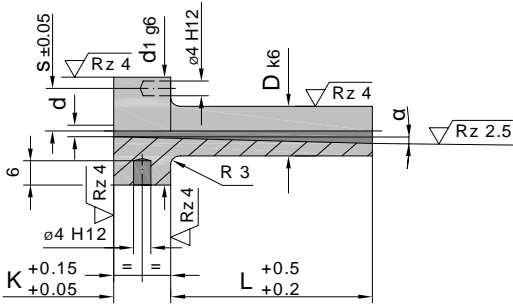
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
11	13	28	12	22	2,5	1,0°	
				27			
				36			
				46			
				56			
11	13	28	12	22	3,0	1,0°	
				27			
				36			
				46			
				56			
				66			
11	13	28	12	22	3,5	1,0°	
				27			
				36			
				46			
				56			
15	18	38	18	27	3,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
				116			
15	18	38	18	27	4,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
				116			
20	23	48	24	46	5,0	1,0°	
				56			
				66			
				76			
				86			
				96			
				116			
				136			

N30

Sprue Bush Without Radius

$\alpha = 1,5^\circ$



Ordering-Example:

1 Piece N30 Ø18/27/3,5/1,5°

Special Sizes Available On Request.

Material: 1.2826 ca. 580 HV

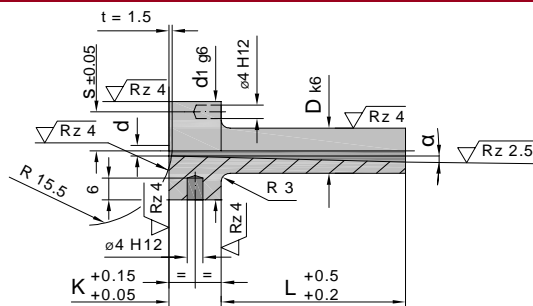
s	K	d1	D	L	d	α	€
15	18	38	18	27	3,5	1,5°	
				36			
				46			
				56			
15	18	38	18	27	4,5	1,5°	
				36			
				46			
				56			
20	23	48	24	46	4,5	1,5°	
				56			
				76			
20	23	48	24	56	6,5	1,5°	
				76			

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N31

Sprue Bush With Radius 15,5

$\alpha = 0,5^\circ$



Ordering-Example:

1 Piece N31 Ø12/27/2,5/0,5°

Special Sizes Available On Request.

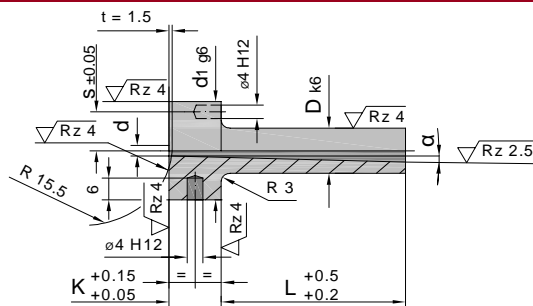
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
11	13	28	12	27	2,5	0,5°	
				36			
				46			
				56			
11	13	28	12	27	3,5	0,5°	
				36			
				46			
				56			
				66			
			76				
15	18	38	18	46	3,0	0,5°	
				56			
				66			
				76			
				86			
				96			
			116				
15	18	38	18	46	4,0	0,5°	
				56			
				66			
				76			
				86			
				96			
			116				

N31

Sprue Bush With Radius 15,5

$\alpha = 1,0^\circ$



Ordering-Example:

1 Piece N31 Ø12/22/2,5/1,0°

Special Sizes Available On Request.

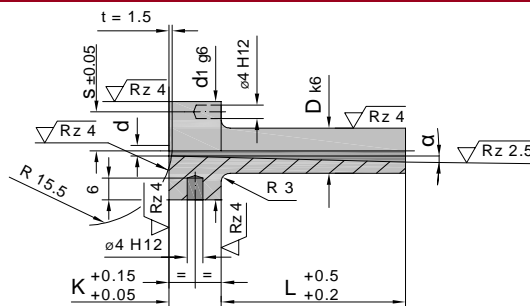
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
11	13	28	12	22	2,5	1,0°	
				27			
				36			
				46			
				56			
11	13	28	12	22	3,0	1,0°	
				27			
				36			
				46			
				56			
11	13	28	12	22	3,5	1,0°	
				27			
				36			
				46			
				56			
15	18	38	18	27	3,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
			116				
15	18	38	18	27	4,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
			116				
20	23	48	24	46	5,0	1,0°	
				56			
				66			
				76			
				86			
				96			
				116			
			136				

N31

Sprue Bush With Radius 15,5

$\alpha = 1,5^\circ$



Ordering-Example:

1 Piece N31 Ø18/27/3,5/1,5°

Special Sizes Available On Request.

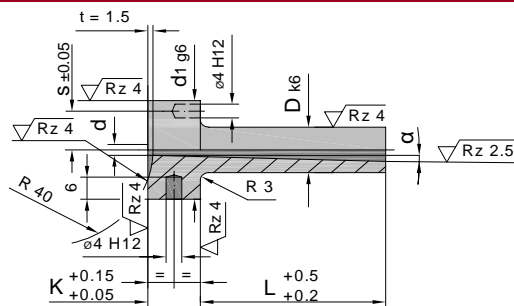
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
15	18	38	18	27	3,5	1,5°	
				36			
				46			
				56			
15	18	38	18	27	4,5	1,5°	
				36			
				46			
				56			
20	23	48	24	46	4,5	1,5°	
				56			
				76			
20	23	48	24	56	6,5	1,5°	
				76			

N32

Sprue Bush With Radius 40

$\alpha = 0,5^\circ$



Ordering-Example:

1 Piece N32 Ø12/27/2,5/0,5°

Special Sizes Available On Request.

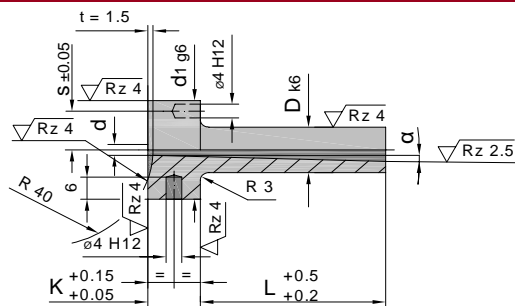
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
11	13	28	12	27	2,5	0,5°	
				36			
				46			
				56			
11	13	28	12	27	3,5	0,5°	
				36			
				46			
				56			
				66			
			76				
15	18	38	18	46	3,0	0,5°	
				56			
				66			
				76			
				86			
				96			
			116				
15	18	38	18	46	4,0	0,5°	
				56			
				66			
				76			
				86			
				96			
			116				

N32

Sprue Bush With Radius 40

$\alpha = 1,0^\circ$



Ordering-Example:

1 Piece N32 Ø12/22/2,5/1,0°

Special Sizes Available On Request.

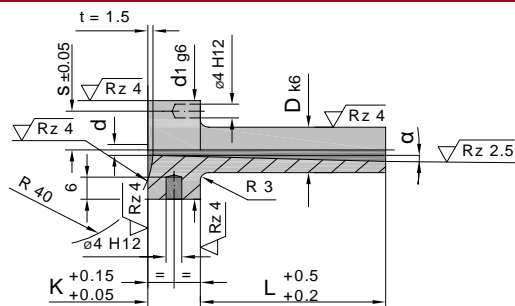
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
11	13	28	12	22	2,5	1,0°	
				27			
				36			
				46			
				56			
11	13	28	12	22	3,0	1,0°	
				27			
				36			
				46			
				56			
				66			
11	13	28	12	22	3,5	1,0°	
				27			
				36			
				46			
				56			
15	18	38	18	27	3,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
				116			
15	18	38	18	27	4,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
				116			
20	23	48	24	46	5,0	1,0°	
				56			
				66			
				76			
				86			
				96			
				116			
				136			

N32

Sprue Bush With Radius 40

$\alpha = 1,5^\circ$



Ordering-Example:

1 Piece N32 Ø18/27/3,5/1,5°

Special Sizes Available On Request.

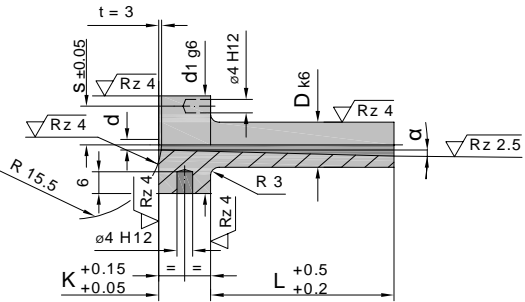
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
15	18	38	18	27	3,5	1,5°	
				36			
				46			
				56			
15	18	38	18	27	4,5	1,5°	
				36			
				46			
				56			
20	23	48	24	46	4,5	1,5°	
				56			
				76			
20	23	48	24	56	6,5	1,5°	
				76			

N33

Sprue Bush With Radius 15,5

$\alpha = 0,5^\circ$



Ordering-Example:

1 Piece N33 Ø18/46/3/0,5°

Special Sizes Available On Request.

Material: 1.2826 ca. 580 HV

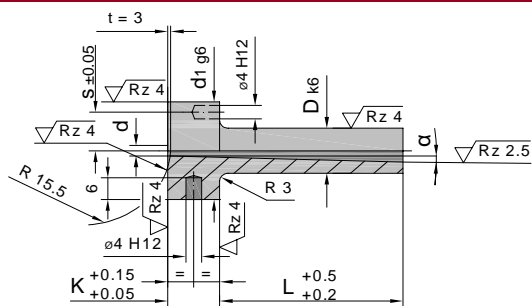
s	K	d1	D	L	d	α	€
15	18	38	18	46	3,0	0,5°	
				56			
				66			
				76			
				86			
				96			
				116			
15	18	38	18	46	4,0	0,5°	
				56			
				66			
				76			
				86			
				96			
				116			

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N33

Sprue Bush With Radius 15,5

$\alpha = 1,0^\circ$



Ordering-Example:

1 Piece N33 Ø18/27/3/1,0°

Special Sizes Available On Request.

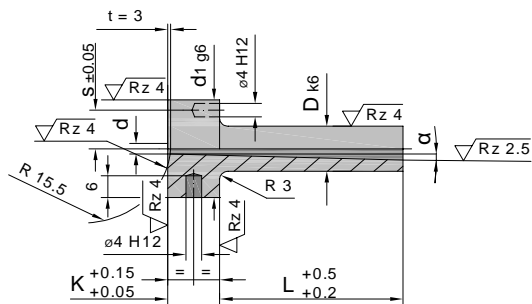
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
15	18	38	18	27	3,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
				116			
15	18	38	18	27	4,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
				116			
20	23	48	24	46	5,0	1,0°	
				56			
				66			
				76			
				86			
				96			
				116			
				136			

N33

Sprue Bush With Radius 15,5

$\alpha = 1,5^\circ$



Ordering-Example:

1 Piece N33 Ø18/27/3,5/1,5°

Special Sizes Available On Request.

