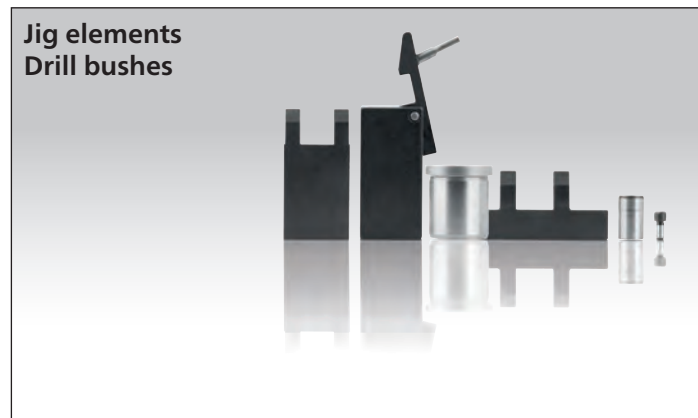


norelem positions

Flexible standard component system

08000



08927
Page 1228



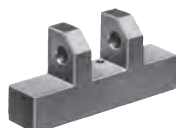
Shoulder screws flathead
for DIN 173 drill bushes

08050
Page 1218



Hinge blocks
long

08100
Page 1218



Hinge blocks
short

08150
Page 1219



Latch

08180
Page 1220



Thrust washers

02010
Page 114, 1220



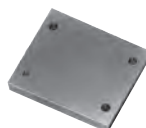
Rest pads

08570
Page 1221



Drilling plates
DIN 6348 enhanced

08580
Page 1222



Base plates
DIN 6348

08600
Page 1223



Extension columns
short

08610
Page 1223



Extension columns
long

08900
Page 1224



Drill bushes cylindrical
DIN 179

08910
Page 1225



Drill bushes flanged
DIN 172

08920
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Drill bushes push-in
DIN 173

08920
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Page



Drill bushes push-in
DIN 173-1

08926
Page 1228



Drill bush clamps
DIN 173-1

+ New/Expanded Items

08000

Jig elements Drill bushes



01000

02000

03000

04000

05000

06000

07000

08000

09000

10000

12000

14000

Hinge blocks

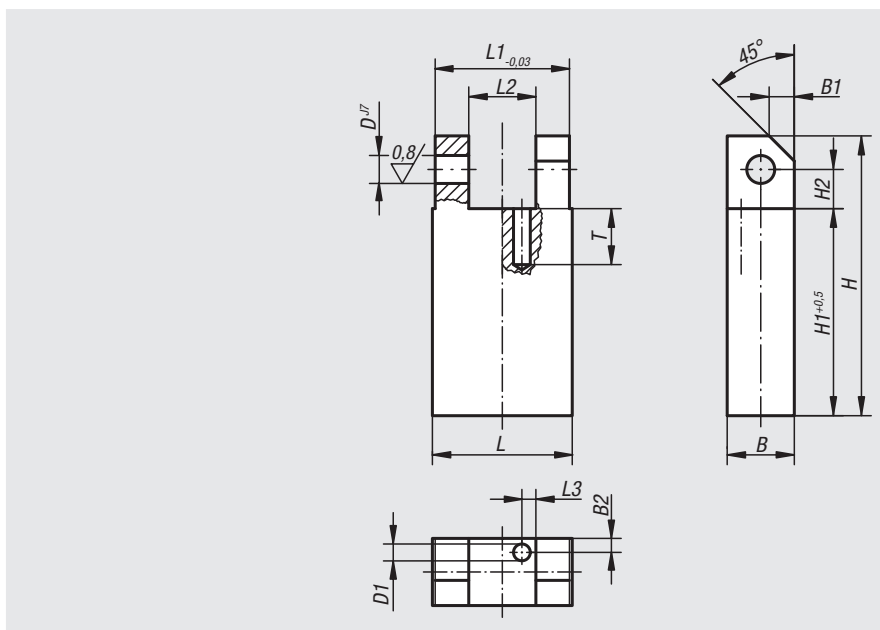
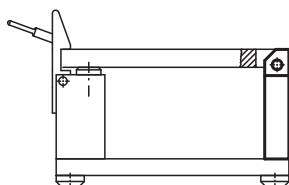
long



Material:
1.0036

Version:
Black oxidised.

Sample order:
nlm 08050-01

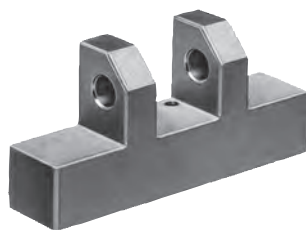


Order No.	L	L1	L2	L3	B	B1	B2	H	H1	H2	D	D1	T
08050-01	25	24	12	2,5	12	4,5	2,5	50	37	7	5	3	10
08050-02	32	31	16	2,5	16	6	2,5	63	46	9	6	3	10
08050-03	50	49	20	2,5	20	8	2,5	100	79	11	8	3	10

