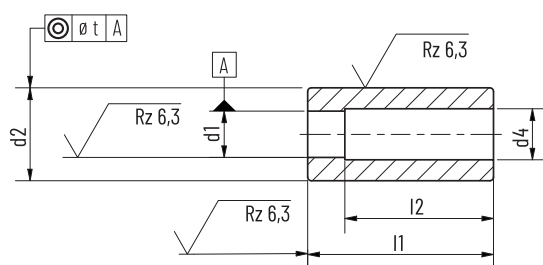


DIE BUSH OF MATERIAL HSS

DIN 9845, type A without collar



Item no.
5113.

Hardness
HRC 62 ± 2

Material
HSS

Hardened and tempered, inside and outside grinded in tolerance, with insertion chamfer.

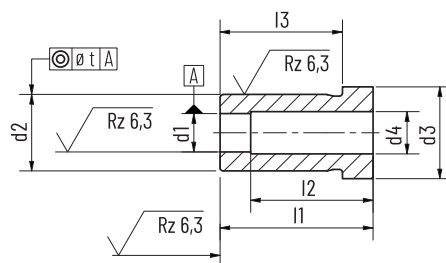
d ₁ H 8	d ₂ n 6	d ₄	l ₁ +0,5 0	l ₂	t
1	5	d1 + 0,3	20	18	0,01
1.1-2	6	d1 + 0,3	20	17	0,01
1.1-2	6	d1 + 0,3	28	25	0,01
2.1-3	7	d1 + 0,5	20	17	0,01
2.1-3	7	d1 + 0,5	28	25	0,01
3.1-4	8	d1 + 0,5	28	25	0,01
3.1-4	8	d1 + 0,5	20	17	0,01
4.1-5	10	d1 + 0,7	20	16	0,01
4.1-5	10	d1 + 0,7	28	24	0,01
5.1-6	12	d1 + 0,7	20	16	0,02
5.1-6	12	d1 + 0,7	28	24	0,02
6.1-8	15	d1 + 0,7	28	24	0,02
6.1-8	15	d1 + 0,7	20	16	0,02
8.1-10	18	d1 + 1,0	20	16	0,02
9.8-10	18	d1 + 1,0	28	24	0,02
10.1-12	22	d1 + 1,0	20	15	0,02
10.1-12	22	d1 + 1,0	28	23	0,02
12.1-15	26	d1 + 1,0	20	15	0,02
12.1-15	26	d1 + 1,0	28	23	0,02
15.5-18	30	d1 + 1,0	28	23	0,02

Gradation of the bore hole d₁ until 15,0 of 0,1 mm > 15,0 of 0,5 mm.

Consider cutting clearance for the assignment of cutting punches and die bushes!

DIE BUSH OF MATERIAL HSS

DIN 9845, type B with collar



Item no.
5123.

Hardness
HRC 62 ± 2

Material
HSS

Hardened and tempered, inside and outside grinded in tolerance, with insertion chamfer.

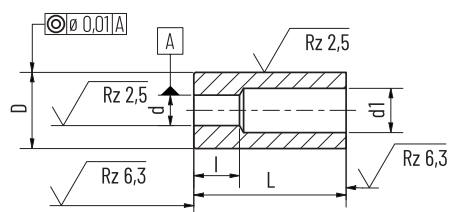
d ₁ H 8	d ₂ k 6	d ₃	d ₄	l ₁ +0,5 0	l ₂	l ₃	t
1	5	7	d1 + 0,3	20	18	16	0,01
1.1 - 2	6	8	d1 + 0,3	20	17	16	0,01
1.1 - 2	6	8	d1 + 0,3	28	25	24	0,01
2.1 - 3	7	9	d1 + 0,5	20	17	16	0,01
2.1 - 3	7	9	d1 + 0,5	28	25	24	0,01
3.1 - 4	8	10	d1 + 0,5	28	25	24	0,01
3.1 - 4	8	10	d1 + 0,5	20	17	16	0,01
4.1 - 5	10	12	d1 + 0,7	20	16	16	0,01
4.1 - 5	10	12	d1 + 0,7	28	24	24	0,01
5.1 - 6	12	14	d1 + 0,7	20	16	16	0,02
5.1 - 6	12	14	d1 + 0,7	28	24	24	0,02
6.1 - 8	15	17	d1 + 0,7	28	24	24	0,02
6.1 - 8	15	17	d1 + 0,7	20	16	16	0,02
8.1 - 10	18	20	d1 + 1,0	28	24	24	0,02
8.9 - 10	18	20	d1 + 1,0	20	16	16	0,02
10.1 - 12	22	24	d1 + 1,0	20	15	16	0,02
10.1 - 12	22	24	d1 + 1,0	28	23	24	0,02
12.1 - 15	26	28	d1 + 1,0	20	15	16	0,02
12.1 - 15	26	28	d1 + 1,0	28	23	24	0,02
15.5 - 18	30	32	d1 + 1,0	28	23	24	0,02