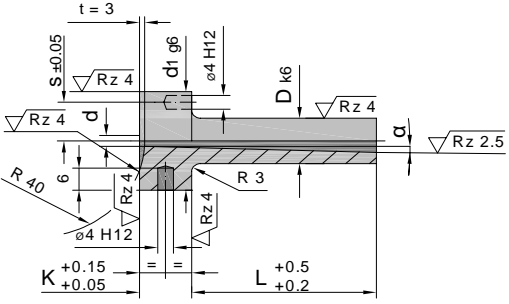
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
15	18	38	18	27	3,5	1,5°	
				36			
				46			
				56			
15	18	38	18	27	4,5	1,5°	
				36			
				46			
				56			
20	23	48	24	46	4,5	1,5°	
				56			
				76			
20	23	48	24	56	6,5	1,5°	
				76			

N34

Sprue Bush With Radius 40

$\alpha = 0,5^\circ$



Ordering-Example:

1 Piece N34 Ø18/46/3/0,5°

Special Sizes Available On Request.

Material: 1.2826 ca. 580 HV

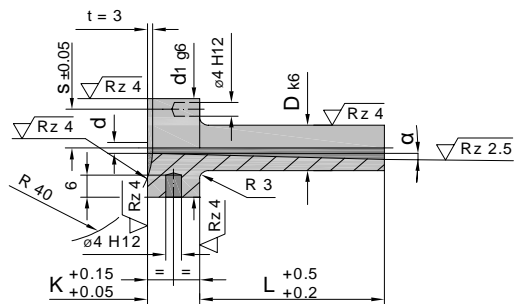
s	K	d1	D	L	d	α	€
15	18	38	18	46	3,0	0,5°	
				56			
				66			
				76			
				86			
				96			
				116			
15	18	38	18	46	4,0	0,5°	
				56			
				66			
				76			
				86			
				96			
				116			

We are not liable for typing and printing errors, technical changes and completeness of the catalogue.

N34

Sprue Bush With Radius 40

$\alpha = 1,0^\circ$



Ordering-Example:

1 Piece N34 Ø18/27/3/1,0°

Special Sizes Available On Request.

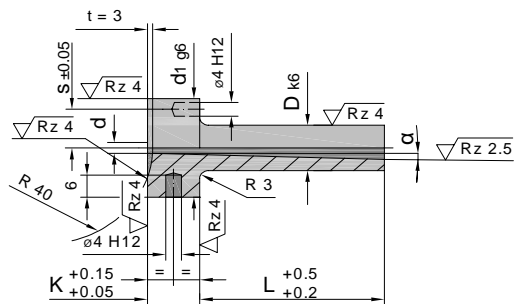
Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
15	18	38	18	27	3,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
				116			
15	18	38	18	27	4,0	1,0°	
				36			
				46			
				56			
				66			
				76			
				86			
				96			
				116			
20	23	48	24	46	5,0	1,0°	
				56			
				66			
				76			
				86			
				96			
				116			
				136			

N34

Sprue Bush With Radius 40

$\alpha = 1,5^\circ$



Ordering-Example:

1 Piece N34 Ø18/27/3,5/1,5°

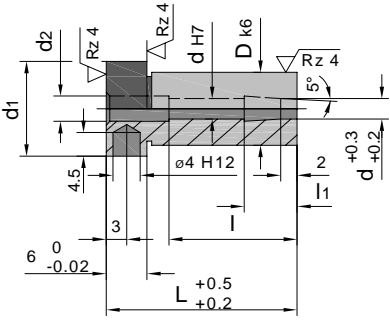
Special Sizes Available On Request.

Material: 1.2826 ca. 580 HV

s	K	d1	D	L	d	α	€
15	18	38	18	27	3,5	1,5°	
				36			
				46			
				56			
15	18	38	18	27	4,5	1,5°	
				36			
				46			
				56			
20	23	48	24	46	4,5	1,5°	
				56			
				76			
20	23	48	24	56	6,5	1,5°	
				76			

N40

Sprue Puller Insert



Ordering-Example:

1 Piece N40 Ø12/22

Special Sizes Available On Request.

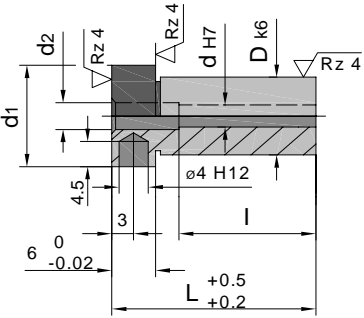
Material: 1.2826 ca. 580 HV

l1	l	d2	d1	d	D	L	€
7,0	18	4,5	16	4	12	22	
						27	
						36	
						46	
						56	
						66	
7,0	22 27	6,5	22	6	18	22	
						27	
						36	
						46	
						56	
						66	
9,5	28	8,5	28	8	24	36	
						46	
						56	
						66	
						76	
						86	
						96	

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N41

Sprue Puller Insert Without Undercut With Long Guiding



Ordering-Example:

1 Piece N41 Ø12/22

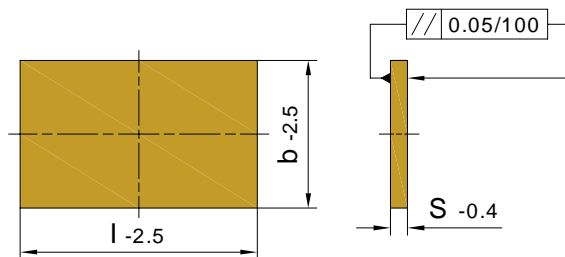
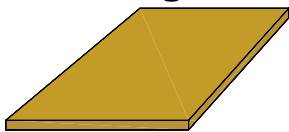
Special Sizes Available On Request.

Material: 1.2826 ca. 580 HV

l	d2	d1	d	D	L	€
22	-	16	4	12	22	
27					27	
36					36	
46					46	
	4,5				56	
					66	
22	-	22	6	18	22	
27					27	
36					36	
46					46	
56					56	
	6,5				66	
					76	
36	-	28	8	24	36	
46					46	
56					56	
66					66	
	8,5				76	
					86	
					96	

N50

Insulating Board $P = 600 \text{ N/mm}^2$



Ordering-Example:

1 Piece N50 95/95/3

Special Sizes Available On Request.

Application Temperature: 200°C
Thermal Conductivity: 0,19 W/mk
Dense: 1,9 g/cm³

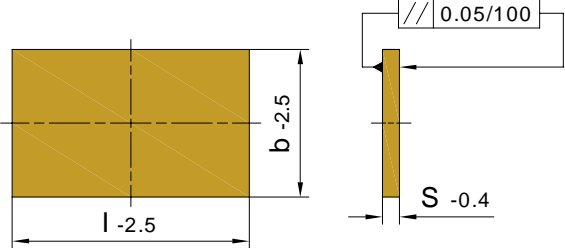
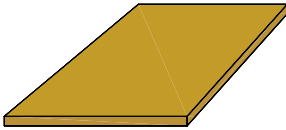
b	l	S	€
95	95	3	
100	130		
156	156		
	196		
	246		
190	246		
196	196		
	246		
206	156		
	196		
95	95	5	
100	130		
156	156		
	196		
	246		
	296		
	396		
190	246		
	296		
196	196		
	246		
	296		
	346		
206	156		
	196		
218	246		
	296		
246	246		
	296		
	346		
	396		
254	246		
276	246		
126	156	6	
	246		
156	156		
	196		
	206		
	246		
	296		
	346		
	396		
	446		

b	l	S	€
196	196	6	
	206		
	246		
	296		
	346		
	396		
	446		
	496		
216	246		
	296		
	396		
246	246		
	266		
	296		
	346		
	396		
	446		
	496		
	546		
	596		
266	296		
196	296	7	
	346		
	396		
	446		
218	396		
246	246		
	296		
	346		
	396		
	446		
254	246		
276	296		
296	296		
	346		
	396		
	446		
346	346		
	396		
	446		
	496		
	546		
396	396		
	446		
	496		
	546		
496	546		

NEW

N50

Insulating Board P = 600 N/mm²



Ordering-Example:

1 Piece N50 296/296/8

Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,19 W/mk
 Dense: 1,9 g/cm³

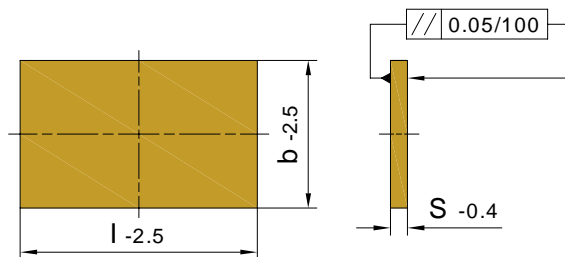
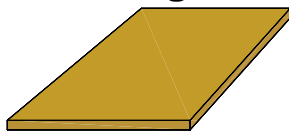
b	l	S	€
296	296	8	
	346		
	396		
	446		
	496		
	546		
	596		
	646		
	696		
316	346		
	396		
	446		
346	346		
	366		
	396		
	446		
	496		
	546		
	596		
	646		
	696		
	796		
366	396		
396	396		
	446		
	496		
	546		
	596		
	646		
	696		
	796		
446	446		
	496		
	546		
	596		
	646		
	696		
	796		
496	496		
	546		
	596		
	646		
	696		
	796		
546	546		
	596		
	646		
	696		
	796		

b	l	S	€
596	596	8	
	646		
	696		
	796		
	896		
	996		
646	646		
	696		
	796		
	896		
	996		
696	696		
	746		
	796		
	896		
	996		
746	796		
	896		
	996		
796	796		
	846		
	896		
	996		
846	896		
	996		
246	496	8,5	
296	296		
	346		
	396		
	446		
	496		
	546		
	596		
	696		
346	346		
	396		
	446		
	496		
	546		
	596		
	696		
	796		
396	396		
	446		
	496		
	546		
	596		
	696		
	796		
	896		

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N50

Insulating Board $P = 600 \text{ N/mm}^2$



Ordering-Example:

1 Piece N50 446/446/8,5

Special Sizes Available On Request.

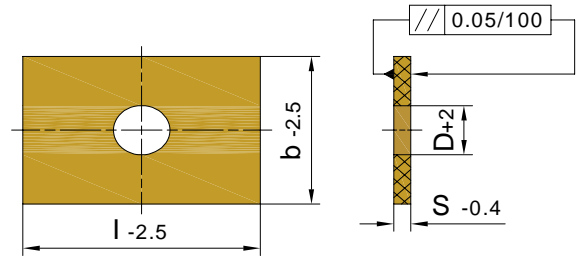
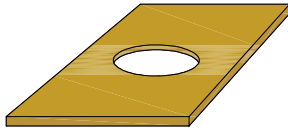
Application Temperature: 200°C
 Thermal Conductivity: 0,19 W/mk
 Dense: 1,9 g/cm³

b	l	S	€
446	446	8,5	
	496		
	546		
	596		
	696		
	796		
	896		
496	496		
	546		
	596		
	696		
	796		
	896		
	996		
546	546		
	596		
	646		
	696		
	796		
	896		
	996		

b	l	S	€
596	596	8,5	
	696		
	796		
	896		
	996		
646	596		
	696		
	796		
	896		
	996		
696	696		
	796		
	896		
	996		
796	796		
	896		
	996		
896	896		
	996		

N51

Insulating Board $P = 600 \text{ N/mm}^2$



Ordering-Example:

1 Piece N51 95/95/3/22

Special Sizes Available On Request.