08100

Hinge blocks

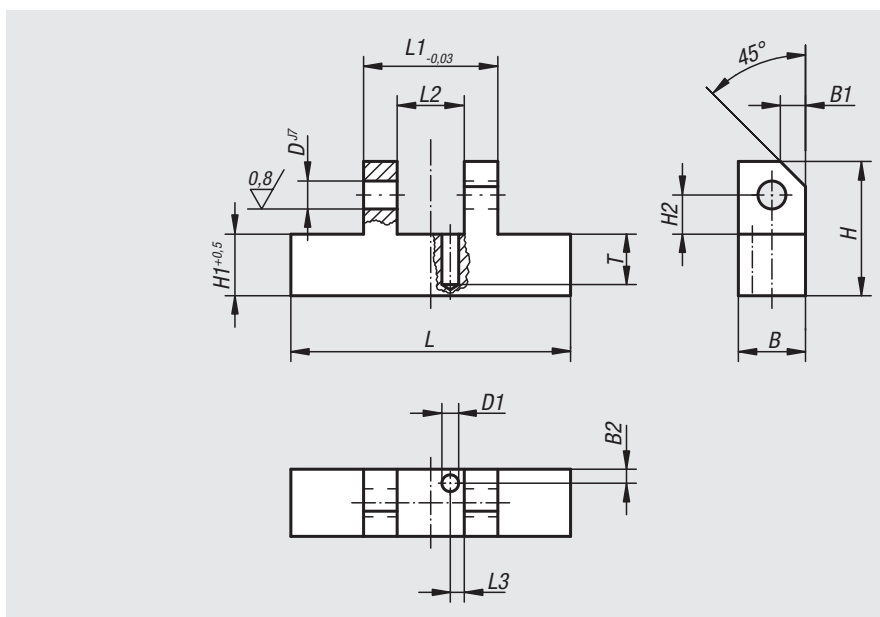
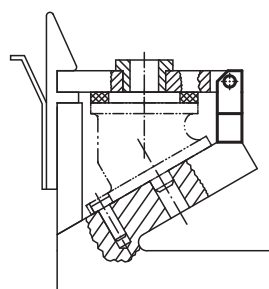
short



Material:
1.0036

Version:
Phosphated

Sample order:
nlm 08100-02



Order No.	L	L1	L2	L3	B	B1	B2	H	H1	H2	D	D1	T
08100-01	50	24	12	2,5	12	4,5	2,5	24	11	7	5	3	9
08100-02	65	31	16	2,5	15	6	2,5	30	13	9	6	3	10
08100-03	100	49	20	2,5	20	8	2,5	48	27	11	8	3	10

Latch

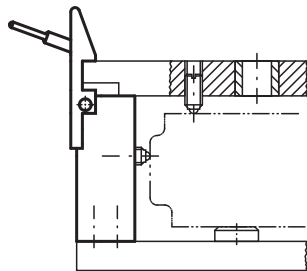
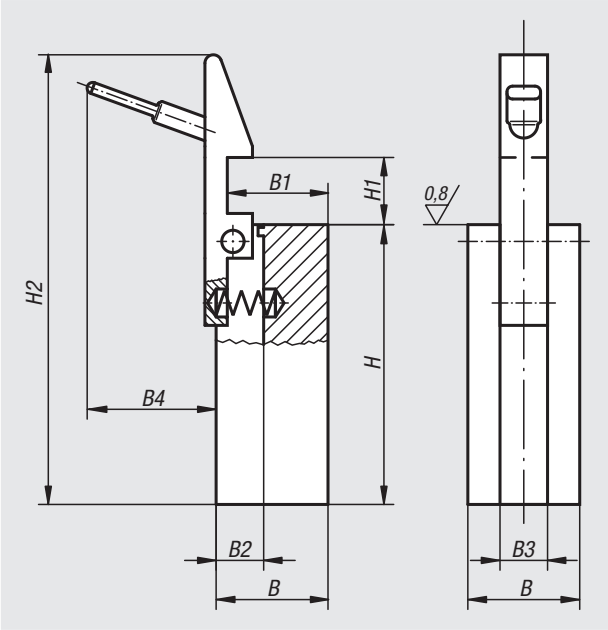


Material:
Body 1.0036, snapper 1.0503

Version:
Body phosphated, snapper black oxidised.

Sample order:
nlm 08150-01

Note:
Missing dimensions for snapper see 07560.



Order No.	B	B1	B2	B3	B4	H	H1	H2
08150-01	20	18	9	8,5	23	50	12	77
08150-02	30	28	11	10,5	24	63	16	99
08150-03	40	36	14	14,5	24	100	25	145

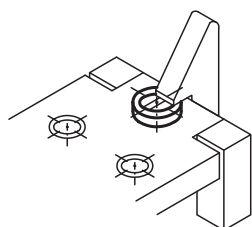
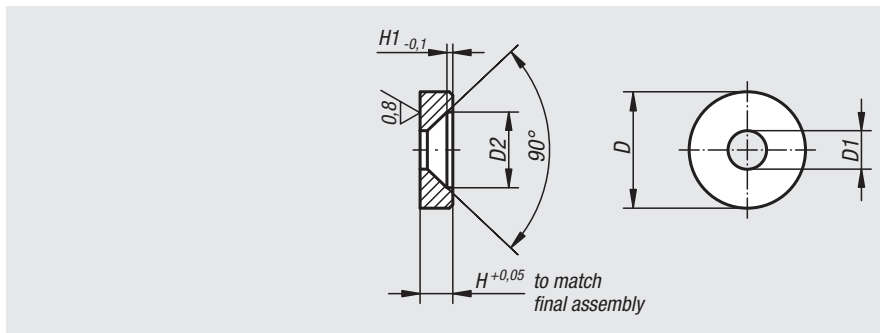
Thrust washers



Material:
Steel.

Version:
Carbonitrided and tempered, black oxidised.
Bottom face ground.

