Piercing Punches

KAXI™

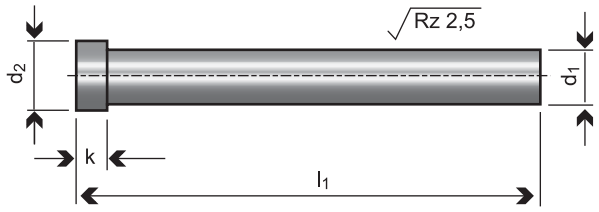
Runde Schneidstempel

Standard: *ISO8020 Type A*

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



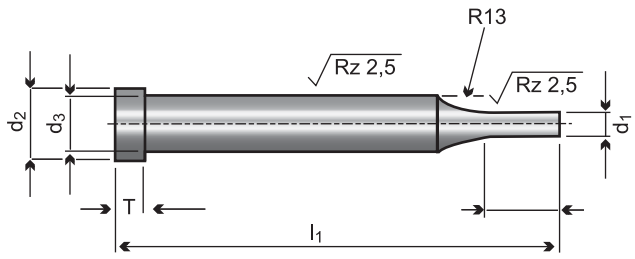
d1 m5	d2 0/-0.2	T +0.2/-0.1	L+0.5 63	71	80	90	100
3	5	3	●	●			
4	6	3	●	●	●		
5	8	5	●	●	●	●	●
6	9	5	●	●	●	●	●
8	11	5	●	●	●	●	●
10	13	5	●	●	●	●	●
13	16	5	●	●	●	●	●
16	19	5	●	●	●	●	●
20	24	5	●	●	●	●	●
25	29	5	●	●	●	●	●
32	36	5	●	●	●	●	●

Standard: *ISO8020 Type B*

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



d1 j6	d2 0/-0.2	d3 m5	T +0.2/-0.1	L2+0.5	L+0.5 71	80	90	100
0.8 – 2.9	5	3	3	10	●			
1.0 – 3.9	6	4	3	10	●	●		
1.2 – 4.9	8	5	5	10	●	●	●	●
1.6 – 5.9	9	6	5	10	●	●	●	●
2.5 – 7.9	11	8	5	13	●	●	●	●
4.0 – 9.9	13	10	5	17	●	●	●	●
5.0 – 12.9	16	13	5	17	●	●	●	●
8.0 – 15.9	19	16	5	17	●	●	●	●
12.0 – 19.5	24	20	5	17	●	●	●	●
16.5 –24.5	29	25	5	17	●	●	●	●

Ejector Punches

KAXI™

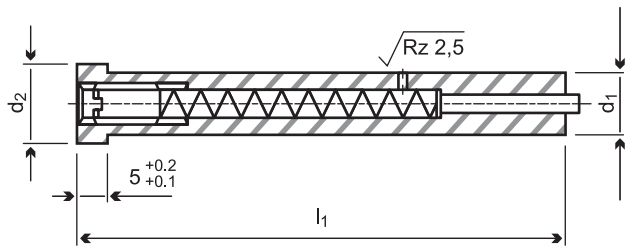
Schneidstempel mit federndam Abdrückstift

Standard: *ISO8020 Type E*

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



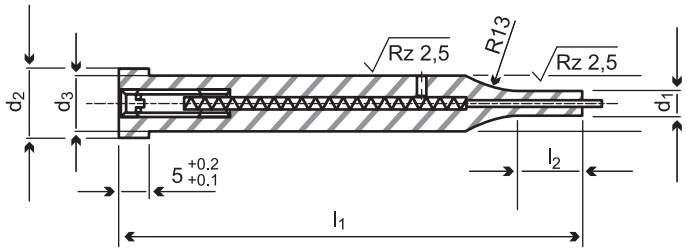
d1 m5	d2 0/-0.2	T +0.2/-0.1	L+0.5 63	71	80	90	100
5	8	5	●	●	●	●	●
6	9	5	●	●	●	●	●
8	11	5	●	●	●	●	●
10	13	5	●	●	●	●	●
13	16	5	●	●	●	●	●
16	19	5	●	●	●	●	●
20	24	5	●	●	●	●	●
25	29	5	●	●	●	●	●
32	36	5	●	●	●	●	●

