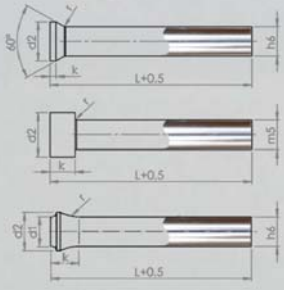
Why Güvenal GTH Die & Mould Components 1976 ?

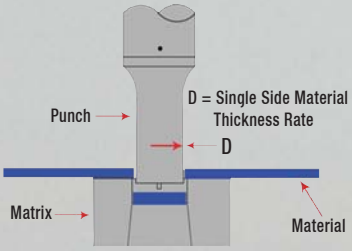
- **Conical Head Punch DIN 9861 / ISO 6752**
- **Cylinder Head Punch ISO 8020**
- **Bottle-neck Punch**



Standard punches in DIN / ISO norms available in our stocks as 1.3343 (M2) material.

Heat-treatment: 62-64 HRC
Head Hardness: 52 ±3 HRC

High Performance Special Material Selection



According to applications to be performed out of standards, we obtain better results by providing special solutions with the contribution of our engineers.

1.3343 - M2

It is suitable to apply as coated in soft sheet metals. Surface wear resistance is high in hard sheet metals. Suitable for sheet metal thickness less than 5 mm. This material should not be preferred in operation involving heavy impacts.

1.3243 - M35

It is suitable to use in stainless, siliceous and spring steel and etc., bolt dies, deep drilling and forming.

ASP30 / PS - Powder Metal

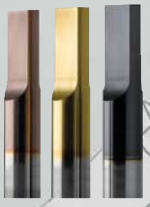
Surface wear resistance is in maximum level.
It is highly compatible with PVD coating.
Correct material choice is important because there are different processes in powder metal products.

GTH Is a brand of Guvenal, you can use confidently.

Precision Grinding / Measurement Completeness

You can have special punch, matrix, retainer and die accessories produced by using our experience and machine line. Please ask offer for custom-made part with the technical drawing.

Coating Technologies



As the production methods develop, the coating technology improves each passing day in order to obtain the highest performance from the available materials. You can try our coating types in order to get more efficiency from your punches.

Guvenal "XKH" Coating (TiCN)

It can be used in punches which high hardness is desired. It is grey-blue. It provides high resistance to cracks in punches. It is suitable to use in high speeds. It provides longer punch life. It is the most efficient standard coating type of Guvenal - GTH punch production.

Guvenal "XKP" Coating (AlTin)

It is ideal for dies and punches working in high temperatures. It is black-purple. It requires less dressing and maintenance thanks to its high speed working and heat conductivity.
It provides longer punch life.

Guvenal "XKT" Coating (TiN - PVD TiN)

It is a general purpose coating type. It is golden yellow. It prevents heat occurring as a result of friction of two metal, it increases lubricity, it reduces problems such as adhesion, winding. Since its heat conductivity is low, it increases punch life by preventing heat transfer.

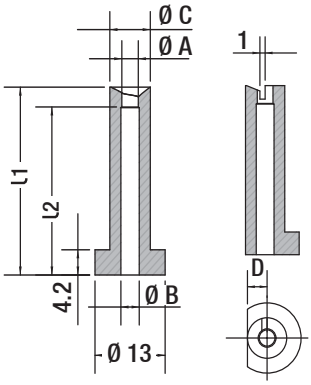
Note: There are many other coating types than traditional coating types. In case that you give information about field of application and its function, our engineers will help you for choosing coating.

Screw Form Punch & Die Button Unit

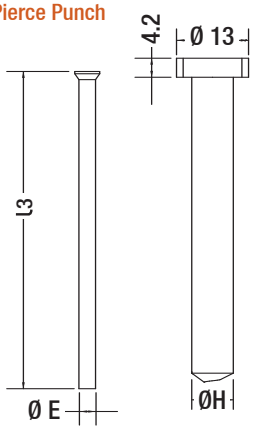
Code: VYZ

Consists of 3 basic parts. **1-** Hss pierce punch **2-** Embossing die punch **3-** Die button.
In terms of working systematics; in all cutting and forming dies, it creates screw forms with the purpose of connecting two sheet metal strips.
Usage: Hss pierce punch is brought to press operation by inserting in die button. While the embossing on the end of the die button bends and embosses, the hss pierce punch forms hole. The sheet metals are prepared to be screwed. The unit forms a hole in screw thread dimension tolerance and helical thread grooves with embossing for screwing and tightening (putting together).
The unspecified tolerances will be according to DIN ISO 2768 T1 (f).