Application Temperature: 200°C
Thermal Conductivity: 0,19 W/mk
Dense: 1,9 g/cm³

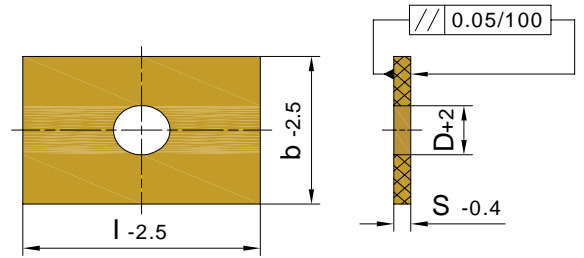
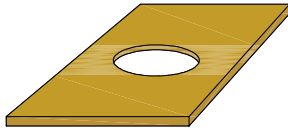
b	l	S	D	€
95	95	3	22	
100	130			
156	156		90	
	196			
	246			
190	246			
196	196			
	246			
206	156			
	196			
95	95	5	22	
100	130			
156	156		90	
	196			
	246			
	296			
	396			
190	246			
	296			
196	196			
	246			
	296			
	346			
206	156			
	196			
218	246			
	296			
	246			
	296			
246	246			
	296			
	346			
254	246			
	246			
	246			
276	246			
126	156	6	90	
	246			
156	156			
	196			
	206			
	246			
	296			
	346			
	396			
	446			

b	l	S	D	€	
196	196	6	90		
	206				
	246				
	296				
	346				
	396				
	446				
	496				
216	246				
	296				
	396				
246	246				
	266				
	296				
	346				
	396				
	446				
	496				
266	296				
196	296	7	90		
	346				
	396				
	446				
218	396				
	246				
	296				
246	246				
	296				
	346				
	396				
	446				
254	246				
	246				
	246				
276	296				
	296				
296	296				
	346				
	396				
	446				
	346	346			
		396			
		446			
496					
546					
396	396				
	446				
	496				
	546				
496	546				

NEW

N51

Insulating Board P = 600 N/mm²



Ordering-Example:

1 Piece N51 296/296/8/90

Special Sizes Available On Request.

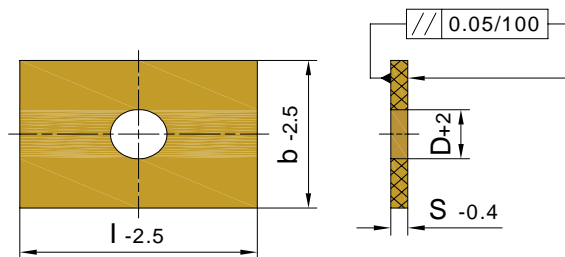
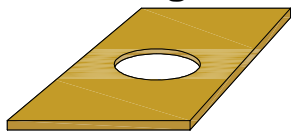
Application Temperature: 200°C
Thermal Conductivity: 0,19 W/mk
Dense: 1,9 g/cm³

b	l	S	D	€
296	296	8	90	
	346			
	396			
	446			
	496			
	546			
	596			
	646			
	696			
316	346			
	396			
	446			
346	346			
	366			
	396			
	446			
	496			
	546			
	596			
	646			
	696			
	796			
366	396			
396	396			
	446			
	496			
	546			
	596			
	646			
	696			
	796			
446	446			
	496			
	546			
	596			
	646			
	696			
	796			
496	496			
	546			
	596			
	646			
	696			
	796			
546	546			
	596			
	646			
	696			
	796			

b	l	S	D	€
596	596	8	90	
	646			
	696			
	796			
646	646			
	696			
	796			
246	496	8,5	90	
296	296			
	346			
	396			
	446			
	496			
	546			
	596			
	696			
	796			
346	346			
	396			
	446			
	496			
	546			
	596			
	696			
	796			
	896			
446	446			
	496			
	546			
	596			
	696			
	796			
	896			
496	496			
	546			
	596			
	696			
	796			
	896			
	996			

N51

Insulating Board $P = 600 \text{ N/mm}^2$



Ordering-Example:

1 Piece N51 646/596/8,5/90

Special Sizes Available On Request.

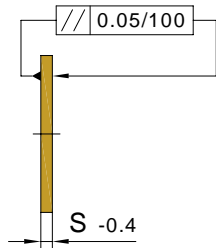
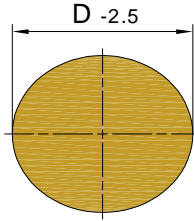
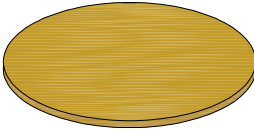
Application Temperature: 200°C
 Thermal Conductivity: 0,19 W/mk
 Densite: 1,9 g/cm³

b	l	S	D	€
546	546	8,5	90	
	596			
	646			
	696			
	796			
	896			
	996			
596	596			
	696			
	796			
	896			
	996			

b	l	S	D	€
646	596	8,5	90	
	696			
	796			
	896			
	996			
696	696			
	796			
	896			
	996			
796	796			
	896			
	996			
896	896			
	996			

N54

Insulating Board $P = 600 \text{ N/mm}^2$



Ordering-Example:

1 Piece N54 95/3

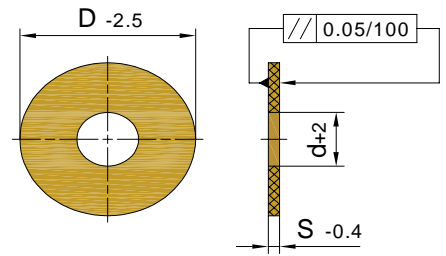
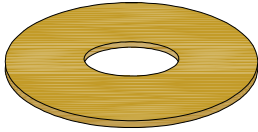
Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,19 W/mk
 Dens: 1,9 g/cm³

D	S	€
95	3	
116		
156		
156	5	
196		
246		
296		
344	7	

N55

Insulating Board $P = 600 \text{ N/mm}^2$



Ordering-Example:

1 Piece N55 95/3/22

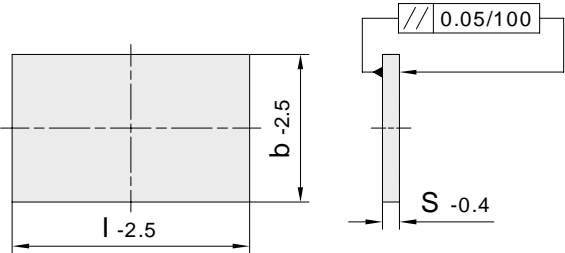
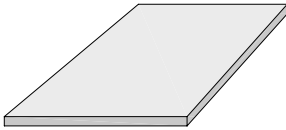
Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: $0,19 \text{ W/mk}$
 Densite: $1,9 \text{ g/cm}^3$

D	S	d	€
95	3	22	
156		90	
156	5	90	
196			
246			
296			
344	7	90	

N52

Insulating Board $P = 330 \text{ N/mm}^2$



Ordering-Example:

1 Piece N52 95/95/3

Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³

b	l	S	€
95	95	3	
100	130		
156	156		
	196		
	246		
	296		
	396		
190	246		
	296		
196	196		
	246		
	296		
206	346		
	156		
	196		
218	246		
	296		
246	246		
	296		
254	246		
276	246		
	296		
296	296		
95	95	5	
100	130		
156	156		
	196		
	246		
	296		
	396		
190	246		
	296		
196	196		
	246		
	296		
	346		
	396		
206	446		
	156		
	196		
218	246		
	296		
	396		
246	246		
	296		
	346		
	396		
	446		
	496		
254	246		

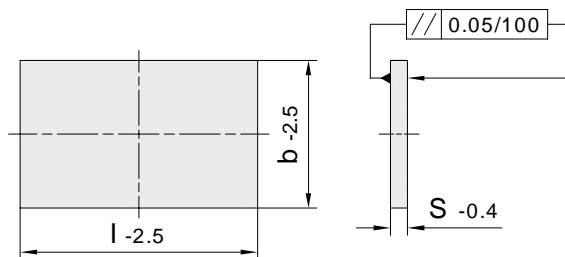
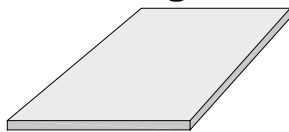
b	l	S	€
276	246	5	
296	296		
	346		
	396		
	446		
	496		
	546		
	596		
	346	346	
346	396		
	446		
	496		
	546		
396	396		
	446		
	496		
126	156	6	
156	246		
	156		
	196		
	206		
	246		
	296		
	346		
	396		
196	446		
	196		
	206		
	246		
	296		
196	346		
	396		
	446		
	496		
216	246		
	296		
	396		
246	246		
	266		
	296		
	346		
	396		
246	446		
	496		
	546		
	596		
	266	296	

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NEW

N52

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece N52 196/296/7

Special Sizes Available On Request.

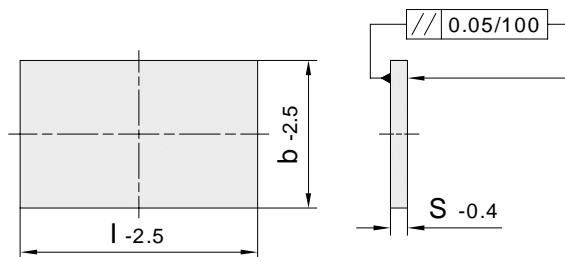
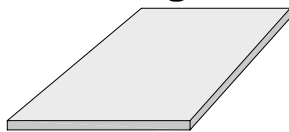
Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³

b	l	S	€
196	296	7	
	346		
	396		
	446		
218	396		
246	246		
	296		
	346		
	396		
	446		
254	246		
276	296		
296	296		
	346		
	396		
	446		
346	346		
	396		
	446		
	496		
	546		
396	396		
	446		
	496		
	546		
496	546		
296	296	8	
	346		
	396		
	446		
	496		
	546		
	596		
	646		
	696		
316	346		
	396		
	446		
346	346		
	366		
	396		
	446		
	496		
	546		
	596		
	646		
	696		
	796		
366	396		

b	l	S	€
396	396	8	
	446		
	496		
	546		
	596		
	646		
	696		
	796		
446	446		
	496		
	546		
	596		
	646		
	696		
	796		
496	496		
	546		
	596		
	646		
	696		
	796		
546	546		
	596		
	646		
	696		
	796		
596	596		
	646		
	696		
	796		
	896		
	996		
646	646		
	696		
	796		
	896		
	996		
696	696		
	746		
	796		
	896		
	996		
746	796		
	896		
	996		
796	796		
	846		
	896		
	996		
846	896		
	996		

N52

Insulating Board $P = 330 \text{ N/mm}^2$



Ordering-Example:

1 Piece N52 246/496/8,5

Special Sizes Available On Request.

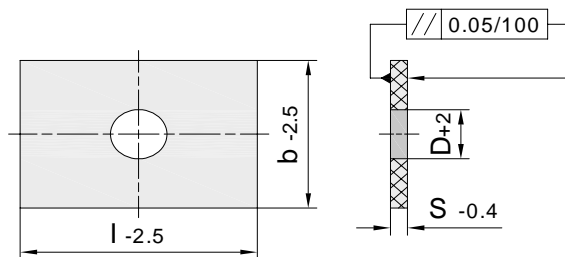
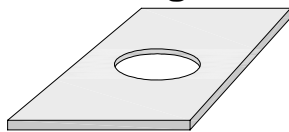
Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³

b	l	S	€
246	496	8,5	
296	296		
	346		
	396		
	446		
	496		
	546		
	596		
	696		
346	346		
	396		
	446		
	496		
	546		
	596		
396	396		
	446		
	496		
	546		
	596		
	696		
446	446		
	496		
	546		
	596		
	696		
	796		

b	l	S	€
496	496	8,5	
496	546		
	596		
	696		
	796		
	896		
	996		
	996		
546	546		
	596		
	646		
	696		
	796		
596	596		
	696		
	796		
	896		
	996		
646	596		
	696		
	796		
	896		
	996		
696	696		
	796		
	896		
	996		
796	796		
	896		
	996		
	996		
896	896		
	996		
	996		

N53

Insulating Board $P = 330 \text{ N/mm}^2$



Ordering-Example:

1 Piece N53 95/95/3/22

Special Sizes Available On Request.