Standard: *ISO8020 Type F*

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



d1 j6	d2 0/-0.2	d3 m5	T +0.2/-0.1	L2+0.5	L+0.5 71	80	90	100
1.6 – 5.9	9	6	5	10	●	●	●	●
2.5 – 7.9	11	8	5	13	●	●	●	●
4.0 – 9.9	13	10	5	17	●	●	●	●
5.0 – 12.9	16	13	5	17	●	●	●	●
8.0 – 15.9	19	16	5	17	●	●	●	●
12.0 – 19.5	24	20	5	17	●	●	●	●
16.5 –24.5	29	25	5	17	●	●	●	●

Piercing Punches

KAXI™

Schneidstempel mit zylindrischem Kopf

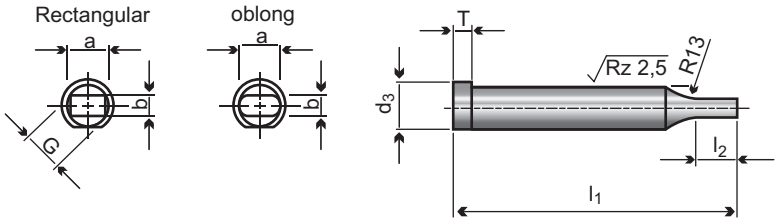
Standard: *ISO8020 Type C*

with rectangular and oblong points

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



a +/-0.01	b +/-0.01	d2 0/-0.2	d3 m5	T +0.2/-0.1	L2+0.5	L+0.5 71	80	90	100
Up to customer's Requirement G = max. d3		6	4	3	From 10, 13,17,19…up	●	●		
		8	5	5		●	●	●	●
		9	6	5		●	●	●	●
		11	8	5		●	●	●	●
		13	10	5		●	●	●	●
		16	13	5		●	●	●	●
		19	16	5		●	●	●	●
		24	20	5		●	●	●	●
		29	25	5		●	●	●	●

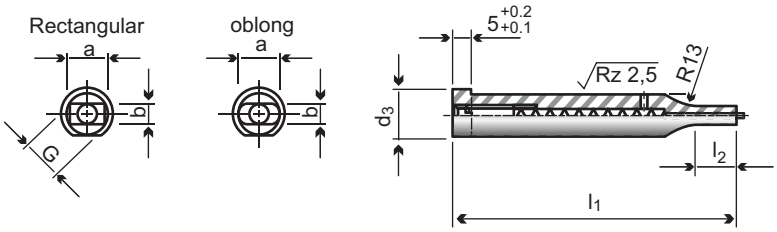
Standard: *ISO8020 Type G*

with rectangular, oblong points and
loaded with spring ejector pins

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



a +/-0.01	b +/-0.01	d2 0/-0.2	d3 m5	T +0.2/-0.1	L2+0.5	L+0.5 71	80	90	100
Up to customer's Requirement G = max. d3		9	6	5	From 10, 13,17,19…up	●	●	●	●
		11	8	5		●	●	●	●
		13	10	5		●	●	●	●
		16	13	5		●	●	●	●
		19	16	5		●	●	●	●
		24	20	5		●	●	●	●
		29	25	5		●	●	●	●