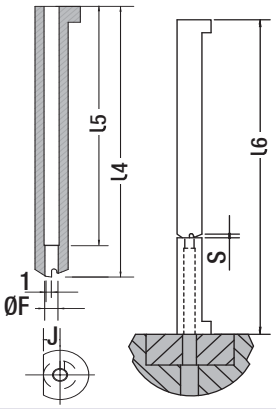
Die Button



HSS Pierce Punch



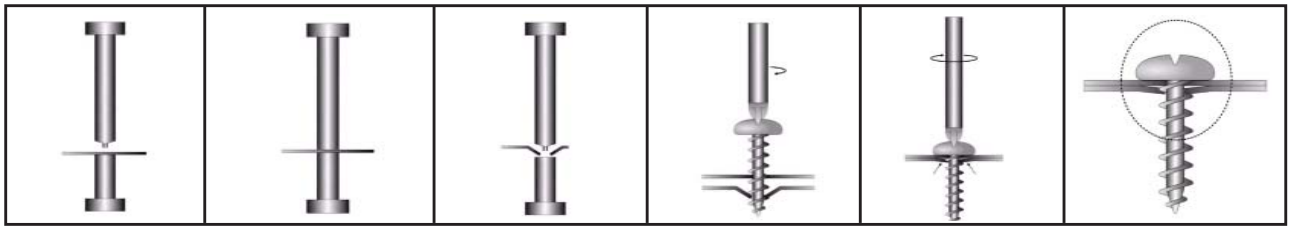
Embossing Die Punch

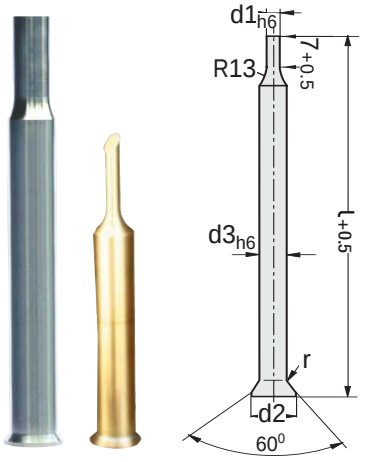


Screw Diameter Thread Dimension:
B 3.5
B 3.9
B 4.2
B 4.8
B 5.5
B 6.3

Sheet Metal Thickness: (S)
Screw 3.5mm: Max.0.50 mm. Thickness
Screw 3.9mm: Max.0.63 mm. Thickness
Screw 4.2mm: Max.0.75 mm. Thickness
Screw 4.8mm: Max.0.88 mm. Thickness
Screw 5.5mm: Max.1.00 mm. Thickness
Screw 6.3mm: Max.1.20 mm. Thickness

Order Code	Ø Screw	A H7	B Ø -mm	C h6	D k6	E Ø -h6	F Ø -H7	H Ø -h6	J k6	l1 mm	l2 mm	l3 mm	l4 mm	l5 mm	l6 Length	S Sheet
VYZB35	**B3.5**	2.75	3.2	7.5	3.75	2.7	2.7	7.5	3.75	31.3	28	74.5	71.5	60	101.72	0.5
VYZB39	**B3.9**	3.05	3.4	7.5	3.75	3.0	3.0	7.5	3.75	31.3	28	74.5	71.5	60	101.85	0.63
VYZB42	**B4.2**	3.15	3.5	8.5	4.25	3.1	3.1	8.0	4.0	31.3	28	74.5	71.5	60	101.97	0.75
VYZB48	**B4.8**	3.85	4.2	9.0	4.50	3.8	3.8	8.0	4.0	31.3	28	74.5	71.5	60	102.10	0.88
VYZB55	**B5.5**	4.35	4.8	9.0	4.50	4.3	4.3	8.0	4.0	31.3	28	74.5	71.5	60	102.22	1.00
VYZB63	**B6.3**	4.85	5.3	10.5	5.25	4.8	4.8	10.0	5.0	31.3	28	74.5	71.5	60	102.42	1.20