Sample order:
nlm 08180-01



Order No.	D	D1	D2	H	H1
08180-01	12	4,3	8,3	2,5	0,4
08180-02	16	5,3	10,4	4,5	0,8

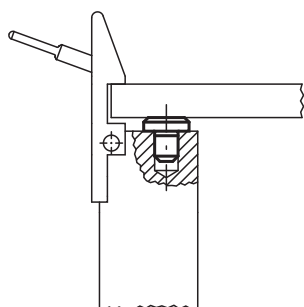
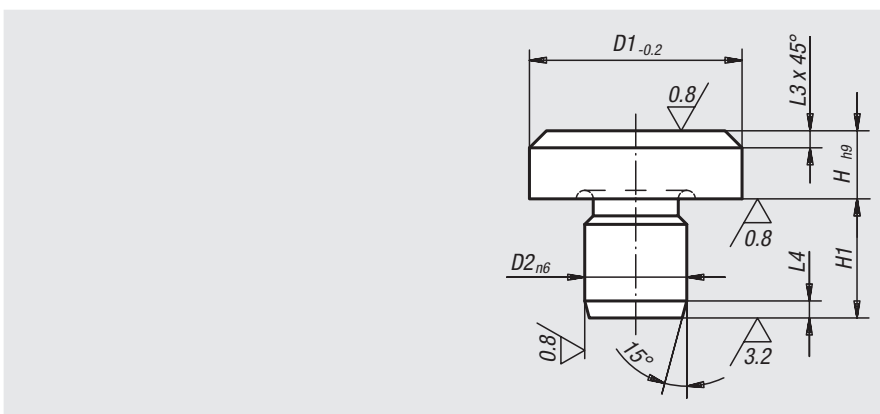
Rest pads



Material:
Tool steel.

Version:
Hardened and ground.
Top face without centerbore.

Sample order:
nlm 02010-041



Order No.	D1	D2	H	H1	L3	L4
02010-041	6	4	2,5	6,5	0,7	1,2
02010-042	6	4	4,5	8,5	0,7	1,2
02010-061	10	6	4,5	8,5	0,9	1,5

Drilling plates

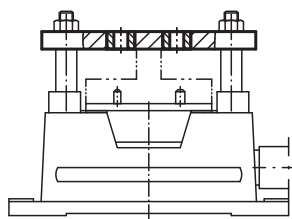
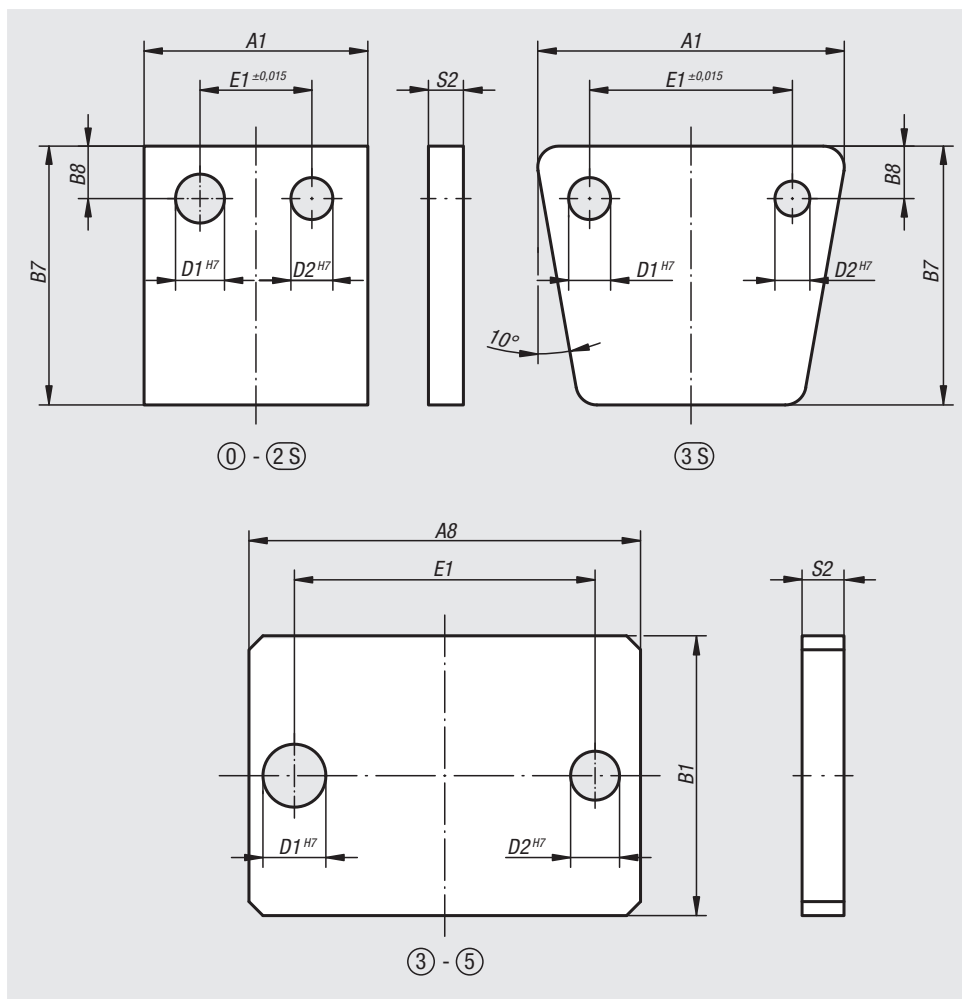
DIN 6348 enhanced



Material:
Steel.

Version:
Black oxidised.
08570-13 bright.