Piercing Punches

KAXI™

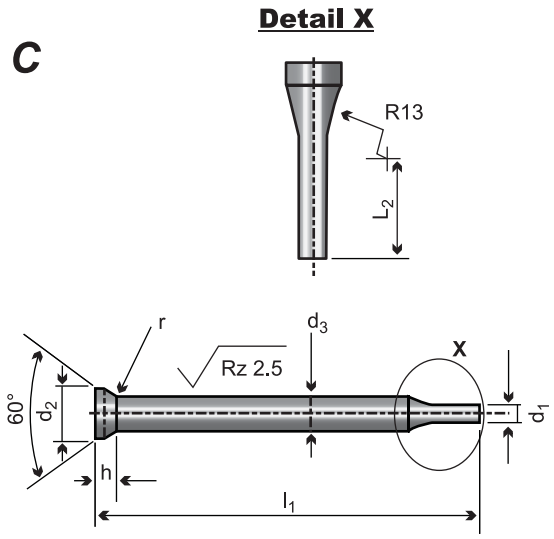
Runde Schneidstempel

Standard: *ISO8020 Type C*

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS & ASP23 Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



d1 h6	d2	d3 h6	In step of	L2+0.5	h+0.2	L+0.5 71	L+0.5 80
0.5 – 1.4	2.2 +/-0.05	1.5	0.1	7	1.11	●	●
0.5 – 1.9	3.0 +/-0.1	2	0.1	7	1.37	●	●
1.6 – 2.9	4.5 +/-0.1	3	1.1	7	1.80	●	●
2.5 – 3.5	5.5 +/-0.1	4	0.5	10	1.80	●	●
3.5 – 4.5	6.5 +/-0.2	5	0.5	10	1.80	●	●
4.5 – 5.5	8.0 +/-0.2	6	0.5	10	2.23	●	●

Piercing Punches

KAXI™

Schneidstempel mit zylindrischem Kopf

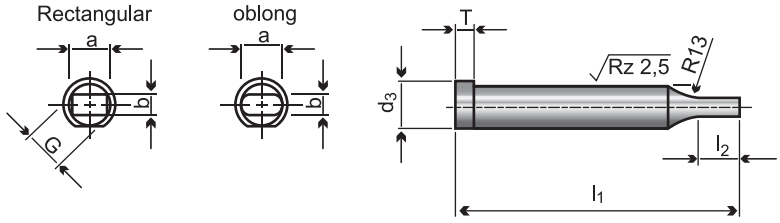
Standard: *ISO8020 Type C*

with rectangular and oblong points

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



a +/-0.01	b +/-0.01	d2 0/-0.2	d3 m5	T +0.2/-0.1	L2+0.5	L+0.5 71	80	90	100
Up to customer's Requirement G = max. d3		6	4	3	From 10, 13,17,19…up	●	●		
		8	5	5		●	●	●	●
		9	6	5		●	●	●	●
		11	8	5		●	●	●	●
		13	10	5		●	●	●	●
		16	13	5		●	●	●	●
		19	16	5		●	●	●	●
		24	20	5		●	●	●	●
		29	25	5		●	●	●	●

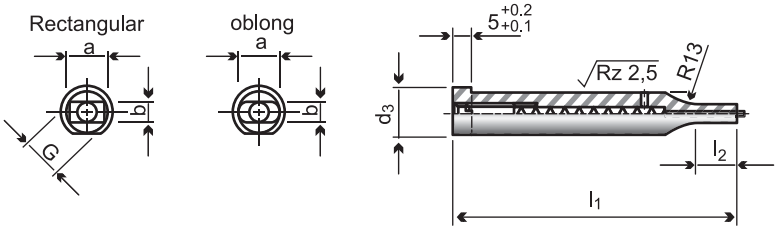
Standard: *ISO8020 Type G*

with rectangular, oblong points and
loaded with spring ejector pins

Material & Hardness:

HWS Tool Steel
Shaft = HRC62+/-2
Head = HRC50+/-5

HSS Steel
Shaft = HRC64+/-2
Head = HRC50+/-5



a +/-0.01	b +/-0.01	d2 0/-0.2	d3 m5	T +0.2/-0.1	L2+0.5	L+0.5 71	80	90	100
Up to customer's Requirement G = max. d3		9	6	5	From 10, 13,17,19…up	●	●	●	●
		11	8	5		●	●	●	●
		13	10	5		●	●	●	●
		16	13	5		●	●	●	●
		19	16	5		●	●	●	●
		24	20	5		●	●	●	●
		29	25	5		●	●	●	●