Conical Head Punches - Stepped

DIN 9861 Form C

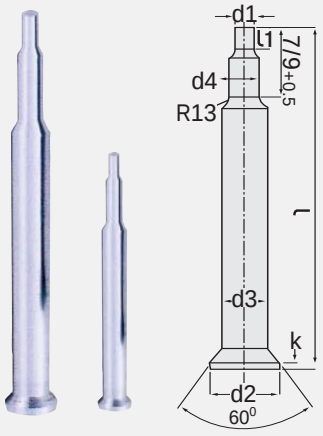
Code: HKZ

According to DIN 9861 norm, there is limitation for body and cutting diameter. In this norm, while body diameter for conical head stepped punch is max. 3 mm, cutting diameter can be max. 2.95 mm.

Material: 1.3343 (M2) **Hardness: 62 - 64 HRC**

d1	l	d3	d2	r
0.8	71	2 mm	3 mm	0.4
	80			
1.0	71			
	80			
1.2	71			
	80			
1.5	71	2.5 mm		
	80			
1.6	71			
	80			
1.8	71			
	80			
1.0	71	3 mm	4.5 mm	0.6
	80			
1.5	71			
	80			
1.8	71			
	80			
2.2	71			
	80			
2.3	71			
	80			
2.6	71			
	80			
2.8	71			
	80			

Order: HKZ. d3 x d1 x l



Conical Head Punches - Stepped

DIN 9861 Form E

Code: H2K

It is preferred for thin work pieces and light duty works. As per request, our punch production is available in the desired material and dimensions and also in shapes.

Material: 1.3343 (M2) **Hardness: 62 - 64 HRC**

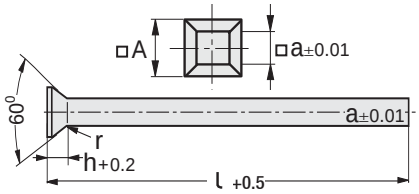
d1	d4	d3	d2	l	l1
1.0	1.4	Ø 3.0	4.5 mm	71 80 100	2 mm
1.2	1.6				
1.5	1.8				
1.7	2.1				
2.2	2.6				
2.5	2.8				
1.6	2.2	Ø 4.0	5.5 mm	71 80 100	2.5 mm
1.8	2.3				
2.3	2.8				
2.6	3.0				
3.0	3.5				
3.2	3.7				
2.4	3.0	Ø 5.0	6.5 mm	71 80 100	3 mm
2.8	3.5				
3.2	4.0				
3.6	4.2				
4.2	4.6				
4.5	4.8				
2.5	3.2	Ø 6.0	8 mm	71 80 100	3 mm
3.0	3.8				
3.5	4.2				
4.0	4.8				
4.5	5.3				
5.0	5.5				
5.5	5.8				

Order: H2K. d1 x d4 x d3 x l x l1

Square Head Punch, Slot - Shaped

Slot - Form DA (forged head)

Code: HFK



a	l	□A	h
1.0	71	1.8	1.2
2.0		3.0	1.4
3.0		4.5	1.8
4.0		5.5	1.8
5.0		6.5	1.8
6.0		8.0	2.2

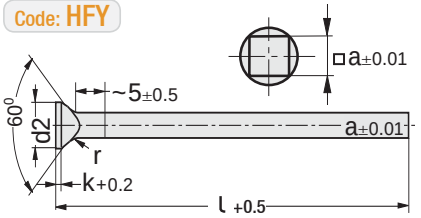
a	l	□A	h
7.0	71	9.0	2.8
8.0		10.0	
9.0		11.0	
10.0		12.0	
12.0		14.0	

Order: HFK. a x l

Material: 1.3343 (M2)
Hardness: 62 - 64 HRC

Conical Head Punch - Shaped

Code: HFY



a	l	d2	k
1.0	71	1.8	0.5
2.0		3.0	
3.0		4.5	
4.0		6.0	
5.0		7.5	
6.0		9.0	

a	l	d2	k
7.0	71	10.5	1.0
8.0		12.0	
9.0		13.5	
10.0		15.0	
12.0		18.0	

Excluding product types in tables, our production such as headless and different slot types, also punches as per request are available.