Application Temperature: 200°C
Thermal Conductivity: 0,18 W/mk
Dense: 1,8 g/cm³

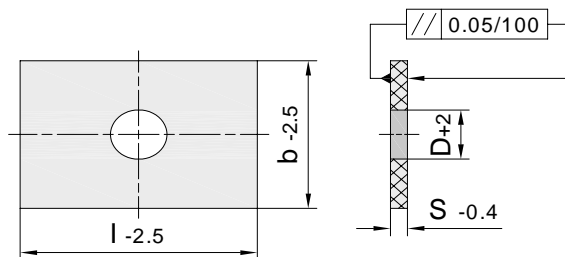
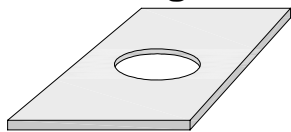
b	l	S	D	€
95	95	3	22	
100	130			
156	156		90	
	196			
	246			
	296			
	396			
190	246			
	296			
196	196			
	246			
	296			
206	156			
	196			
218	246			
	296			
246	246			
	296			
254	246			
276	246			
	296			
296	296			
95	95	5	22	
100	130			
156	156		90	
	196			
	246			
	296			
	396			
190	246			
	296			
196	196			
	246			
	296			
	346			
	396			
206	156			
	196			
218	246			
	296			
	396			
246	246			
	296			
	346			
	396			
	446			
	496			
254	246			

b	l	S	D	€
276	246	5	90	
296	296			
	346			
	396			
	446			
	496			
	546			
	596			
346	346			
	396			
	446			
	496			
396	546			
	396			
	446			
	496			
126	156	6	90	
	246			
156	156			
	196			
	206			
	246			
	296			
	346			
	396			
196	446			
	196			
	206			
	246			
	296			
	346			
216	396			
	446			
	496			
	246			
	296			
246	396			
	446			
	496			
	546			
	596			
266	296			

NEW

N53

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece N53 196/296/7/90

Special Sizes Available On Request.

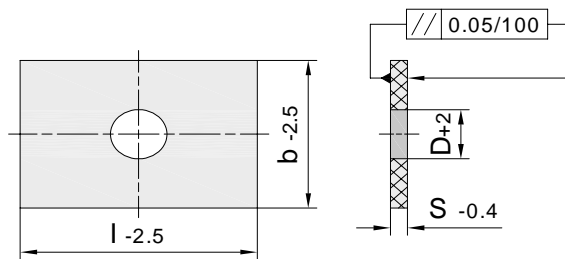
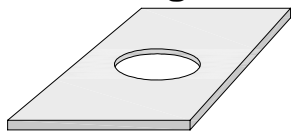
Application Temperature: 200°C
Thermal Conductivity: 0,18 W/mk
Dense: 1,8 g/cm³

b	l	S	D	€
196	296	7	90	
	346			
	396			
	446			
218	396			
246	246			
	296			
	346			
	396			
	446			
254	246			
276	296			
296	296			
	346			
	396			
	446			
346	346			
	396			
	446			
	496			
	546			
396	396			
	446			
	496			
	546			
496	546			
296	296	8	90	
	346			
	396			
	446			
	496			
	546			
	596			
	646			
	696			
316	346			
	396			
	446			
346	346			
	366			
	396			
	446			
	496			
	546			
	596			
	646			
	696			
	796			
366	396			

b	l	S	D	€
396	396	8	90	
	446			
	496			
	546			
	596			
	646			
	696			
	796			
446	446			
	496			
	546			
	596			
	646			
	696			
	796			
496	496			
	546			
	596			
	646			
	696			
	796			
546	546			
	596			
	646			
	696			
	796			
596	596			
	646			
	696			
	796			
646	646			
	696			
	796			
246	496	8,5	90	
296	296			
	346			
	396			
	446			
	496			
	546			
	596			
	696			
346	346			
	396			
	446			
	496			
	546			
	596			
	696			
	796			

N53

Insulating Board $P = 330 \text{ N/mm}^2$



Ordering-Example:

1 Piece N53 396/396/8,5/90

Special Sizes Available On Request.

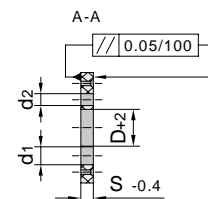
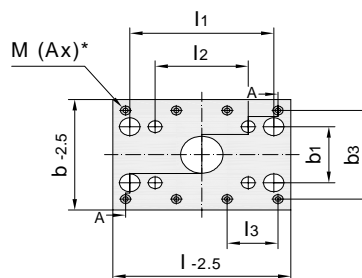
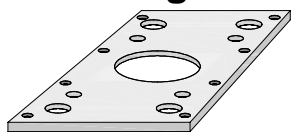
Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³

b	l	S	D	€
396	396	8,5	90	
	446			
	496			
	546			
	596			
	696			
	796			
	896			
446	446			
	496			
	546			
	596			
	696			
	796			
	896			
496	496			
	546			
	596			
	696			
	796			
	896			
	996			

b	l	S	D	€
546	546	8,5	90	
	596			
	646			
	696			
	796			
	896			
	996			
596	596			
	696			
	796			
	896			
	996			
646	596			
	696			
	796			
	896			
	996			
696	696			
	796			
	896			
	996			
796	796			
	896			
	996			
896	896			
	996			

N56

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 56096096001

Special Sizes Available On Request.

Application Temperature: 200°C

Thermal Conductivity: 0,18 W/mk

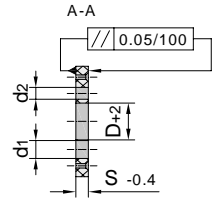
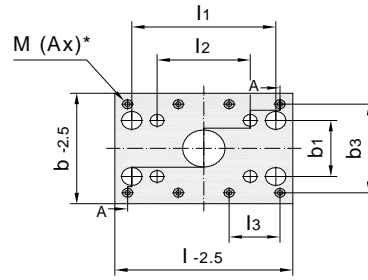
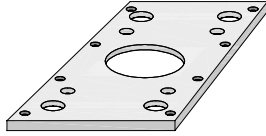
Dense: 1,8 g/cm³

(Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	D	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
14	16	74	50	4	M3	60	6	96	96	74	24	74	56096096001		
			80						126		54	104	56096126001		
			134						156		24	74	56096156001		
											54	104	56096156002		
14	16	104	80	4	M3	60	6	126	126	104	54	104	56126126001		
			134						156				56126156001		
20	19	94	92		M4	90				94	60	124	56126156002		
			214						246				56126246001		
14	16	134	74	4	M3	60	6	156	96	74	24	74	56156096001		
			104						126		54	104	56156126001		
										104			56156126002		
			134						156	74	24	74	56156156001		
											54	104	56156156002		
										104			56156156003		
20	19	124	124		M4	90				94	60	124	56156156004		
			92							124			56156156005		
			164						196				56156196001		
			132								100	164	56156196002		
			214						246		60	124	56156246001		
			182								150	214	56156246002		
			132	6					296		100	164	56156296001		
											150	214	56156296002		
			116								200	264	56156296003		
			141						346		250	314	56156346001		
			182						396		200	264	56156396001		
			207						446		250	314	56156446001		
20	19	164	92	4	M4	90	6	196	156	164	60	124	56196156001		
			164						196				56196196001		
26			156							156	86	156	56196196002		
20			164						246	124	150	214	56196246001		
										164	60	124	56196246002		
26										156	86	156	56196246003		
			156								136	206	56196246004		
20			164	6					296	124	200	264	56196296001		
26										156	86	156	56196296002		
											136	206	56196296003		
			156								186	256	56196296004		
20			164						346	124	250	314	56196346001		
30	21	178	164							148	220	298	56196346002		
26	19	164	182						396	156	186	256	56196396001		
30	21	178	189							148	270	348	56196396002		
			164						446		220	298	56196446001		
											270	348	56196446002		
			178								320	398	56196446003		
			214						496		370	448	56196496001		
			159	8											
20	19	174	124	4	M4	90	6	206	156	124	60	124	56206156001		
			164						196				56206196001		
											100	164	56206196002		

N56

Insulating Board $P = 330 \text{ N/mm}^2$



Ordering-Example:

1 Piece 56216246001

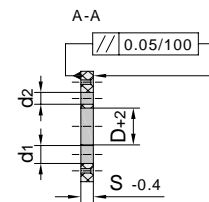
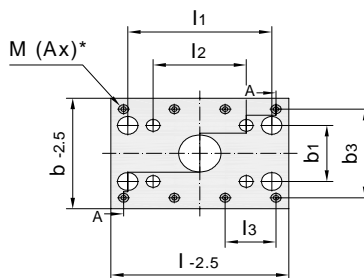
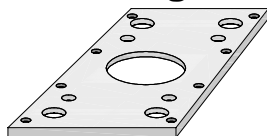
Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³
 (Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	D	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €									
26	19	176	168	4	M4	90	6	216	246	176	136	206	56216246001											
		184	132	6									296	56216296001										
		176	109											186	256	56216296002								
		184	182											396		56216396001								
26	19	214	124	4	M4	90	6	246	156	164	60	124	56246156001											
			164											196		56246196001								
														156	86	156	56246196002							
		206	118											206		56246196003								
		214	214											246	156	56246246001								
																136	206	56246246002						
														206	86	156	56246246003							
																136	206	56246246004						
				206									168					296	156	186	256	56246296001		
				214									132	6					206	86	156	56246296002		
																				136	206	56246296003		
		30	21	228									139							198	170	248	56246296004	
26	19	214	157						346	148	220	298	56246346001											
										206	136	206	56246346002											
30	21	228	164							198	220	298	56246346003											
		214	182						396	148	270	348	56246396001											
											198	170	248	56246396002										
												270	348	56246396003										
		228	189							446	148	320	398	56246446001										
		214	207								198	220	298	56246446002										
													270	348	56246446003									
													320	398	56246446004									
				228	214						496	148	370	448	56246496001									
				214	155	8						198			56246496002									
26	19	234	214	4	M4	90	6	266	246	176	136	206	56266246001											
			132	6													296		186	256	56266296001			

N56

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 56296196001

Special Sizes Available On Request.

Application Temperature: 200°C

Thermal Conductivity: 0,18 W/mk

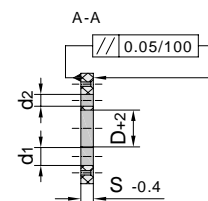
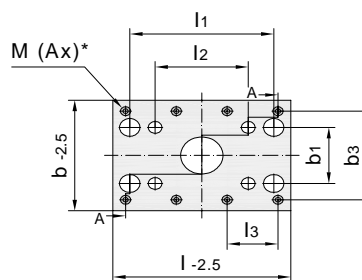
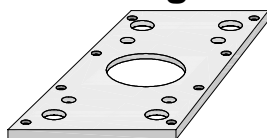
Dense: 1,8 g/cm³

(Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	D	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
26	19	264	164	4	M4	90	6	296	196	206	86	156	56296196001		
			214				8		246				56296246001		
							6				136	206	56296246002		
30	21	278	228						248	120	198	198	56296246003		
26	19	264	132	6			8		296	206	136	206	56296296001		
30	21									198	170	248	56296296002		
										248	120	198	56296296003		
		278	139								170	248	56296296004		
		264	157						346	198	220	298	56296346001		
										248	120	198	56296346002		
											170	248	56296346003		
											220	298	56296346004		
		278	164						396	198	270	348	56296396001		
		264	182							248	170	248	56296396002		
											270	348	56296396003		
		278	189						446	198	320	398	56296446001		
		264	207							248	220	298	56296446002		
											270	348	56296446003		
		278	214								320	398	56296446004		
		264	155	8					496	198	370	448	56296496001		
		278	159							248			56296496002		
		264	171						546	198	420	498	56296546001		
		278	176							248			56296546002		
		264	188						596	198	470	548	56296596001		
										248	320	398	56296596002		
											370	448	56296596003		
		278	193								470	548	56296596004		
			209						646		520	598	56296646001		
			226						696		570	648	56296696001		
30	21	298	164	6	M4	90	8	316	346	268	220	298	56316346001		
			189								270	348	56316396001		
		284	207						446		220	298	56316446001		
											270	348	56316446002		

N56

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 56346246001

Special Sizes Available On Request.