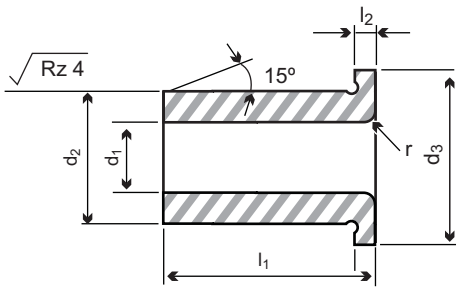
Standard: *DIN172 Headed*

Type A: Bore radius on one end

Type B: Bore radius on both ends

Material & Hardness:

Case Hardened Steel x HRC60+/-2



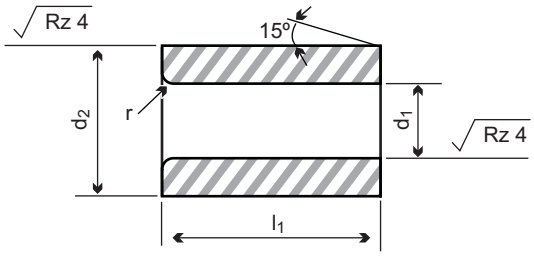
Standard: *DIN179 Headless*

Type A: Bore radius on one end

Type B: Bore radius on both ends

Material & Hardness:

Case Hardened Steel x HRC60+/-2



d1 F7	d2 n6	d3	L1+0.5		L2	r
0.4 – 0.8	3	6	6		2	1
0.9 – 1.0	3	6	6	9	2	1
1.1 – 1.8	4	7	6	9	2	1
1.9 – 2.6	5	8	6	9	2	1
2.7 – 3.3	6	9	8	12	16	2.5	1
3.4 – 4.0	7	10	8	12	16	2.5	1
4.1 – 5.0	8	11	8	12	16	2.5	1
5.1 – 6.0	10	13	10	16	20	3	1.5
6.1 – 8.0	12	15	10	16	20	3	1.5
8.1 –10.0	15	18	12	20	25	3	2
10.1 – 12.0	18	22	12	20	25	4	2
12.1 – 15.0	22	26	16	28	36	4	2
15.1 – 18.0	26	30	16	28	36	4	2
18.1 – 22.0	30	34	20	36	45	5	3
22.1 – 26.0	35	39	20	36	45	5	3
26.1 – 30.0	42	46	25	45	56	5	3
30.1 – 35.0	48	52	25	45	56	5	3
35.1 – 42.0	55	59	30	56	67	5	3.5
42.1 – 48.0	62	66	30	56	67	6	3.5
48.1 – 55.0	70	74	30	56	67	6	3.5
55.1 – 63.0	78	82	35	67	78	6	4

Piercing with Bottle Neck

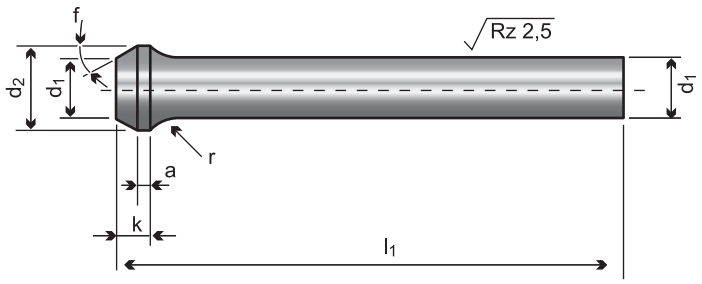
KAXI™

Schneidstempel mit Posaunenhals

Standard: *European Type D*

Material & Hardness:

HWS Steel
Head = HRC50+/-2
Shaft = HRC62±2
HSS Steel
Head = HRC50+/-2
Shaft = HRC64±2