Sample order:
nlm 08570-03

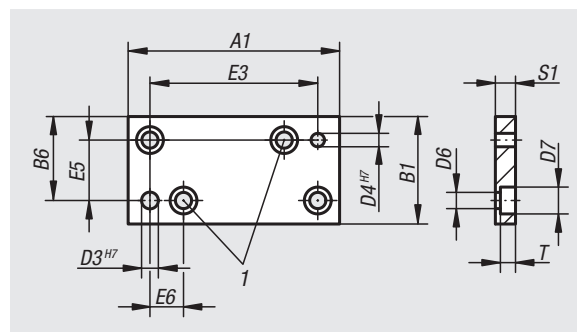


Order No.	Size	Suitable for jig size	Jig dimensions	A1	B7	B8	E1	D1	D2	S2
08570-00	0 - 3S	0	60 x 32	50	56	9	24	10	9	8
08570-01	0 - 3S	1	80 x 50	80	80	14	28	14	14	12
08570-02	0 - 3S	2	100 x 60	100	96	16	50	16	16	14
		2S	100 x 60 x 115							
08570-13	0 - 3S	3S	125 x 100	168	130	17	132	20	18	15

Order No.	Size	Suitable for jig size	Jig dimensions	A8	B1	E1	D1	D2	S2
08570-03	3 - 5	3	100 x 125	170	125	132 ±0,015	20	18	16
08570-04	3 - 5	4	200 x 160	275	160	236 ±0,015	20	18	16
08570-05	3 - 5	5	300 x 190	380	190	335 ±0,015	24	22	20

Base plates

DIN 6348

**Material:**

Steel.

Version:

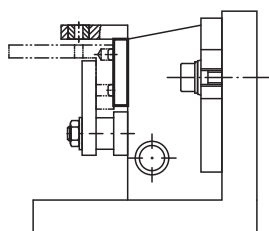
Black oxidised.

Sample order:

nlm 08580-05

Drawing reference:

1) these two holes only with size 6



Order No.	Suitable for jig size	Jig dimensions	A1	B1	B6	D3	D4	D6	D7	E3	E5	E6	S1	T
08580-00	0	60 x 32	63	32	25	4	5	4,5	8	50 ±0,01	18 ±0,01	-	6	4,6
08580-01	1	80 x 50	80	50	30	10	8	6,6	11	60 ±0,01	20 ±0,01	-	10	6,8
08580-02	2	100 x 60	100	60	50	10	8	6,6	11	80 ±0,01	40 ±0,01	-	10	6,8
	2S	100 x 60 x 115												
08580-03	3	100 x 125	85	125	100	14	10	6,6	11	60 ±0,015	75 ±0,015	-	10	6,8
	3S	125 x 100												
08580-04	4	200 x 160	188	160	130	14	10	9	15	150 ±0,015	100 ±0,015	-	15	9
08580-05	5	300 x 190	278	190	157,5	20	-	9	15	220 ±0,015	125 ±0,015	-	15	9
08580-06	6	400 x 250	400	250	225	20	18	13,5	20	320 ±0,015	200 ±0,015	40	18	13

Extension columns

short



Material:

Hardened steel 1.7139

Version:

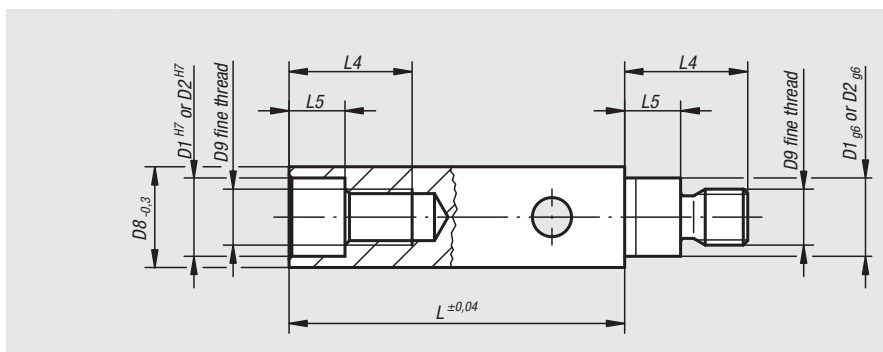
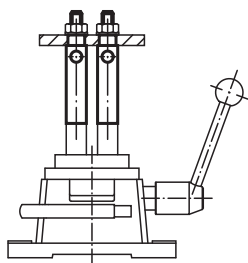
Hardened, black oxidised.

Sample order:

nIm 08600-01 (in pairs)

Note:

Supplied in pairs.



Order No.	Suitable for jig size	D1	D2	D8	D9	L	L4	L5
08600-01	1	14	14	22	M10x1	60	22	10
08600-02	2 + 2S	16	16	25	M14x1,5	60	28	12
08600-03	3 + 3S + 4	20	18	30	M14x1,5	60	32	14,5
08600-05	5	24	22	40	M20x1,5	60	43	18
08600-06	6	26	24	40	M20x1,5	70	46	22

Extension columns

long



Material:

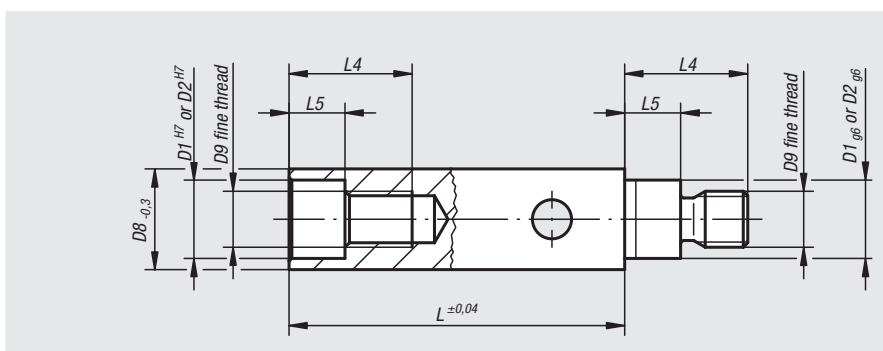
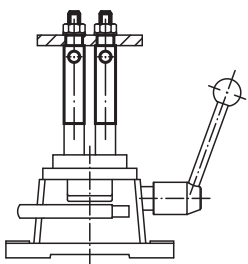
Hardened steel 1.7139

Version:

Hardened, black oxidised.