Order: HFY. a x l

Material: 1.3343 (M2)
Hardness: 62 - 64 HRC

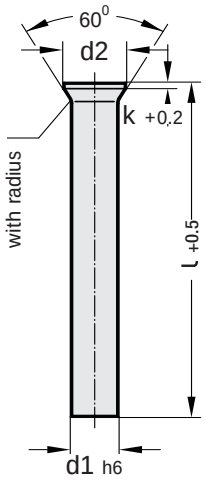
Code: HBZ

DIN 9861 / ISO 6752

d1	l	d2	k
10	71	12	1.0
	80		
	100		
	125		
	160		
10.5	71	13	1.0
	80		
	100		
	125		
	160		
11	71	14	1.0
	80		
	100		
	125		
	160		
11.5	71	14	1.0
	80		
	100		
12	71	14	1.0
	80		
	100		
	125		
	160		
12.5	71	15	1.0
	80		
	100		
13	71	15	1.0
	80		
	100		
	125		
	160		
13.5	71	16	1.5
	80		
	100		
14	71	16	1.5
	80		
	100		
	125		
	160		
14.5	71	17	1.5
	80		
	100		
15	80	17	1,5
	100		
	125		
	160		
16	71	18	1.5
	80		
	100		
	125		
	160		
17	80	19	1.5
	100		
18	80	21	1.5
	100		
19	80	21	1.5
	100		
20	71	22	1.5
	80		
	100		
	125		
	160		

d1	l	d2	k
6.6	71	9.0	1.0
6.7	80		
	100		
6.8	71	9.0	1.0
6.9	80		
	100		
7.0	71	9.0	1.0
	80		
	100		
	125		
	160		
7.1	71	9.0	1.0
7.2	80		
	100		
7.3	71	9.0	1.0
7.4	80		
	100		
7.5	71	10	1.0
	80		
	100		
	125		
	160		
7.6	71	10	1.0
7.7	80		
	100		
7.8	71	10	1.0
7.9	80		
	100		
8.0	71	10	1.0
	80		
	100		
	125		
	160		
8.1	71	10	1.0
8.2	80		
	100		
8.3	71	10	1.0
8.4	80		
	100		
8.5	71	11	1.0
	80		
	100		
	125		
	160		
8.6	71	11	1.0
8.7	80		
	100		
8.8	71	11	1.0
8.9	80		
	100		
9.0	71	11	1.0
	80		
	100		
9.5	125	12	1.0
	160		

d1	l	d2	k
4.1	71	5.5	0.5
4.2	80		
	100		
4.3	71	5.5	0.5
4.4	80		
	100		
4.5	71	6.0	0.5
	80		
	100		
	125		
	160		
4.6	71	6.0	0.5
4.7	80		
	100		
4.8	71	6.0	0.5
4.9	80		
	100		
5.0	71	6.5	0.5
	80		
	100		
	125		
	160		
5.1	71	6.5	0.5
5.2	80		
	100		
5.3	71	6.5	0.5
5.4	80		
	100		
5.5	71	7.0	0.5
	80		
	100		
	125		
	160		
5.6	71	7.0	0.5
5.7	80		
	100		
5.8	71	7.0	0.5
5.9	80		
	100		
6.0	71	8.0	0.5
	80		
	100		
	125		
	160		
6.1	71	8.0	0.5
6.2	80		
	100		
6.3	71	8.0	0.5
6.4	80		
	100		
6.5	71	9.0	1.0
	80		
	100		
	125		
	160		



Punch as per request:


TIN / TIC Coating


Complete Coating


ASP (powder metal)


Sintered Carbide

Code: HBZ

Conical Head Punch, DIN 9861 / ISO 6752

With our wide range and dimensional products of "**GTH** Punch and Matrix Sets" from our stocks, we are in top location with our sectoral experience in quality / price formation. In addition, we provide other special requests with the shortest delivery time. Also, full or partial coating can be preferred upon request, by providing resistance against heat and friction on external layer, it solves problems such as winding and cold welding. For harder work pieces, ASP / PS (powder metal) and for very hard and abrasive work pieces, sintered carbide punches are preferred.