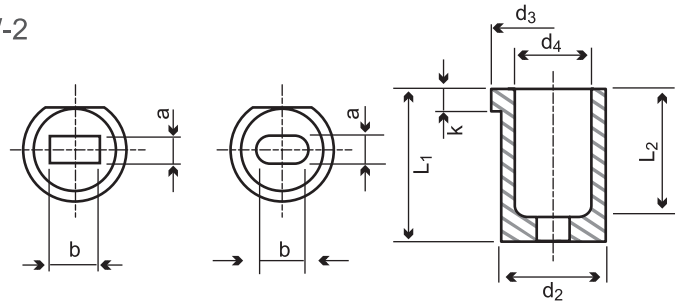


d1 h6	d2 +/-0.5	k	a +/-0.1	f	r	L+0.5 71	L+0.5 80	L+0.5 100
2.0 up	3.0	3.0	1.0	15°	3.5	●	●	
2.1 up	3.2	3.0	1.0	15°	3.5	●	●	
2.3 up	3.5	3.0	1.0	15°	5.0	●	●	
2.6 up	4.0	3.0	1.0	20°	6.5	●	●	
3.0 up	4.5	3.0	1.0	20°	6.5	●	●	
3.5 up	5.0	3.0	1.0	20°	8.0	●	●	
4.0 up	5.5	4.0	1.5	15°	8.0	●	●	●
4.5 up	6.0	4.0	1.5	15°	8.0	●	●	●
5.0 up	7.0	4.0	1.5	20°	10.0	●	●	●
5.5 up	8.0	4.0	1.5	25°	10.0	●	●	●
6.0 up	9.0	4.0	1.5	30°	10.0	●	●	●
6.5 up	10.0	4.0	1.5	35°	12.0	●	●	●
7.5 up	11.0	4.0	1.5	35°	12.0	●	●	●
8.5 up	13.2	4.0	1.5	40°	15.0	●	●	●
9.5 up	14.5	4.0	1.5	40°	15.0	●	●	●
10.5 up	15.0	4.0	1.5	40°	15.0	●	●	●
11.5 up	16.5	4.0	1.5	40°	15.0	●	●	●
12.5 up	17.5	4.0	1.5	40°	15.0	●	●	●
13.5 up	18.5	4.0	1.5	40°	15.0	●	●	●
14.5 up	19.0	4.0	1.5	40°	15.0	●	●	●
15.5 up	20.0	4.0	1.5	40°	15.0	●	●	●
16.5 up	21.0	4.0	1.5	40°	15.0	●	●	●
17.5 up	22.0	4.0	1.5	40°	15.0	●	●	●
18.5 up	23.0	4.0	1.5	40°	15.0	●	●	●
19.5 – 20.0	25.0	7.0	1.5	45°	15.0	●	●	●

Standard: *ISO8977 Headed*

Material & Hardness:

HWS Tool Steel x HRC60+/-2
HSS High Speed Steel x HRC64+/-2

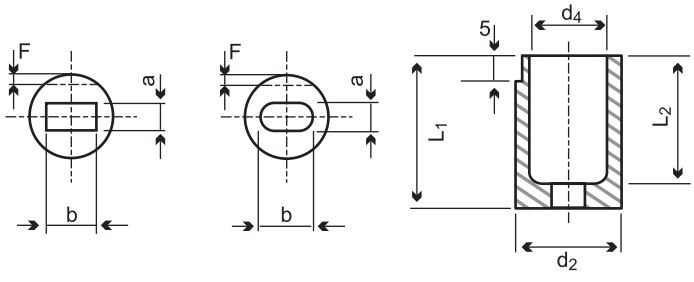


a H8	b H8	d2 m5	d3	d4	k 0/+0.25	L1+0.5	L2
1.6 – 5.4	2.0 – 5.5	10	13	6.5	5.0	32	29
2.0 – 7.4	2.5 – 7.5	13	16	8.5	5.0	32	28
2.2 – 9.9	2.5 – 10.0	16	19	11.0	5.0	32	28
2.5 – 12.9	3.2 – 13.0	20	24	14.0	5.0	32	27
3.2 – 15.9	4.0 – 16.0	25	29	17.0	5.0	32	27
4.0 – 20.9	5.0 – 21.0	32	36	22.0	5.0	32	26
5.0 – 26.9	6.5 – 27.0	40	44	28.0	5.0	32	24