Sample order:

nIm 08610-03 (in pairs)



Order No.	Suitable for jig size	D1	D2	D8	D9	L	L4	L5
08610-02	2 + 2S	16	16	25	M14x1,5	120	28	12
08610-03	3 + 3S + 4	20	18	30	M14x1,5	120	32	14,5
08610-05	5	24	22	40	M20x1,5	120	43	18
08610-06	6	26	24	40	M20x1,5	120	46	22

Drill bushes cylindrical

DIN 179

**Material:**

Special low carbon steel

Version:

Hardened to 740 ±80 HV 10 and ground.

Sample order:

nlm 08900-A0120X06

(bush Form A D1 = 1.2 mm and L1 = 6 mm)

Note:

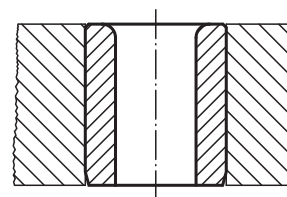
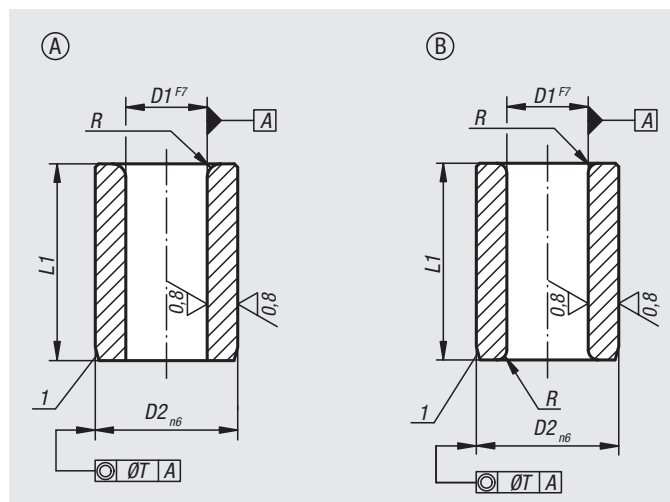
From diameter D1 over 15 mm size increases are 0.5 mm.

Drawing reference:

Form A: hole rounded one end

Form B: hole rounded both ends

1) Chamfer for insert



D1	D2	L1	Product type	R	T
from 0.4 to 0.8	3	6	short	1	0,01
from 0.9 to 1.0	3	6/9	short/medium	1	0,01
from 1.1 to 1.8	4	6/9	short/medium	1	0,01
from 1.9 to 2.6	5	6/9	short/medium	1	0,01
from 2.7 to 3.3	6	8/12/16	short/medium/long	1	0,01
from 3.4 to 4.0	7	8/12/16	short/medium/long	1	0,01
from 4.1 to 5.0	8	8/12/16	short/medium/long	1	0,01
from 5.1 to 6.0	10	10/16/20	short/medium/long	1,5	0,02
from 6.1 to 8.0	12	10/16/20	short/medium/long	1,5	0,02
from 8.1 to 10.0	15	12/20/25	short/medium/long	2	0,02
from 10.1 to 12.0	18	12/20/25	short/medium/long	2	0,02
from 12.1 to 15.0	22	16/28/36	short/medium/long	2	0,02
from 15.5 to 18.0	26	16/28/36	short/medium/long	2	0,02
from 18.5 to 22.0	30	20/36/45	short/medium/long	3	0,02
from 22.5 to 26.0	35	20/36/45	short/medium/long	3	0,02
from 26.5 to 30.0	42	25/45/56	short/medium/long	3	0,02
from 30.5 to 35.0	48	25/45/56	short/medium/long	3	0,04
from 35.5 to 42.0	55	30/56/67	short/medium/long	3,5	0,04
from 42.5 to 48.0	62	30/56/67	short/medium/long	3,5	0,04

Drill bushes flanged

DIN 172

**Material:**

Special low carbon steel

Version:

Hardened to 740 ±80 HV 10 and ground.

Sample order:

nIm 08910-A0120X09

(bush Form A D1 = 1.2 mm and L1 = 9 mm)

Note:

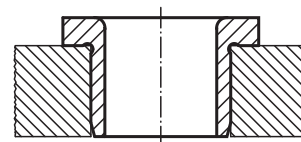
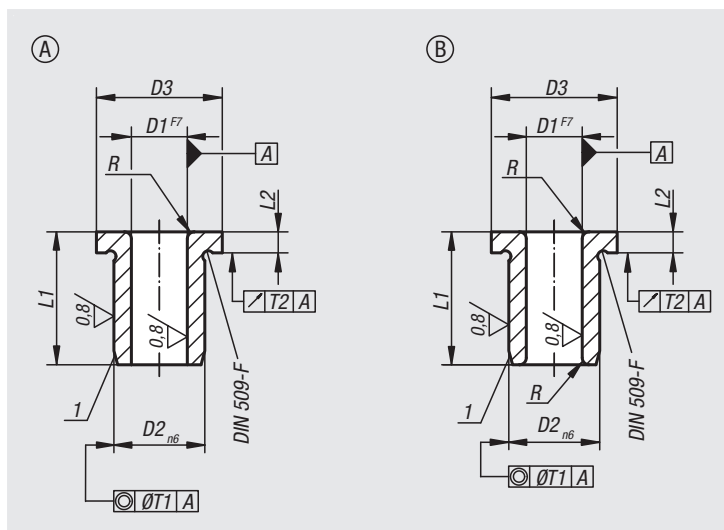
From diameter D1 over 15 mm size increases are 0.5 mm.