Conical Head Punch - Form D
Heat Treated: (64 HRC ± 2)
Surface: ≥ 950 HV 0.3

Material: < Ø12.5= 1.3343 (HSS) Completely ground
≥ Ø12.5= 1.2379 (HWS) Completely ground
Head Hardness: (52 ±3 HRC)

d1	l	d2	k
3.0	71	4.5	0.5
	80		
	100		
	125		
	160		
3.1	71	4.5	0.5
3.2	80		
	100		
3.3	71	4.5	0.5
3.4	80		
	100		
3.5	71	5.0	0.5
	80		
	100		
	125		
	160		
3.6	71	5.0	0.5
3.7	80		
	100		
3.8	71	5.0	0.5
3.9	80		
	100		
4.0	71	5.5	0.5
	80		
	100		
	125		
	160		

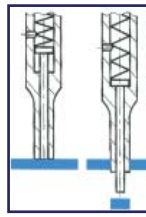
d1	l	d2	k
1.8	71	2.8	0.5
1.9	80		
	100		
2.0	71	3.0	0.5
	80		
	100		
	125		
	160		
2.1	71	3.2	0.5
2.2	80		
	100		
2.3	71	3.5	0.5
2.4	80		
	100		
2.5	71	3.5	0.5
	80		
	100		
	125		
	160		
2.6	71	4.0	0.5
2.7	80		
	100		
2.8	71	4.0	0.5
2.9	80		
	100		

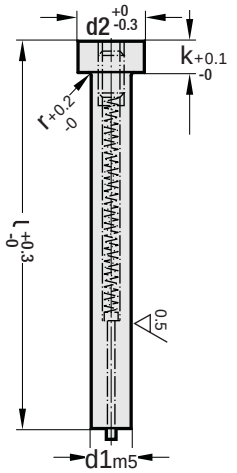
d1	l	d2	k
0.5	71	0.9	0.2
	80		
	100		
0.6	71	1.1	0.2
	80		
	100		
0.7	71	1.3	0.2
	80		
	100		
0.8	71	1.4	0.4
	80		
	100		
0.9	71	1.6	0.4
	80		
	100		
1.0	71	1.8	0.5
1.1	80		
	100		
1.2	71	2.0	0.5
1.3	80		
	100		
1.4	71	2.2	0.5
1.5	80		
	100		
1.6	71	2.5	0.5
1.7	80		
	100		

Order: HBZ. d1 x l

Order Example:
HBZ. 6 x 100

Coating as per request





Cylinder Head Punch with Ejector

Code: SFZ

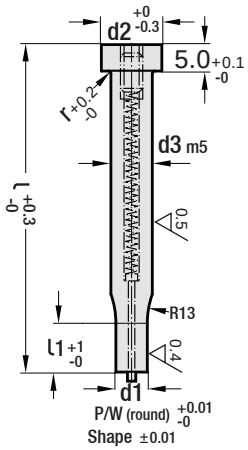
(Blank type) ISO 8020

Material: 1.3343 (M2) completely ground
Heat Treated: 62 - 64 HRC
Head Hardness: 52 ± 3 HRC
Surface: ≥ 950 HV 0.3

d1	l	d2	k	r
5.0	63	8	5 mm	0.3
6.0		9		
8.0	71	11		
10	80	13		
13		16		
16	100	19		
20	125	23		
25	160	28		
32		35		

Order: SFZ. d1 x l

Material: 1.3343 (M2)
Hardness: 62 - 64 HRC



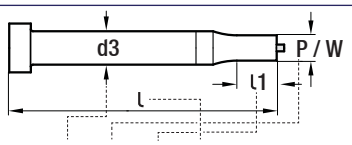
Cylinder Head Stepped Punch with Ejector

Order Codes: **SFY - SFO - SFK - SFD - SFA - SFM - SFX - SFP**

Please refer to the table on the right side →

Order d3	Head d2	d1 / Shape (SFY) Round P	d1 / Shape Other Shapes W G/P	Standard l1	Alternative l1 Min.	Alternative l1 Max.	l mm
SF..05	8	1.6 ~ 4.99	1.6 - 5.0	13	10	-	63
SF..06	9	2.5 ~ 5.99	2.5 - 6.0	13	10	-	71
SF..08	11	3.2 ~ 7.99	3.2 - 8.0	19	13	19	80
SF..10	13	4.5 ~ 9.99	4.5 - 10	19	13	25	90
SF..13	16	6.0 ~ 12.99	6.0 - 13	19	13	25	100
SF..16	19	8.0 ~ 15.99	7.5 - 16	19	13	25	125
SF..20	23	10 ~ 19.99	8.0 - 20	19	13	25	
SF..25	28	12 ~ 24.99	9.0 - 25	19	13	25	
SF..32	35	16 ~ 31.99	10 - 32	25	19	30	