Application Temperature: 200°C

Thermal Conductivity: 0,18 W/mk

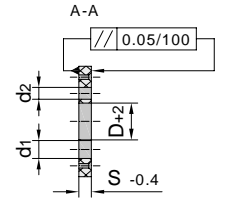
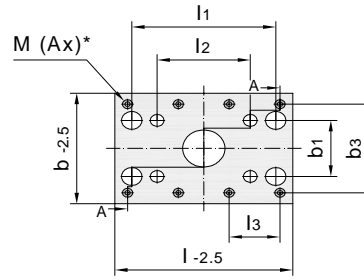
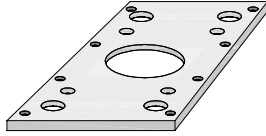
Dense: 1,8 g/cm³

(Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	D	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
30	21	314	214	4	M4	90	6	346	246	248	120	198	56346246001		
			132	6			8		296				56346296001		
		328	139								170	248	56346296002		
		314	157						346	248			56346346001		
											220	298	56346346002		
		328	164							298	170	248	56346346003		
		314	182								220	298	56346346004		
									396	248	270	348	56346396001		
										298	170	248	56346396002		
											220	298	56346396003		
42	27	322	186		M5					274	230	324	56346396004		
30	21	314	207		M4				446	248	320	398	56346446001		
										298	220	298	56346446002		
42	27	306	203		M5					274	230	324	56346446003		
		322	211								280	374	56346446004		
30	21	314	155	8	M4				496	248	370	448	56346496001		
42	27	322	157		M5					274	330	424	56346496002		
30	21	314	171		M4				546	248	420	498	56346546001		
42	27	322	174		M5					274	380	474	56346546002		
30	21	314	188		M4				596	248	470	548	56346596001		
42	27	306	185		M5					274	280	374	56346596002		
											330	424	56346596003		
		322	191								430	524	56346596004		
30	21	314	204		M4				646	248	520	598	56346646001		
42	27	322	207		M5					274	480	574	56346646002		
30	21	314	221		M4				696	248	570	648	56346696001		
42	27	322	224		M5					274	530	624	56346696002		
			257						796		630	724	56346796001		
30	21	334	157	6	M4	90	8	366	346	268	220	298	56366346001		
			182						396		270	348	56366396001		

N56

Insulating Board $P = 330 \text{ N/mm}^2$



Ordering-Example:

1 Piece 56396296001

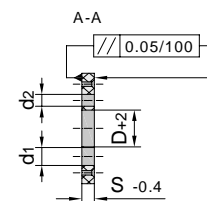
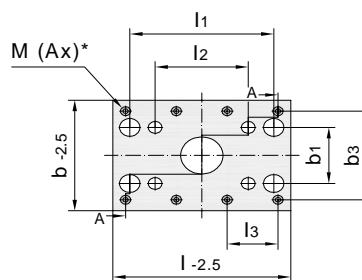
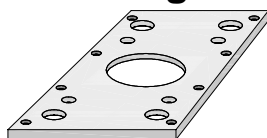
Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³
 (Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	D	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
30	21	364	132	6	M4	90	8	396	296	298	170	248	56396296001		
			157						346				56396346001		
			182								220	298	56396346002		
									396				56396396001		
42	27	356	178		M5					274	230	324	56396396002		
		372	186							324			56396396003		
		356	203						446	274	280	374	56396446001		
										324	230	324	56396446002		
		372	211								280	374	56396446003		
		356	152	8					496	274	330	424	56396496001		
		372	157							324			56396496002		
		356	169						546	274	380	474	56396546001		
		372	174							324			56396546002		
		356	185						596	274	430	524	56396596001		
										324	280	374	56396596002		
											330	424	56396596003		
		372	191								430	524	56396596004		
		356	202						646	274	480	574	56396646001		
		372	207							324			56396646002		
		356	219						696	274	530	624	56396696001		
		372	224							324			56396696002		
		356	252						796	274	630	724	56396796001		
		372	257							324			56396796002		
42	27	406	178	6	M5	90	8	446	396	324	230	324	56446396001		
			203						446		280	374	56446446001		
		422	211							374			56446446002		
		406	152	8					496	324	330	424	56446496001		
		422	157							374			56446496002		
		406	169						546	324	380	474	56446546001		
		422	174							374			56446546002		
		406	185						596	324	430	524	56446596001		
										374	280	374	56446596002		
											330	424	56446596003		
		422	191								430	524	56446596004		
		406	202						646	324	480	574	56446646001		
		422	207							374			56446646002		
		406	219						696	324	530	624	56446696001		
		422	224							374			56446696002		
		406	252						796	324	630	724	56446796001		
		422	257							374			56446796002		

N56

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 56496446001

Special Sizes Available On Request.

Application Temperature: 200°C

Thermal Conductivity: 0,18 W/mk

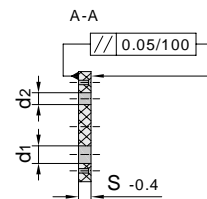
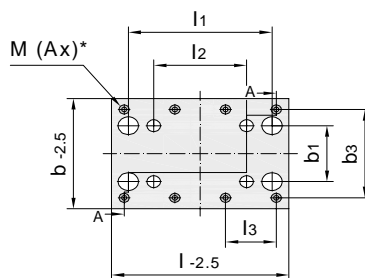
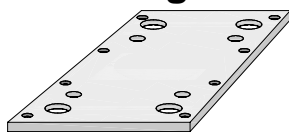
Dense: 1,8 g/cm³

(Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	D	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
42	27	456	203	6	M5	90	8	496	446	374	280	374	56496446001		
			152	8					496		330	424	56496496001		
			472	157						424			56496496002		
			456	169					546	374	380	474	56496546001		
			472	174						424			56496546002		
			456	185					596	374	430	524	56496596001		
										424	330	424	56496596002		
			472	191							430	524	56496596003		
			456	202					646	374	480	574	56496646001		
			472	207						424			56496646002		
			456	219					696	374	530	624	56496696001		
			472	224						424			56496696002		
			456	252					796	374	630	724	56496796001		
54	33	468	256							408	590	708	56496796002		
42	27	506	152	8	M5	90	8	546	496	424	330	424	56546496001		
			169						546		380	474	56546546001		
			522	174						474			56546546002		
			506	185					596	424	430	524	56546596001		
54	33	518	189							458	390	508	56546596002		
42	27	506	202						646	424	480	574	56546646001		
54	33	518	206							458	440	558	56546646002		
42	27	506	219						696	424	530	624	56546696001		
54	33	518	223							458	490	608	56546696002		
			506	252					796	408	590	708	56546796001		
			518	256						458			56546796002		
42	27	556	169	8	M5	90	8	596	546	474	380	474	56596546001		
54	33		185						596	458	390	508	56596596001		
			568	189						508			56596596002		
			556	202					646	458	440	558	56596646001		
			568	206						508			56596646002		
			556	219					696	458	490	608	56596696001		
			568	223						508			56596696002		
			556	252					796	458	590	708	56596796001		
			568	256						508			56596796002		
54	33	606	185	8	M5	90	8	646	596	508	390	508	56646596001		
			202						646		440	558	56646646001		
			219						696		490	608	56646696001		
			252						796		590	708	56646796001		

N57

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 57096096001

Special Sizes Available On Request.

Application Temperature: 200°C

Thermal Conductivity: 0,18 W/mk

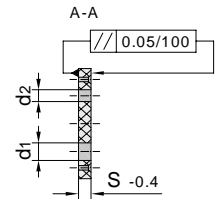
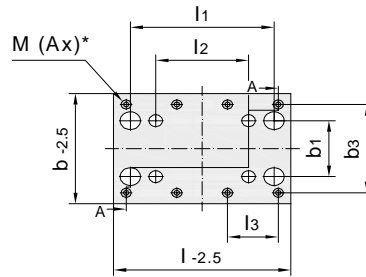
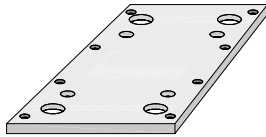
Dense: 1,8 g/cm³

(Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
14	16	74	50	4	M3	6	96	96	74	24	74	57096096001		
			80					126		54	104	57096126001		
			134					156		24	74	57096156001		
										54	104	57096156002		
14	16	104	80	4	M3	6	126	126	104	54	104	57126126001		
			134					156				57126156001		
20	19	94	92		M4				94	60	124	57126156002		
			214					246				57126246001		
14	16	134	74	4	M3	6	156	96	74	24	74	57156096001		
			104					126		54	104	57156126001		
									104			57156126002		
			134					156	74	24	74	57156156001		
										54	104	57156156002		
									104			57156156003		
20	19	124	124		M4				94	60	124	57156156004		
			92						124			57156156005		
			164					196				57156196001		
			132							100	164	57156196002		
			214					246	60	124		57156246001		
			182						150	214		57156246002		
			132	6				296	100	164		57156296001		
			132						150	214		57156296002		
			116						200	264		57156296003		
			141					346	250	314		57156346001		
			182					396	200	264		57156396001		
			207					446	250	314		57156446001		
20	19	164	92	4	M4	6	196	156	164	60	124	57196156001		
			164					196				57196196001		
26			156						156	86	156	57196196002		
20			164					246	124	150	214	57196246001		
									164	60	124	57196246002		
26									156	86	156	57196246003		
			156							136	206	57196246004		
20			164	6				296	124	200	264	57196296001		
26									156	86	156	57196296002		
										136	206	57196296003		
			156							186	256	57196296004		
20			164					346	124	250	314	57196346001		
30	21	178	164						148	220	298	57196346002		
26	19	164	182					396	156	186	256	57196396001		
30	21	178	189						148	270	348	57196396002		
			164					446		220	298	57196446001		
										270	348	57196446002		
			178							320	398	57196446003		
			159	8				496	370	448		57196496001		
20	19	174	124	4	M4	6	206	156	124	60	124	57206156001		
			164					196				57206196001		
										100	164	57206196002		