Gradation of the bore hole d₁ until 15,0 of 0,1 mm > 15,0 of 0,5 mm.

Consider cutting clearance for the assignment of cutting punches and die bushes!

DIE BUSH OF MATERIAL HSS

ISO 8977, type A without collar



Item no.
5213.

Hardness
HRC 62 ± 2

Material
HSS

Hardened and tempered, inside and outside grinded in tolerance, with insertion chamfer.

d +0,02	D n 5	d ₁ max.	l min.	L +0,5 0	16	20	25	32
1-2,4	5	2,8	2		•	•	•	
1,6-3	6	3,5	3		•	•	•	
2-3,5	8	4	4		•	•	•	•
3-5	10	5,8	4		•	•	•	•
4-7,2	13	8	5			•	•	•
6-8,8	16	9,5	5			•	•	•
7,5-11,3	20	12	8			•	•	•
11-16,6	25	17,3	8			•	•	•
15-20	32	20,7	8			•	•	•
18-27	40	27,7	8			•	•	•
26-36	50	37	8			•	•	•

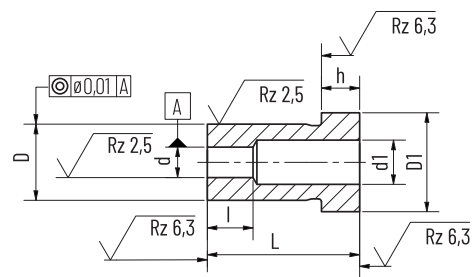
Gradation of the bore hole until d: 16,6 mm and D: 25,0 mm = 0,1 mm

Gradation of the bore hole from d: 15,0 mm and D: 32,0 mm = 0,5 mm

Consider cutting clearance for the assignment of cutting punches and die bushes!

DIE BUSH OF MATERIAL HSS

ISO 8977, type B with collar



Item no.
5223.

Hardness
HRC 62 ± 2

Material
HSS

Hardened and tempered, inside and outside grinded in tolerance, with insertion chamfer.

d +0,02	D m 5	D ₁ 0 -0,25	d ₁ max.	l min.	h +0,25 0	L +0,5 0	16	20	25	32
1-2,4	5	8	2,8	2	5		•	•	•	
1,6-3	6	9	3,5	3	5		•	•	•	
2-3,5	8	11	4	4	5		•	•	•	•
3-5	10	13	5,8	4	5		•	•	•	•
4-7,2	13	16	8	5	5			•	•	•
6-8,8	16	19	9,5	5	5			•	•	•
7,5-11,3	20	23	12	8	5			•	•	•
11-16,6	25	28	17,3	8	5			•	•	•
15-20	32	35	20,7	8	5			•	•	•
18-27	40	43	27,7	8	5			•	•	•
26-36	50	53	37	8	5			•	•	•

Gradation of the bore hole until d: 16,6 mm and D: 25,0 mm = 0,1 mm

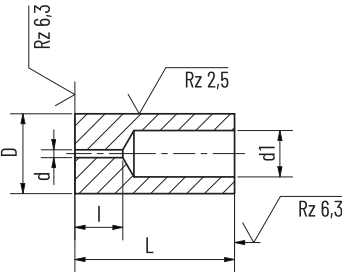
Gradation of the bore hole from d: 15,0 mm and D: 32,0 mm = 0,5 mm

Consider cutting clearance for the assignment of cutting punches and die bushes!