Drawing reference:

Form A: hole rounded one end

Form B: hole rounded both ends

1) Chamfer for insert



D1	D2	D3	L1	Product type	L2	R	T1	T2
from 0.4 to 0.8	3	6	6	short	2	1	0,01	0,03
from 0.9 to 1.0	3	6	6/9	short/medium	2	1	0,01	0,03
from 1.1 to 1.8	4	7	6/9	short/medium	2	1	0,01	0,03
from 1.9 to 2.6	5	8	6/9	short/medium	2	1	0,01	0,03
from 2.7 to 3.3	6	9	8/12/16	short/medium/long	2,5	1	0,01	0,03
from 3.4 to 4.0	7	10	8/12/16	short/medium/long	2,5	1	0,01	0,03
from 4.1 to 5.0	8	11	8/12/16	short/medium/long	2,5	1	0,01	0,03
from 5.1 to 6.0	10	13	10/16/20	short/medium/long	3	1,5	0,02	0,03
from 6.1 to 8.0	12	15	10/16/20	short/medium/long	3	1,5	0,02	0,03
from 8.1 to 10.0	15	18	12/20/25	short/medium/long	3	2	0,02	0,03
from 10.1 to 12.0	18	22	12/20/25	short/medium/long	4	2	0,02	0,03
from 12.1 to 15.0	22	26	16/28/36	short/medium/long	4	2	0,02	0,03
from 15.5 to 18.0	26	30	16/28/36	short/medium/long	4	2	0,02	0,03
from 18.5 to 22.0	30	34	20/36/45	short/medium/long	5	3	0,02	0,03
from 22.5 to 26.0	35	39	20/36/45	short/medium/long	5	3	0,02	0,05
from 26.5 to 30.0	42	46	25/45/56	short/medium/long	5	3	0,02	0,05
from 30.5 to 35.0	48	52	25/45/56	short/medium/long	5	3	0,04	0,05
from 35.5 to 42.0	55	59	30/56/67	short/medium/long	5	3,5	0,04	0,05
from 42.5 to 48.0	62	66	30/56/67	short/medium/long	6	3,5	0,04	0,05

Drill bushes push-in

DIN 173

**Material:**

Special steel

Version:Hardened to 780 ± 40 HV 10 and ground.
Without lead-in groove.**Sample order:**

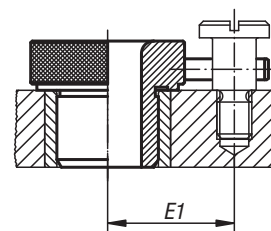
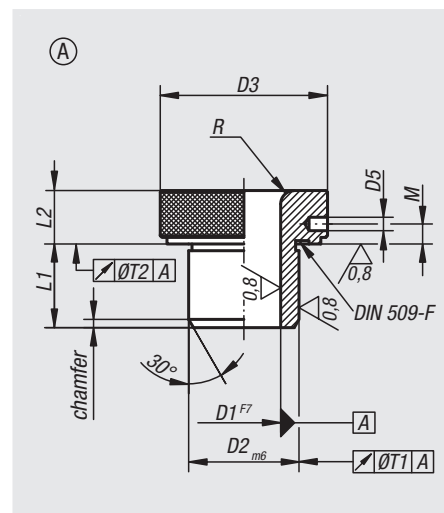
nlm 08920-A1000X15

(bush Form A with $D1 = 10$ mm and $D2 = 15$ mm)**Note:**

All bushes have the bore size marked on the upper face, e.g. 10.

Diameters $D1$ over 15 mm increase in size by 0.5 mm.

Supplied with matching retaining pin.



D1	D2	D3	D5	M	L1	L2	E1 centre spacing to shoulder screws	R	T1	T2
from 2.5 to 4.0	8	16	2,5	4	10	10	15	3	0,02	0,005
from 4.1 to 6.0	10	19	2,5	4	12	10	16,5	3	0,02	0,005
from 6.1 to 8.0	12	22	3	4	12	12	19,5	4	0,02	0,005
from 8.1 to 10.0	15	26	3	4	16	12	21,5	5	0,02	0,005
from 10.1 to 12.0	18	30	3	4	16	12	23,5	5	0,02	0,005
from 12.1 to 15.0	22	35	5	5	20	16	28	5	0,02	0,005
from 15.5 to 18.0	26	40	5	5	20	16	30,5	5	0,02	0,005
from 18.5 to 22.0	30	47	5	5	20	16	34	6	0,02	0,005
from 22.5 to 26.0	35	55	6	6	25	20	38	6	0,04	0,008
from 26.5 to 30.0	42	62	6	6	25	20	41,5	6	0,04	0,008
from 30.5 to 35.0	48	69	6	6	30	20	45	8	0,04	0,008
from 35.5 to 42.0	55	77	6	6	30	20	49	8	0,04	0,008
from 42.5 to 48.0	62	85	8	7,5	35	20	53	8	0,04	0,008

Drill bushes push-in

DIN 173-1



Material:
Special steel

Version:
Hardened to 780 ±40 HV 10 and ground.

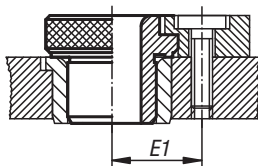
Sample order:
nlm 08920-K0400X16
(bush Form K D1 = 4 mm and L1 = 16 mm)

Note:
All bushes have the bore size marked on the upper face, e.g. 15 F7.
Form K are quick-change bushes. Dowels or coiled spring pins together with DIN 173-1 flathead screws can be used in place of the stop pin.

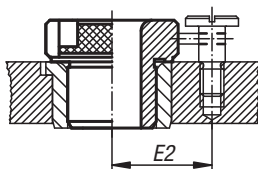
The bayonet mount is secured with DIN 173-1 drill bush clamps together with DIN 912 socket head screws.

E2 = Hole spacing when using dowels or coiled spring pins.