N57

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 57216246001

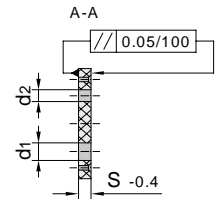
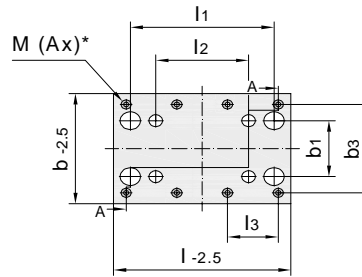
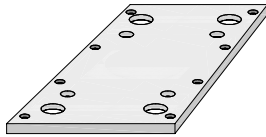
Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dense: 1,8 g/cm³
 (Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €				
26	19	176	168	4	M4	6	216	246	176	136	206	57216246001						
		184	132	6	296	186		256	57216296001									
		176	109	396	57216296002													
		184	182	57216396001														
20	19	214	124	4	M4	6	246	156	164	60	124	57246156001						
			164	196	57246196001													
				156	86	156		57246196002										
				206	206	57246196003												
				214	214	246		156	57246246001									
								136	206	57246246002								
								206	86	156	57246246003							
								136	206	57246246004								
				206	168	6				296	156	186	256	57246296001				
				214	132					206	86	156	57246296002					
					136		206			57246296003								
					198		170			248	57246296004							
30	21	228	139	4	M4	6	266	246	176	136	206	57266246001						
		214	157									346	148	220	298	57246346001		
26	19											206	136	206	57246346002			
30	21	228	164									396	148	270	348	57246396001		
		214	182									198	170	248	57246396002			
													270	348	57246396003			
													148	320	398	57246446001		
													198	220	298	57246446002		
														270	348	57246446003		
														320	398	57246446004		
				228	214	8			496	148	370	448	57246496001					
		214	155	198	57246496002													
		228	159	546	420				498	57246546001								
			176	596	470				548	57246596001								
			193															

N57

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 57296196001

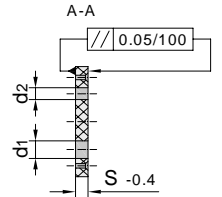
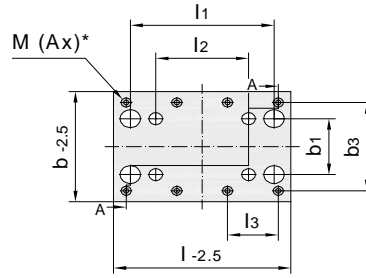
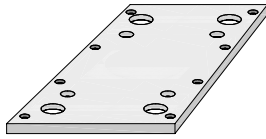
Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³
 (Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
26	19	264	164	4	M4	6	296	196	206	86	156	57296196001		
			214			8		246				57296246001		
						6				136	206	57296246002		
30	21	278	228					248	120	198	198	57296246003		
26	19	264	132	6		8		296	206	136	206	57296296001		
30	21								198	170	248	57296296002		
									248	120	198	57296296003		
		278	139							170	248	57296296004		
		264	157					346	198	220	298	57296346001		
									248	120	198	57296346002		
										170	248	57296346003		
										220	298	57296346004		
		278	164					396	198	270	348	57296396001		
		264	182						248	170	248	57296396002		
										270	348	57296396003		
		278	189					446	198	320	398	57296446001		
		264	207						248	220	298	57296446002		
										270	348	57296446003		
		278	214							320	398	57296446004		
		264	155	8				496	198	370	448	57296496001		
		278	159						248			57296496002		
		264	171					546	198	420	498	57296546001		
		278	176						248			57296546002		
		264	188					596	198	470	548	57296596001		
									248	320	398	57296596002		
										370	448	57296596003		
		278	193							470	548	57296596004		
			209					646		520	598	57296646001		
			226					696		570	648	57296696001		
30	21	298	164	6	M4	8	316	346	268	220	298	57316346001		
			189					396		270	348	57316396001		
		284	207					446		220	298	57316446001		
										270	348	57316446002		

N57

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 57346246001

Special Sizes Available On Request.

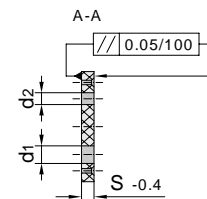
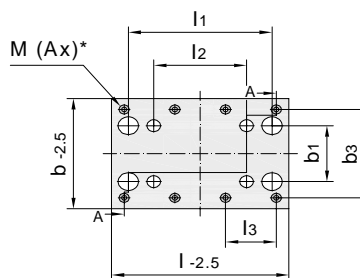
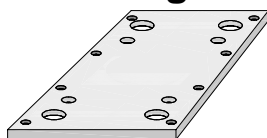
Application Temperature: 200°C
Thermal Conductivity: 0,18 W/mk
Dense: 1,8 g/cm³

(Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
30	21	314	214	4	M4	6	346	246	248	120	198	57346246001		
			132	6		8		296				57346296001		
		328	139						298	170	248	57346296002		
		314	157					346	248			57346346001		
									298	220	298	57346346002		
									298	170	248	57346346003		
		328	164						298	220	298	57346346004		
		314	182					396	248	270	348	57346396001		
									298	170	248	57346396002		
										220	298	57346396003		
42	27	322	186		M5				274	230	324	57346396004		
30	21	314	207		M4			446	248	320	398	57346446001		
									298	220	298	57346446002		
42	27	306	203		M5				274	230	324	57346446003		
		322	211							280	374	57346446004		
30	21	314	155	8	M4			496	248	370	448	57346496001		
42	27	322	157		M5				274	330	424	57346496002		
30	21	314	171		M4			546	248	420	498	57346546001		
42	27	322	174		M5				274	380	474	57346546002		
30	21	314	188		M4			596	248	470	548	57346596001		
42	27	306	185		M5				274	280	374	57346596002		
										330	424	57346596003		
		322	191							430	524	57346596004		
30	21	314	204		M4			646	248	520	598	57346646001		
42	27	322	207		M5				274	480	574	57346646002		
30	21	314	221		M4			696	248	570	648	57346696001		
42	27	322	224		M5				274	530	624	57346696002		
			257					796		630	724	57346796001		
30	21	334	157	6	M4	8	366	346	268	220	298	57366346001		
			182					396		270	348	57366396001		

N57

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 57396296001

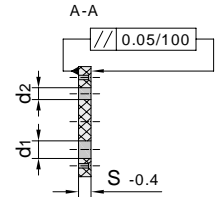
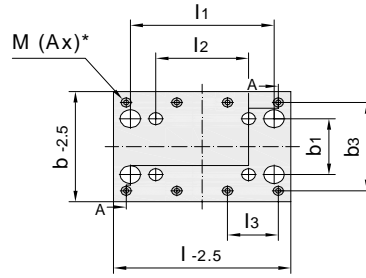
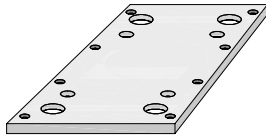
Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³
 (Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
30	21	364	132	6	M4	8	396	296	298	170	248	57396296001		
			157					346				57396346001		
			182					396		220	298	57396346002		
												57396396001		
42	27	356	178		M5				274	230	324	57396396002		
		372	186						324			57396396003		
		356	203					446	274	280	374	57396446001		
									324	230	324	57396446002		
		372	211							280	374	57396446003		
		356	152	8				496	274	330	424	57396496001		
		372	157						324			57396496002		
		356	169					546	274	380	474	57396546001		
		372	174						324			57396546002		
		356	185					596	274	430	524	57396596001		
									324	280	374	57396596002		
										330	424	57396596003		
										430	524	57396596004		
		372	191					646	274	480	574	57396646001		
		356	202						324			57396646002		
		372	207					696	274	530	624	57396696001		
		356	219						324			57396696002		
		372	224					796	274	630	724	57396796001		
		356	252						324			57396796002		
		372	257											
42	27	406	178	6	M5	8	446	396	324	230	324	57446396001		
			203					446		280	374	57446446001		
		422	211						374			57446446002		
		406	152	8				496	324	330	424	57446496001		
		422	157						374			57446496002		
		406	169					546	324	380	474	57446546001		
		422	174						374			57446546002		
		406	185					596	324	430	524	57446596001		
									374	280	374	57446596002		
										330	424	57446596003		
										430	524	57446596004		
		422	191					646	324	480	574	57446646001		
		406	202						374			57446646002		
		422	207					696	324	530	624	57446696001		
		406	219						374			57446696002		
		422	224					796	324	630	724	57446796001		
		406	252						374			57446796002		
		422	257											

N57

Insulating Board P = 330 N/mm²



Ordering-Example:

1 Piece 57496446001

Special Sizes Available On Request.

Application Temperature: 200°C
 Thermal Conductivity: 0,18 W/mk
 Dens: 1,8 g/cm³
 (Ax)* Number Of Screw Holes

d1	d2	b3	l3	Ax	M	S	b	l	b1	l2	l1	Part Number	1 pc. €	from 2 pcs. €
42	27	456	203	6	M5	8	496	446	374	280	374	57496446001		
			152	8				496		330	424	57496496001		
			472	157					424			57496496002		
			456	169				546	374	380	474	57496546001		
			472	174					424			57496546002		
			456	185				596	374	430	524	57496596001		
									424	330	424	57496596002		
			472	191						430	524	57496596003		
			456	202				646	374	480	574	57496646001		
			472	207					424			57496646002		
			456	219				696	374	530	624	57496696001		
			472	224					424			57496696002		
			456	252				796	374	630	724	57496796001		
54	33	468	256						408	590	708	57496796002		
42	27	506	152	8	M5	8	546	496	424	330	424	57546496001		
			169					546		380	474	57546546001		
			522	174					474			57546546002		
			506	185				596	424	430	524	57546596001		
54	33	518	189						458	390	508	57546596002		
42	27	506	202					646	424	480	574	57546646001		
54	33	518	206						458	440	558	57546646002		
42	27	506	219					696	424	530	624	57546696001		
54	33	518	223						458	490	608	57546696002		
			506	252				796	408	590	708	57546796001		
			518	256					458			57546796002		
42	27	556	169	8	M5	8	596	546	474	380	474	57596546001		
54	33		185					596	458	390	508	57596596001		
			568	189					508			57596596002		
			556	202				646	458	440	558	57596646001		
			568	206					508			57596646002		
			556	219				696	458	490	608	57596696001		
			568	223					508			57596696002		
			556	252				796	458	590	708	57596796001		
			568	256					508			57596796002		
54	33	606	185	8	M5	8	646	596	508	390	508	57646596001		
			202					646		440	558	57646646001		
			219					696		490	608	57646696001		
			252					796		590	708	57646796001		

Each measuring tower is individually manufactured according to your wishes.

The frame, which is equipped with gauge blocks, is made of aluminium and can be anodized in any color.

Can be equipped as required with any number of parallel gauge blocks.