DIE BUSH

WITH STARTING HOLE OF MATERIAL HSS

ISO 8977, type C without collar



Item no.
 5283.

Hardness
 HRC 62 ± 2

Material
 HSS

Hardened and tempered, outside grinded in tolerance, with insertion chamfer.

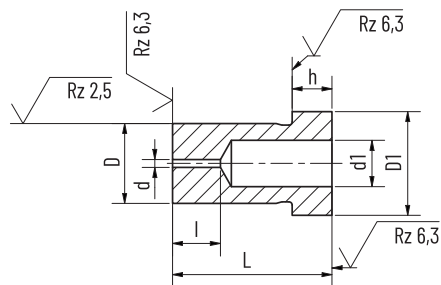
d	D n 5	d ₁ max.	l min.	L +0,5 0	16	20	22	25	28	30	32	35
1	8	4	4		•	•	•	•	•	•	•	•
1	10	5,8	4		•	•	•	•	•	•	•	•
1,2	13	8	5			•	•	•	•	•	•	•
1,2	16	9,5	5			•	•	•	•	•	•	•
1,5	20	12	8			•	•	•	•	•	•	•
1,5	25	17,3	8			•	•	•	•	•	•	•
1,5	32	20,7	8			•	•	•	•	•	•	•
1,5	40	27,7	8			•	•	•	•	•	•	•
1,5	50	37	8			•	•	•	•	•	•	•

Attention: The diagonal profile should not be larger than max. d₁ on dies for square and rectangular shapes.

DIE BUSH

WITH STARTING HOLE OF MATERIAL HSS

ISO 8977, type D with collar



Item no.
5293.

Hardness
HRC 62 ± 2

Material
HSS

Hardened and tempered, outside grinded in tolerance, with insertion chamfer.

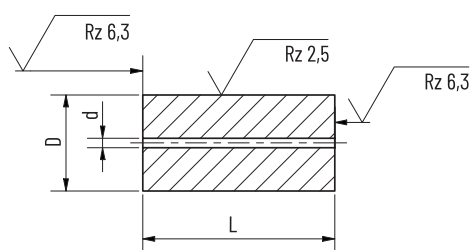
d	D m 5	D ₁ 0 -0,25	d ₁ max.	l min.	h +0,25 0	L +0,5 0	16	20	22	25	28	30	32	35
1	8	11	4	4	5		•	•	•	•	•	•	•	•
1	10	13	5,8	4	5		•	•	•	•	•	•	•	•
1,2	13	16	8	5	5			•	•	•	•	•	•	•
1,2	16	19	9,5	5	5			•	•	•	•	•	•	•
1,5	20	23	12	8	5			•	•	•	•	•	•	•
1,5	25	28	17,3	8	5			•	•	•	•	•	•	•
1,5	32	35	20,7	8	5			•	•	•	•	•	•	•
1,5	40	43	27,7	8	5			•	•	•	•	•	•	•
1,5	50	53	37	8	5			•	•	•	•	•	•	•

Attention: The diagonal profile should not be larger than max. d₁ on dies for square and rectangular shapes.

DIE BUSH

WITH THROUGH-GOING STARTING HOLE OF MATERIAL HSS

ISO 8977, type E without collar



Item no.
5263.