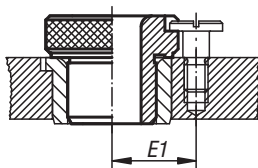
Diameter D1 over 15 mm increase in size by 0.5 mm.



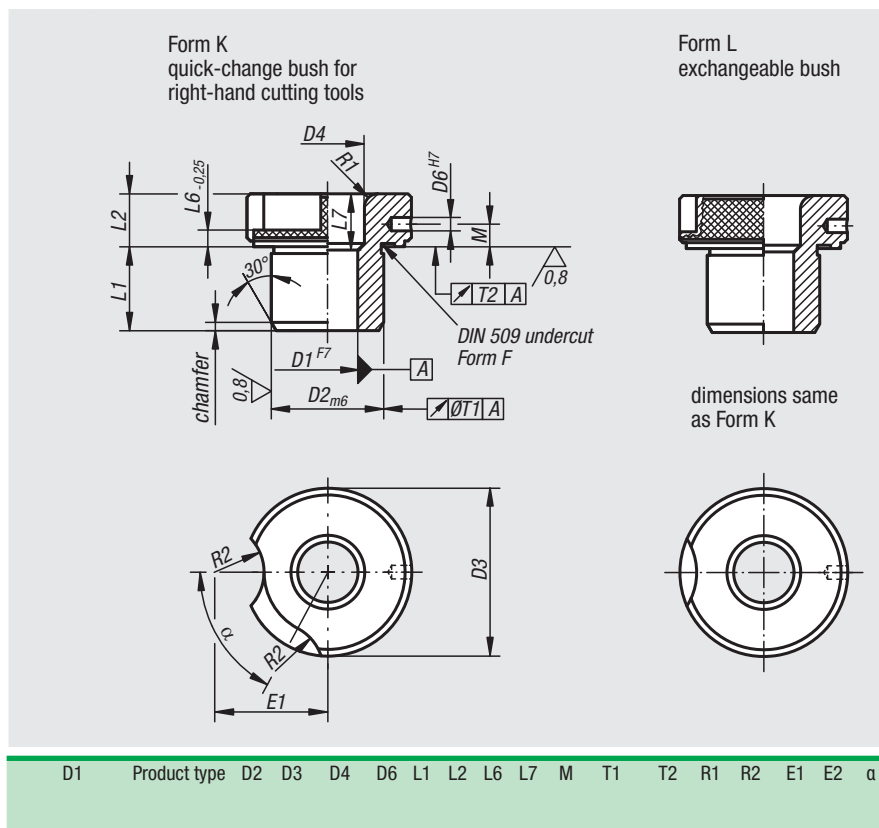
Quick-change drill bush Form K
with DIN 172 bush with collar
or DIN 179 bush



Quick-change drill bush Form K
with DIN 172 bush with collar
or DIN 179 bush



Exchangeable drill bush Form L
with DIN 172 bush with collar
or DIN 179 bush



D1	Product type	D2	D3	D4	D6	L1	L2	L6	L7	M	T1	T2	R1	R2	E1	E2	α
from 2.3 to 4.0	short	8	15	-	2,5	10	8	3	-	4,25	0,02	0,005	1,5	7	11,5	15	65°
from 2.3 to 4.0	medium	8	15	4,5	2,5	16	8	3	6	4,25	0,02	0,005	1,5	7	11,5	15	65°
from 4.1 to 6.0	short	10	18	-	2,5	12	8	3	-	4,25	0,02	0,005	2	7	13	17	65°
from 4.1 to 6.0	medium	10	18	6,5	2,5	20	8	3	8	4,25	0,02	0,005	2	7	13	17	65°
from 4.1 to 6.0	long	10	18	6,5	2,5	25	8	3	13	4,25	0,02	0,005	2	7	13	17	65°
from 6.1 to 8.0	short	12	22	-	3	12	10	4	-	6	0,02	0,005	2	8,5	16,5	20	60°
from 6.1 to 8.0	medium	12	22	8,5	3	20	10	4	8	6	0,02	0,005	2	8,5	16,5	20	60°
from 6.1 to 8.0	long	12	22	8,5	3	25	10	4	13	6	0,02	0,005	2	8,5	16,5	20	60°
from 8.1 to 10.0	short	15	26	-	3	16	10	4	-	6	0,02	0,005	2	8,5	18	22	50°
from 8.1 to 10.0	medium	15	26	10,5	3	28	10	4	12	6	0,02	0,005	2	8,5	18	22	50°
from 8.1 to 10.0	long	15	26	10,5	3	36	10	4	20	6	0,02	0,005	2	8,5	18	22	50°
from 10.1 to 12.0	short	18	30	-	3	16	10	4	-	6	0,02	0,005	2	8,5	20	24	50°
from 10.1 to 12.0	medium	18	30	12,5	3	28	10	4	12	6	0,02	0,005	2	8,5	20	24	50°
from 10.1 to 12.0	long	18	30	12,5	3	36	10	4	20	6	0,02	0,005	2	8,5	20	24	50°
from 12.1 to 15.0	short	22	34	-	5	20	12	5,5	-	7	0,02	0,005	3	10,5	23,5	28	35°
from 12.1 to 15.0	medium	22	34	15,5	5	36	12	5,5	16	7	0,02	0,005	3	10,5	23,5	28	35°
from 12.1 to 15.0	long	22	34	15,5	5	45	12	5,5	25	7	0,02	0,005	3	10,5	23,5	28	35°
from 15.5 to 18.0	short	26	39	-	5	20	12	5,5	-	7	0,02	0,005	3	10,5	26	31	35°
from 15.5 to 18.0	medium	26	39	19	5	36	12	5,5	16	7	0,02	0,005	3	10,5	26	31	35°
from 15.5 to 18.0	long	26	39	19	5	45	12	5,5	25	7	0,02	0,005	3	10,5	26	31	35°
from 18.5 to 22.0	short	30	46	-	5	25	12	5,5	-	7	0,02	0,005	3	10,5	29,5	35	30°
from 18.5 to 22.0	medium	30	46	23	5	45	12	5,5	20	7	0,02	0,005	3	10,5	29,5	35	30°
from 18.5 to 22.0	long	30	46	23	5	56	12	5,5	31	7	0,02	0,005	3	10,5	29,5	35	30°
from 22.5 to 26.0	short	35	52	-	6	25	12	5,5	-	7	0,04	0,008	3	10,5	32,5	37	30°
from 22.5 to 26.0	medium	35	52	27	6	45	12	5,5	20	7	0,04	0,008	3	10,5	32,5	37	30°
from 22.5 to 26.0	long	35	52	27	6	56	12	5,5	31	7	0,04	0,008	3	10,5	32,5	37	30°
from 26.5 to 30.0	short	42	59	-	6	30	12	5,5	-	7	0,04	0,008	3	10,5	36	41	30°
from 26.5 to 30.0	medium	42	59	31	6	56	12	5,5	26	7	0,04	0,008	3	10,5	36	41	30°
from 26.5 to 30.0	long	42	59	31	6	67	12	5,5	37	7	0,04	0,008	3	10,5	36	41	30°