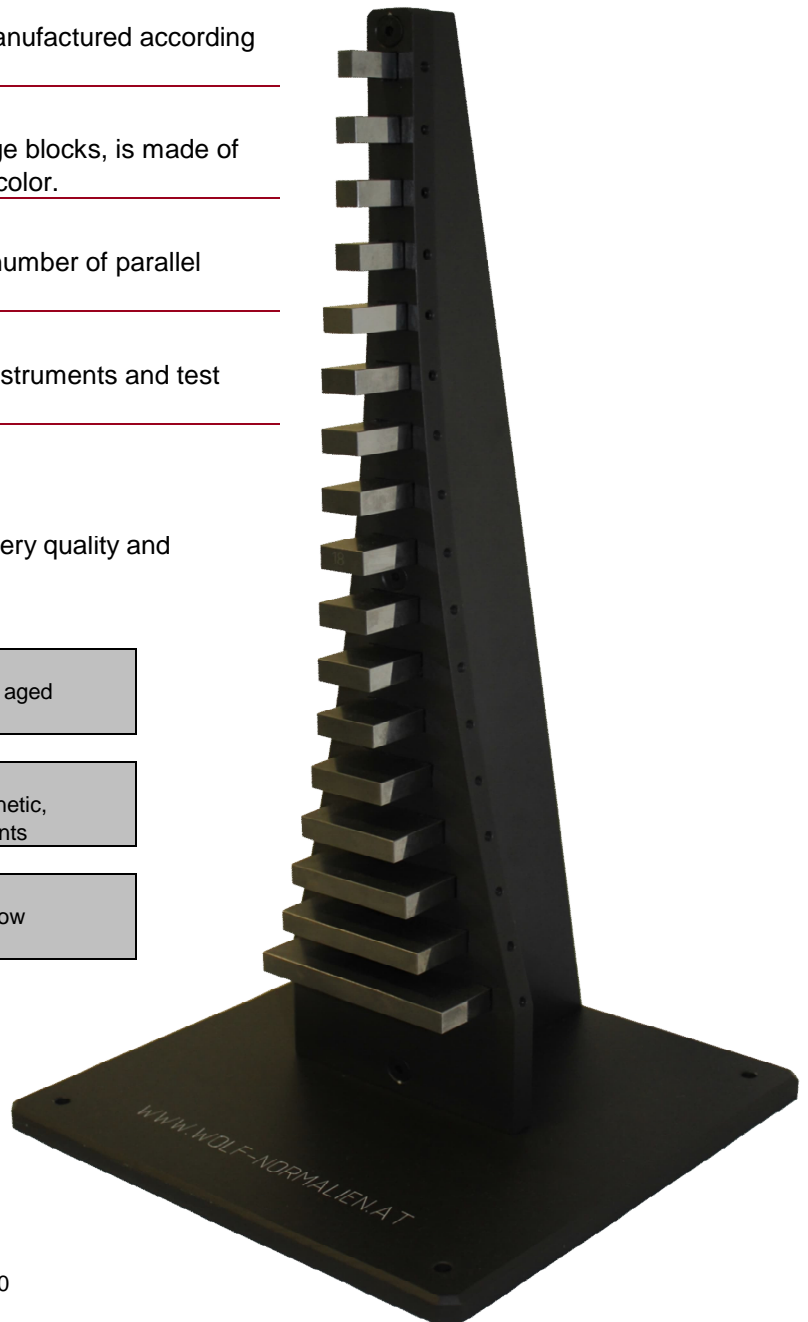
For testing and calibrating measuring instruments and test equipment.

The final dimensions are available in every quality and tolerance class.

Gauge steel.
hardened and lapped by hand from high quality, aged special steel

Hard metal.
10 times longer service life than steel, non-magnetic, corrosion-resistant and very low care requirements

Ceramics.
20 times longer service life than steel and very low thermal expansion



Pictured measuring tower
Tolerance class 1
Equipped with carbide gauge blocks
6/8/9/10/12/14/15/16/18/20/22/24/30/40/50/60/80

Price 2.300,00 €

Ask without obligation!

Tolerance classes gauge blocks

Tolerance class 2:

For working gauges. To set up indicating measuring devices. To check exact dimensions at the fixture construction.

Tolerance class 1:

For high accuracy requirements. As comparatively gauge block for the measuring room. For execution of particularly accurate measurements. To justify indicating measuring devices for testing accurate gauges.

Tolerance class 0:

For highest accuracy requirements. For use as primary standard in measuring laboratories and fine measuring rooms, in which other gauge blocks and very exact measuring equipment are calibrated.

Tolerance class K:

As the highest factory standard, especially for the calibration of the standards of subordinate measuring laboratories, e.g. of gauge blocks of underlying tolerance classes. On request, supplied with DKD calibration certificate, which shows the deviation from the gauge block for every final dimension.

Coefficient of linear expansion:

Steel: $11,5 \times 10^{-6} \text{ K}^{-1}$
Ceramic: $9,5 \times 10^{-6} \text{ K}^{-1}$

New in our catalogue

N05 (A)	Centring Sleeves	Group 4
N0661 (E)	Rectangular Guide Unit As Set	Group 4
N0661 M (E)	Square Guide Bar With DLC Coating	Group 4
N0661 W (E)	Guide Retainer, Rectangular	Group 4
N0662 (E)	Top Lock, Guide DLC-coated	Group 4
N0662 M (E)	Top Lock, Guide DLC-coated	Group 4
N0662 W (E)	Top Lock	Group 4
N0663 (E)	Fine Centring Unit, Guide DLC-coated	Group 4
N0663 M (E)	Fine Centring Unit, Guide DLC-coated	Group 4
N0663 W (E)	Fine Centring Unit	Group 4
N0664 (E)	Flat Guiding Unit With Final Centring, Horizontal	Group 4
N0665 (E)	Flat Guiding Stock	Group 4
N0666 (E)	Flat Guiding Unit With Final Centring, Horizontal	Group 4
N50 (A)	Insulating Board P = 600 N/mm ²	Group 11
N51 (A)	Insulating Board P = 600 N/mm ²	Group 11
N52 (A)	Insulating Board P = 330 N/mm ²	Group 12
N53 (A)	Insulating Board P = 330 N/mm ²	Group 12

(A) = New Dimensions

(E) = Extension, New Product

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Mirjam Wolf



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Offers
Philipp Wolf
guiding elements
special treatment



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philipp@wolf-normalien.at



Contact Persons

Offers

Darko Antic
guiding elements
special treatment

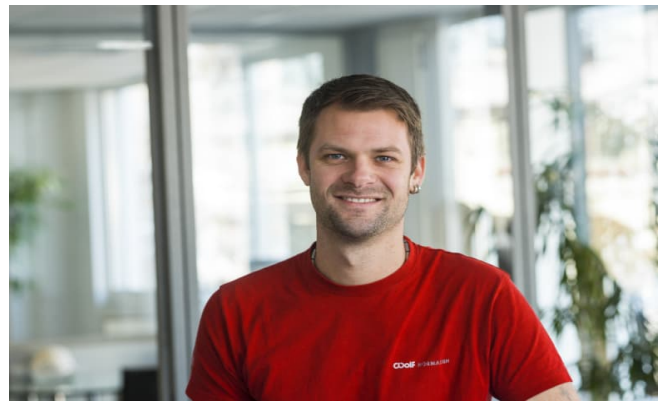
Tel. +43 5572 24919 72
Fax. +43 5572 20364
darko.antic@wolf-normalien.at



Offers

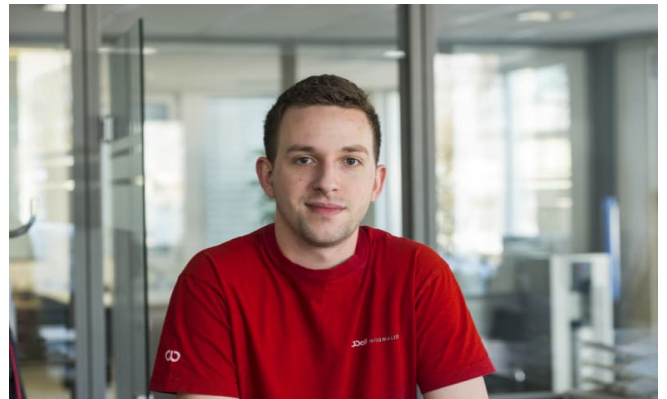
Marco Winkler
insulating boards with special treatment
waterjetcutting

Tel. +43 5572 24919 86
Mob. +43 (0) 664 359 1684
Fax. +43 5572 20364 62
marco@wolf-normalien.at



Standards And Shipping Jürgen Isele

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versand@wolf-normalien.at

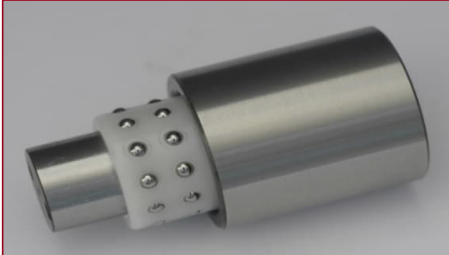
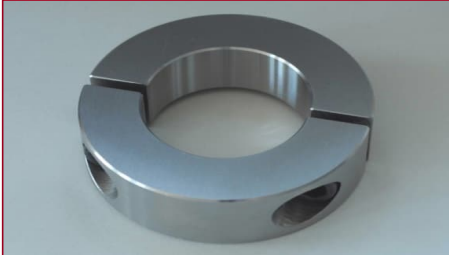


<https://wolf-normalien.at>



Manufacturing Special Parts

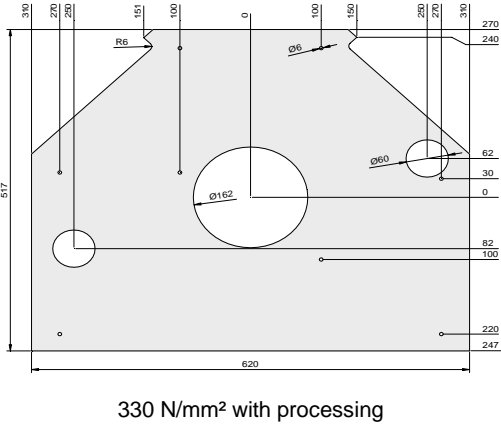
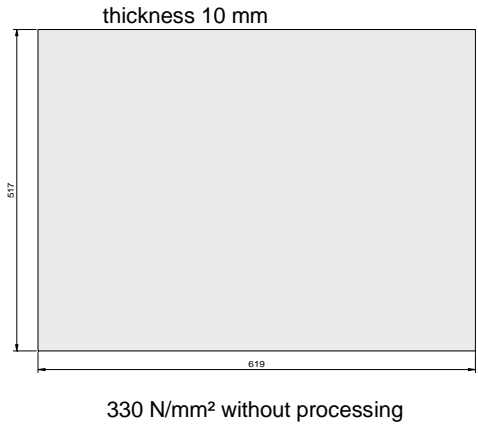
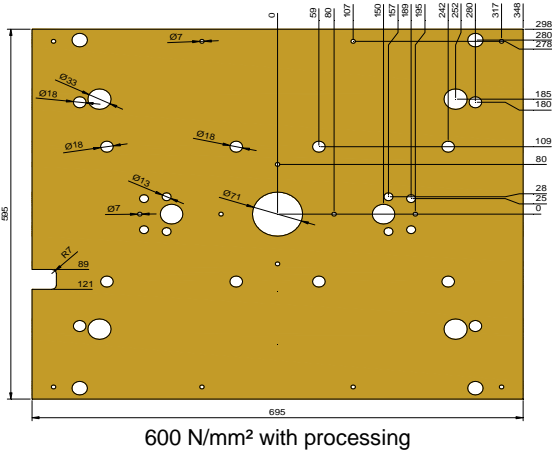
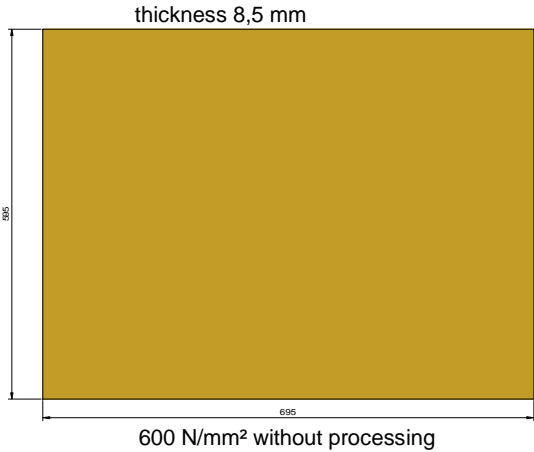
The production line of special parts according to customer's drawings is optimised so that shortest delivery is possible from single components to large-scale production.