Hardness
HRC 62 ± 2

Material
HSS

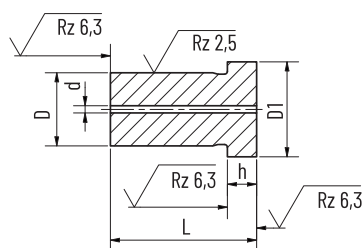
Hardened and tempered, outside
grinded in tolerance, with insertion
chamfer.

d	D n 5	L +0,5 0	20	22	25	28	30	32	35
1	8		•	•	•	•	•	•	•
1	10		•	•	•	•	•	•	•
1,2	13		•	•	•	•	•	•	•
1,2	16		•	•	•	•	•	•	•
1,5	20		•	•	•	•	•	•	•
1,5	25		•	•	•	•	•	•	•
1,5	32		•	•	•	•	•	•	•
1,5	40				•	•	•	•	•
1,5	50							•	•

DIE BUSH

WITH THROUGH-GOING STARTING HOLE OF MATERIAL HSS

ISO 8977, type F with collar



Item no.
5273.

Hardness
HRC 62 ± 2

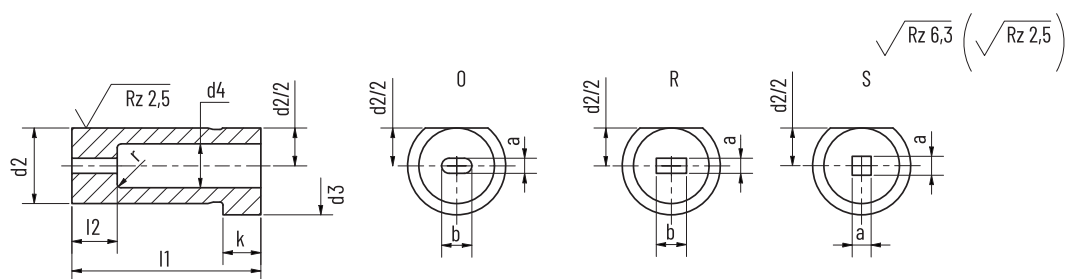
Material
HSS

Hardened and tempered, outside grinded in tolerance, with insertion chamfer.

d	D m 5	D ₁ 0 -0,25	h +0,25 0	L +0,5 0	20	22	25	28	30	32	35
1	8	11	5		•	•	•	•	•	•	•
1	10	13	5		•	•	•	•	•	•	•
1,2	13	16	5		•	•	•	•	•	•	•
1,2	16	19	5		•	•	•	•	•	•	•
1,5	20	23	5		•	•	•	•	•	•	•
1,5	25	28	5		•	•	•	•	•	•	•
1,5	32	35	5		•	•	•	•	•	•	•
1,5	40	43	5				•	•	•	•	•
1,5	50	53	5							•	•

FORMING DIE WITH COLLAR OF MATERIAL HSS

similar ISO 8977



Item no.

5533. Type S
5543. Type R
5553. Type O

Version

Type S: square cutting form
Type R: rectangular cutting form
Type O: oblong cutting form

Material

HSS

a H8	b H8	Gradation	d ₂ m5	d ₃	d ₄ max.	k +0,25 0	l ₁ +0,5 0	l ₂ min.
1,6 - 5,4	2,0 - 5,5	0,1	10	13	5,8	5,0		4
2,0 - 7,4	2,5 - 7,5	0,1	13	16	8,0	5,0		5
2,0 - 9,9	2,5 - 10,0	0,1	16	19	9,5	5,0	16	5
2,5 - 12,9	3,2 - 13,0	0,1	20	23	12,0	5,0	20	8
3,2 - 15,9	4,0 - 16,0	0,1	25	28	17,3	5,0	25	8
4,0 - 20,9	5,0 - 21,0	0,1	32	35	20,7	5,0	32	8
5,0 - 26,9	6,3 - 27,0	0,1	40	43	27,7	5,0		8

**Attention: The diagonal profile should not be larger than d₄ max. on dies for square and rectangular forming.
Consider cutting clearance for the assignment of cutting punches and die bushes!**

PRICE UPON REQUEST

TYPE VARIATIONS

Punches and dies

We can supply these tools according to your requirements from a range of materials:
HWS, HSS and powder metallurgic steels. Also coated if requested.