Drill bush clamps

DIN 173-1

**Material:**

Bush clamp 1.0711.
Cap screw steel.

Version:

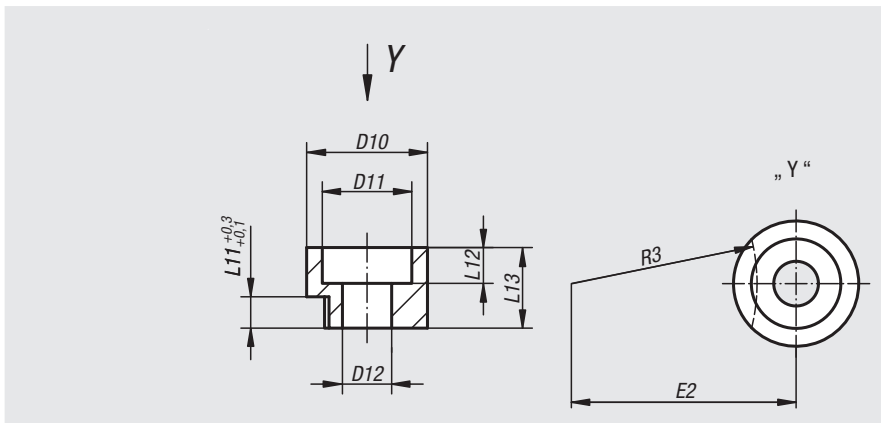
Clamping bush, black oxidised.
Cap screw, electro zinc-plated.

Sample order:

nIm 08926-061X10
(clamping bush D12= 6.1 mm and L13 = 10 mm)

Note:

DIN 912 cap screws are supplied.
The clamping bush 08926-081X12 is left bright.



Order No.	D12	for drill bushes (D1)	D10	D11	L11	L12	L13	E2	R3	Socket head screw DIN 912
08926-051X08	5,1	≤6,0	13	10	3	4	8	13,2	9,5	M5x16
08926-061X10	6,1	> 6,0 ≤ 12,0	16	12	4	5	10	19,7	15	M6x20
08926-081X12	8,1	> 12,0 ≤ 30,0	20	15	5,5	5	12	36,2	30	M8x25

08927

Shoulder screws flathead

for DIN 173 drill bushes

**Material:**

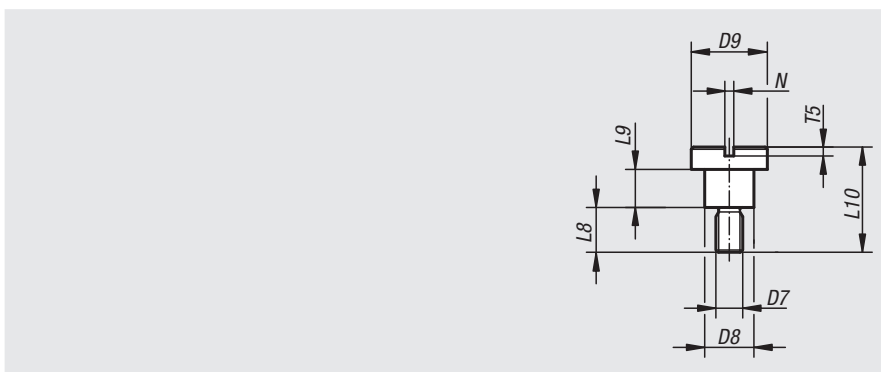
Steel.

Version:

Bright, grade 10.9

Sample order:

nIm 08927-06X04
(DIN 173-1 screw D7 = M6 and L9 = 4 mm)



Order No.	Product type	D7	for drill bushes (D1)	L8	L9	L10	D8	D9	N	T5
08927-05X03	short	M5	≤6,0	9	3	15	7,5	13	1,6	2
08927-06X04	short	M6	> 6,0 ≤ 12,0	10	4	18	9,5	16	2	2,5
08927-08X55	short	M8	> 12,0 ≤ 30,0	11,5	5,5	22	12	20	2,5	3
08927-05X06	long	M5	≤6,0	9	6	18	7,5	13	1,6	2
08927-06X08	long	M6	> 6,0 ≤ 12,0	10	8	22	9,5	16	2	2,5
08927-08X105	long	M8	> 12,0 ≤ 30,0	11,5	10,5	27	12	20	2,5	3