Never more processing problems!

Insulating boards according to customer drawing

Price examples



with shortest delivery times

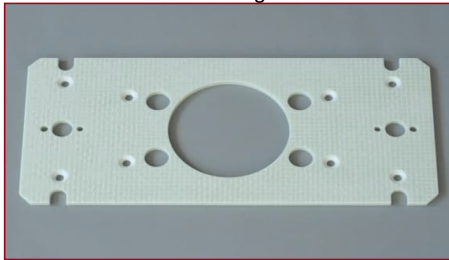
Please send us your inquiry

Request to Marco Winkler / marco@wolf-normalien.at Tel. +43 5572 24919-86 Fax. +43 5572 20364-62

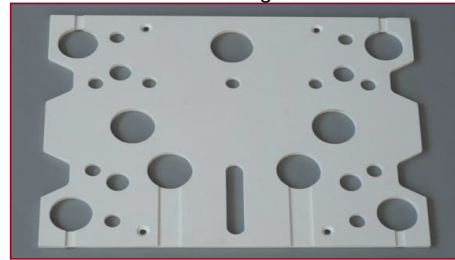
Water Jet Cutting - Special Parts

Water jet cutting is a manufacturing procedure
whereby no heat comes up
and the possibility is given to treat various kinds of material.

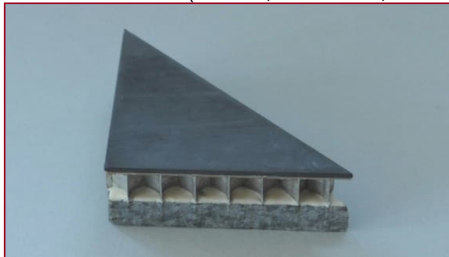
Heat Insulating Boards



Heat Insulating Boards



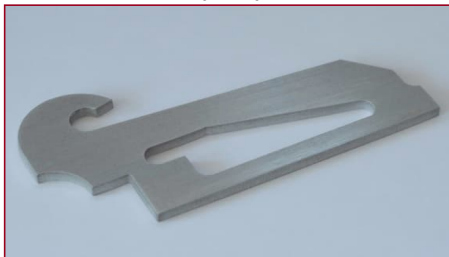
Aluminium - Combs (Rubber, Aluminium, Granite)



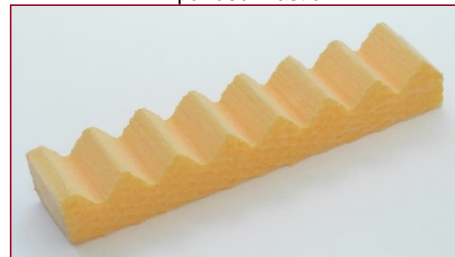
Rubber



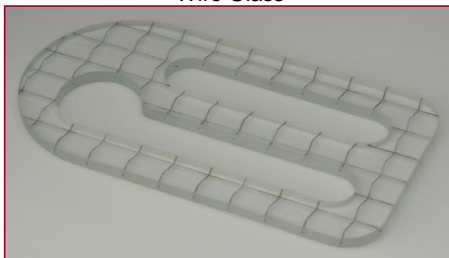
Aluminium



Expanded Plastic



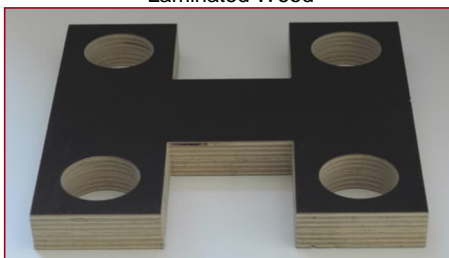
Wire Glass



Granite



Laminated Wood



Laminated Plates (Rubber, Metal, PVC, ...)



Advantages of bronze bushes compared to lubricating bushes

Short cut : CuSn7Zn4Pb7-C
Material number: 2.1090
Density: 8,83 kg/dm³
Composition: copper 81-85% / nickel to 2% / phosphor to 0,1% / lead 5%-8%
 tin 6%-8% / zinc 2%-5%

Notes to characteristics and use:

Common and favourable red brass alloy for slide bearings.
 With medium hardness it still has good running qualities and sufficient resistance to wear and tear. It's also suitable when non hardened shafts are used and the selvages are slightly compressed.
 Good corrosion resistance (even in sea water).
 Main range of applications are slide bearings and bearing bushes for general machine construction.

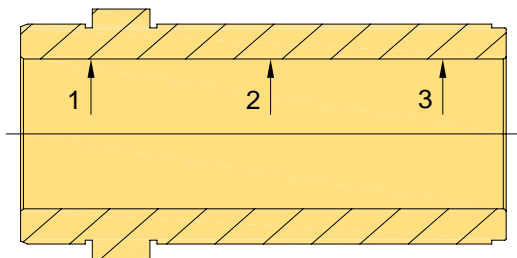
Comparison - test N045 32-56 after 3,4 mill. up and down motions

Wolf bronze bushes

take point	new	torn	wear
1	32,005	32,022	0,017
2	32,004	32,030	0,026
3	32,006	32,025	0,019

lubricating bushes customary in trade

take point	new	torn	wear
1	32,005	32,065	0,060
2	32,005	32,068	0,063
3	32,006	32,066	0,060



After these tests at company Wolf, it's obvious that the cheaper bronze bushes which we have in program exhibit less wear and tear than the customary in trade lubrication bushes.

Insulating boards N50 / N51 / N54 / N55 (yellowbrown) 600 N/mm²

Compound material made of resinated glass fibres; thickness 3 - 30 mm

Characteristics	Unit	Value
-----------------	------	-------

Physical characteristics

Density	g/cm³	1,9
----------------	-------------------------	------------

Thermal characteristics

Working temperature, permanent	°C	200
Application temperature, temporary	°C	210
Thermal conductivity	W/mK	0,19
Coefficient of linear expansion	10⁻⁶ x K⁻¹	13

Mechanical characteristics

Compressive strength at 23° C	Mpa	600
Compressive strenght at 200° C	Mpa	350
Bending strength (10 mm) at 23° C	Mpa	380

Thickness Tolerance - 0,4 mm	Parallelism +/- 0,05 mm
-------------------------------------	--------------------------------

Insulating boards N52 / N53 (white) 330 N/mm²

Compound material made of resinated glass fibres and filling material; thickness 3 - 30 mm

Characteristics	Unit	Value
-----------------	------	-------

Physical characteristics

Density	g/cm³	1,8
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Thermal characteristics

Working temperature, permanent	°C	200
Application temperature, temporary	°C	210
Thermal conductivity	W/mK	0,18
Coefficient of linear expansion	10⁻⁶ x K⁻¹	18

Mechanical characteristics

Compressive strength at 23° C	Mpa	330
Compressive strenght at 200° C	Mpa	120
Bending strength (10 mm) at 23° C	Mpa	140

Thickness Tolerance - 0,4 mm

Parallelism +/- 0,05 mm

Non-alloy heat treatment steel 1.1191 (C45E)

Chemical composition:

C	Si	Mn	S	Other
0,45	0,25	0,65	<0,030	(Pb)

Characteristics:

Components with small heat treatment cross section and low strength.

Use:

Non-alloy construction steel for parts in engine and vehicle construction (general).

Hot forming and heat treatment:

Forging or rolling:	1100 - 850°C
Normalising:	840 - 880°C / air
Soft annealing:	680 - 710°C / furnace
Hardening:	820 - 860°C / water/oil
Tempering:	550 - 660°C

Cold work steel 1.2826 (60MnSiCr4)

Chemical composition:

C	Si	Mn	Cr
0,6	1	1,1	0,3

Characteristics:

Cold work steel with very good spring property, high robustness in heat-treated state, and high wear resistance.

Use:

Tongs and bridges, single shear blades and die plates, ejectors and inserts in plastic moulds that are in high risk of fracture due to their cross sections.

Hot forming and heat treatment:

Soft annealing:	700 - 740°C / furnace
Stress relieving:	600 - 650°C / furnace
Hardening:	820 - 850°C / oil
Tempering:	160 - 500°C

Tool steel 1.7139 (16MnCrS5)

Chemical composition:

C	Si	Mn	Cr	S	Other
0,16	0,25	1,15	0,95	0,02 0,035	(Pb)

Characteristics:

Case hardening steel for construction of highly stressed and wear resistant parts of all kinds. It stands out due to its very good workability. It features form stability as well as high impact strength, and is hardenable (case hardening/nitriding).

Use:

MnCr-alloyed case hardening steel for parts that should have a core strength of 800 – 1100 N/mm² and are mainly stressed by wear, like slides, cogwheels, con-rods, slide rails, base plates, bolts, pints, spindles etc.

Hot forming and heat treatment:

Forging and rolling:	1100 - 850°C
Normalising:	840 - 870°C / air
Soft annealing:	650 - 700°C / furnace
Carburising:	880 - 980°C
Core hardening:	860 - 900°C / oil
Intermediate annealing:	650 - 700°C
Case hardening:	780 - 820°C / oil
Tempering:	150 - 200°C

Alternatives to this type of steel:

1.1183, 1.1241, 1.1545, 1.0503, 1.0570, St37, 1.2842

Bronze 2.1090 (CuSn7Zn4Pb7-C)

Chemical composition:

Cu	Ni	P	Pb	Sn	Zn
>81 <85	<2	<0,1	>5 <8	>6 <8	>2 <5

Characteristics:

CuSn7Zn4Pb7-C is especially used as slide material. With medium strength, it possesses good characteristics in dry-running operations. When produced with centrifugal or continuous casting it features sufficient resistance to wear.

Besides good machinability this material has good corrosion resistance, also in sea water, and is regarded as an all-purpose slide bearing material.

t max = 200°C

Use:

Major areas of use are slide bearings and bearing bushes for general machine construction.

DLC Coating

Procedure:

In the case of the DLC coating (Diamant Like Carbon), a diamond-like carbon is applied to the material to be processed by the PVD/PACVD process. This is possible with different materials.

The Advantages:

- Reduction of energy consumption due to reduced friction values
- High corrosion resistance to alkalis, acids and salts
- High temperature resistance, depending on the base material up to 350°C
- High degree of hardness
- Due to the biocompatibility, the use in the food industry and in the medical field is possible

Use:

Various metals, ceramics, cutting tools and some types of plastics

Characteristics:

Deposition temperature (°C)	<180
Microhardness (HV 0,05)	>3000
Thickness (µm)	<3
Friction coefficient* (-)	0,05...0,015
Max. operating temperature (°C)	350
Coating material	a-C/a-C:H
Abrasive wear resistance	+++
Corrosion resistance	+++
Coating color	black gray

Hints:

- *coefficient of friction against steel (100Cr6), measured in the sliding wear test ball/disc-tribometer, unlubricated
- The color can shimmer in the light, by its small thickness also from green to red

Tightening torques for parts with hexagon socket

Strength class 8.8

M5	M6	M8	M10	M12	M16	M20
4,9 Nm 6,0 Nm	8,0 Nm 10,0 Nm	20,0 Nm 25,0 Nm	40,0 Nm 49,0 Nm	69,0 Nm 86,0 Nm	170,0 Nm 210,0 Nm	330,0 Nm 410,0 Nm

Nominal tightening torque in Nm for unlubricated threads. The minimum insertion depth is depending on the strength between the 0,9 and 1,4 times of the diameter.