Standard: *ISO8977 Headless*

Material & Hardness:

HWS Tool Steel x HRC60+/-2
HSS High Speed Steel x HRC64+/-2



a H8	b H8	d2 m5	F +0.01	d4	L1+0.5	L2
1.6 – 5.4	2.0 – 5.5	10	1.0	6.5	32	29
2.0 – 7.4	2.5 – 7.5	13	1.5	8.5	32	28
2.2 – 9.9	2.5 – 10.0	16	1.5	11.0	32	28
2.5 – 12.9	3.2 – 13.0	20	1.5	14.0	32	27
3.2 – 15.9	4.0 – 16.0	25	2.5	17.0	32	27
4.0 – 20.9	5.0 – 21.0	32	2.5	22.0	32	26
5.0 – 26.9	6.5 – 27.0	40	2.5	28.0	32	24

Precision Jig Bushes

KAXI™

Führungsbuchsen

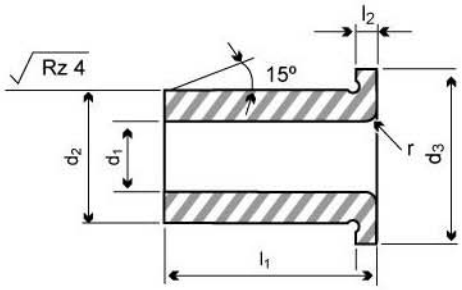
Standard: *DIN172 Headed*

Type A: Bore radius on one end

Type B: Bore radius on both ends

Material & Hardness:

