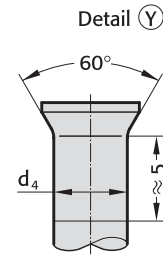
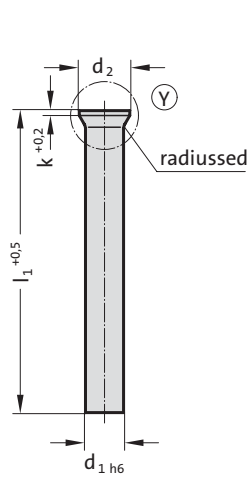


Punch DIN 9861 Shape DA



222.



222. Punch DIN 9861 Shape DA

Gradation		d ₂	k	l ₁	71	80	100
d ₁	d ₁						
0.5	0.05	0.9	0.2		●	●	●
0.55	0.05	1	0.2		●	●	●
0.6	0.05	1.1	0.2		●	●	●
0.65	0.05	1.2	0.2		●	●	●
0.7 - 0.75	0.05	1.3	0.2		●	●	●
0.8 - 0.85	0.05	1.4	0.4		●	●	●
0.9 - 0.95	0.05	1.6	0.4		●	●	●
1 - 1.1	0.1	1.8	0.5		●	●	●
1.2 - 1.3	0.1	2	0.5		●	●	●
1.4 - 1.5	0.1	2.2	0.5		●	●	●
1.6 - 1.7	0.1	2.5	0.5		●	●	●
1.8 - 1.9	0.1	2.8	0.5		●	●	●
2	0.1	3	0.5		●	●	●
2.1 - 2.2	0.1	3.2	0.5		●	●	●
2.3 - 2.5	0.1	3.5	0.5		●	●	●
2.6 - 2.9	0.1	4	0.5		●	●	●
3 - 3.4	0.1	4.5	0.5		●	●	●
3.5 - 3.9	0.1	5	0.5		●	●	●
4 - 4.4	0.1	5.5	0.5		●	●	●
4.5 - 4.9	0.1	6	0.5		●	●	●
5 - 5.4	0.1	6.5	0.5		●	●	●
5.5 - 5.9	0.1	7	0.5		●	●	●
6 - 6.4	0.1	8	0.5		●	●	●
6.5 - 7	0.5	9	1		●	●	●
7.5 - 8	0.5	10	1		●	●	●
8.5 - 9	0.5	11	1		●	●	●
9.5 - 10	0.5	12	1		●	●	●
10.5 - 11	0.5	13	1		●	●	●
11.5 - 12	0.5	14	1		●	●	●
12.5 - 13	0.5	15	1		●	●	●
13.5 - 14	0.5	16	1.5		●	●	●
14.5 - 15	0.5	17	1.5		●	●	●
15.5 - 16	0.5	18	1.5		●	●	●

Material:

HSS
 Order No 222.3.
 Hardness:
 Shaft 64 ± 2 HRC
 Head 52 ± 3 HRC

HST
 Order No 222.4.
 Hardness:
 Surface ≥ 950 HV 0,3
 Head 52 ± 3 HRC

HZ - TIN (HSS)
 Order No 222.0.
 Hardness:
 Surface 2300 HV 0,05
 Head 52 ± 3 HRC

Description of FIBRO materials for tool and die components see at the beginning of Chapter E.

Execution:

Shaft precision ground. Head hot upset-forged and tempered. Residual upset bulge below head normally much smaller than permissible acc. to DIN 9861.

d₄: For d₁ < 1 mm d₄=d₁ + 0,02
 For d₁ ≥ 1 mm d₄=d₁ + 0,03

Stock lengths: 71, 80, 100 mm.
 other lengths and diameters on request!

Note:

Punches are also available without head

Ordering Code (example):

Punch DIN 9861 Shape DA	= 222.
Material MAT	HSS = 3.
Shaft diameter d ₁	0.5 mm = 0050.
Length l ₁	71 mm = 071
Order No	= 222. 3.0050. 071