Case Hardened Steel x HRC60+/-2



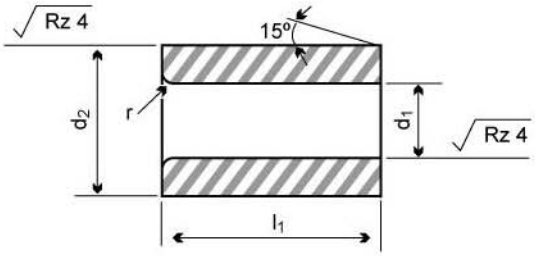
Standard: *DIN179 Headless*

Type A: Bore radius on one end

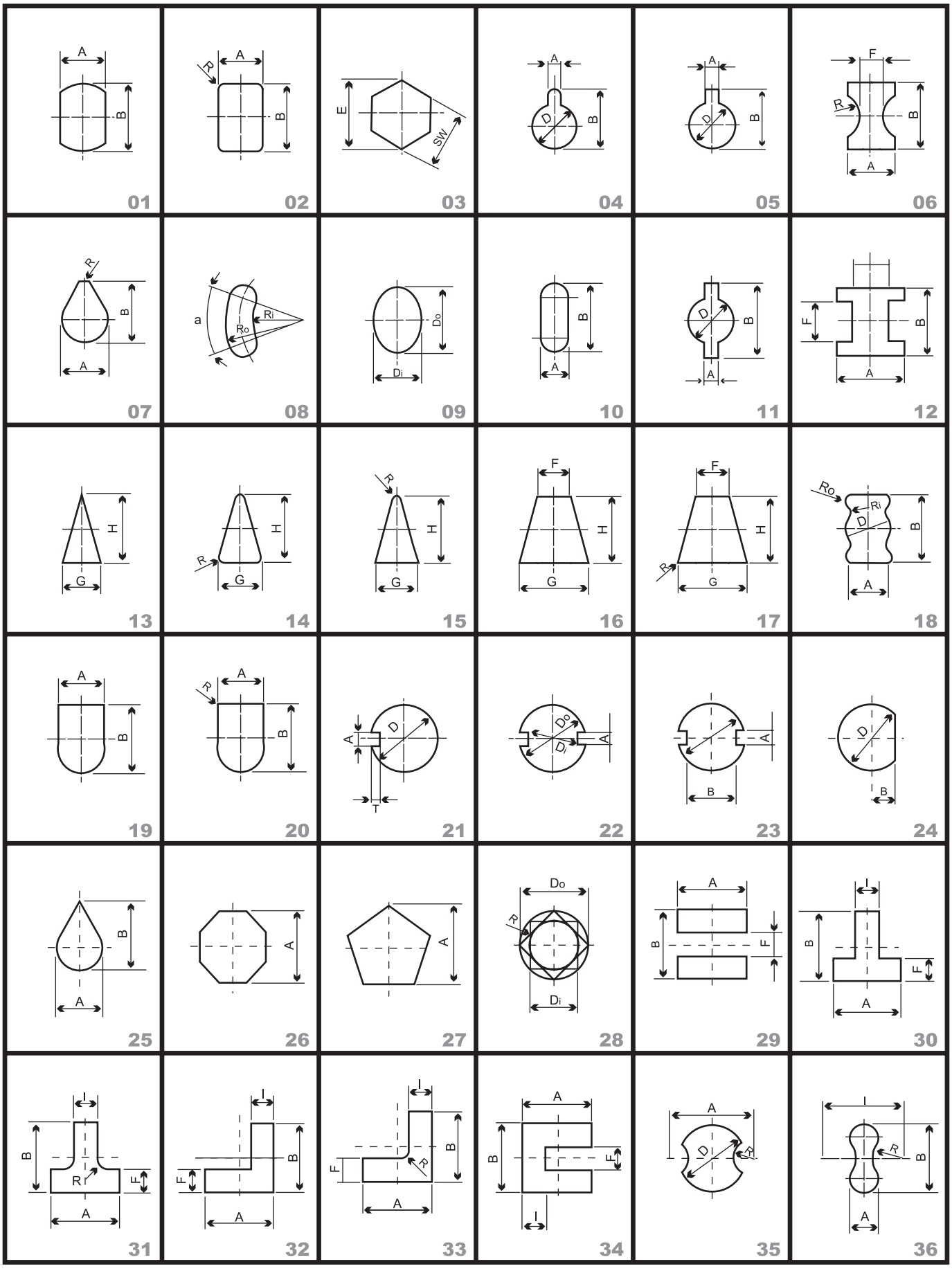
Type B: Bore radius on both ends

Material & Hardness:

Case Hardened Steel x HRC60+/-2



d1 F7	d2 n6	d3	L1+0.5			L2	r
0.4 – 0.8	3	6	6			2	1
0.9 – 1.0	3	6	6	9		2	1
1.1 – 1.8	4	7	6	9		2	1
1.9 – 2.6	5	8	6	9		2	1
2.7 – 3.3	6	9	8	12	16	2.5	1
3.4 – 4.0	7	10	8	12	16	2.5	1
4.1 – 5.0	8	11	8	12	16	2.5	1
5.1 – 6.0	10	13	10	16	20	3	1.5
6.1 – 8.0	12	15	10	16	20	3	1.5
8.1 –10.0	15	18	12	20	25	3	2
10.1 – 12.0	18	22	12	20	25	4	2
12.1 – 15.0	22	26	16	28	36	4	2
15.1 – 18.0	26	30	16	28	36	4	2
18.1 – 22.0	30	34	20	36	45	5	3
22.1 – 26.0	35	39	20	36	45	5	3
26.1 – 30.0	42	46	25	45	56	5	3
30.1 – 35.0	48	52	25	45	56	5	3
35.1 – 42.0	55	59	30	56	67	5	3.5
42.1 – 48.0	62	66	30	56	67	6	3.5
48.1 – 55.0	70	74	30	56	67	6	3.5
55.1 – 63.0	78	82	35	67	78	6	4

The Shape of Punches and Dies

KAXI™