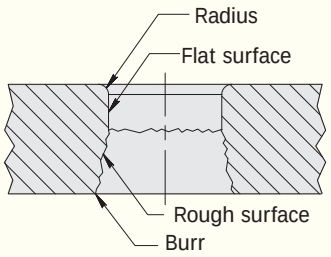
How to order:
Shape
d3
P/W
l1
l
Material



SFY x 10 x P7.0 x 13 x 80 - M2
SFO x 10 x P8.2 x W5.2 x 25 x 100 - M2

Definition of Gap Between Punch and Die

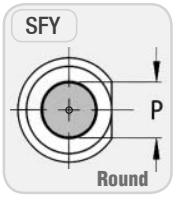
Gap between punch and die depends on material type of stamped work pieces, material thickness, finish requirement of hole and desired tool life. **This is indicated as total percentage of stamped material thickness.** It should be remembered that hole diameter of punch specifies the dimension of part to be processed. Generally, ideal gap provides serial, clear and smooth punching process with minimum tool force. When insufficient gap is left, minimum radius and burrs are obtained. However, depending on high tool forces, it shortens tool life. As a result of excessive gap, wide radius creates deformation, but tool life is increased. Some general values are presented for different materials in the following table (it is an advisory). Expressed values are total die gap recommended for non-ejector punch holes. Increasing gap to 2 times by using ejector punch, will significantly increase estimated tool life. Abrasion occurring in the most of the punches occurs by scraper forces when the punch is pulled back. Increasing gap with using ejector punches will hold abrasion on tool surface in minimum.
Punches used in dies should be mounted in perpendicular position as 90^0 completely.

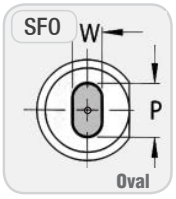


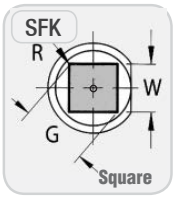
Material	Soft	Hard
Aluminum	% 10	% 12
Brass / Copper	% 6	% 8
Low Carbon Steel	% 10	% 12
High Carbon Steel	% 18	% 20

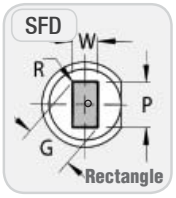
The standard location of key flats is at 0^0.
Alternate locations of 90^0, 180^0 or 270^0 can be specified.

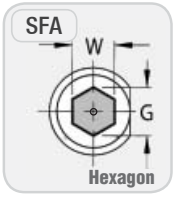
Shapes

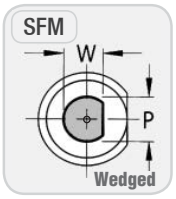


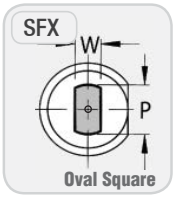


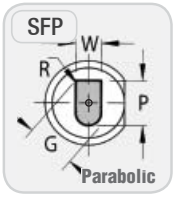


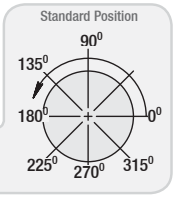




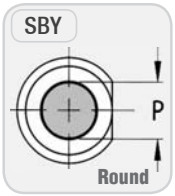


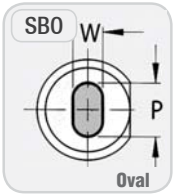


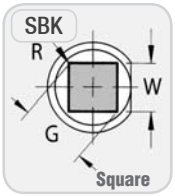


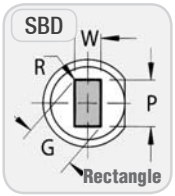


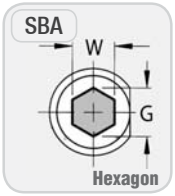
Shapes

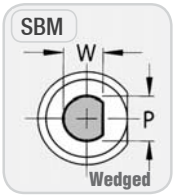


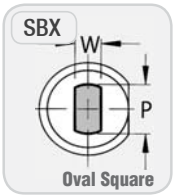


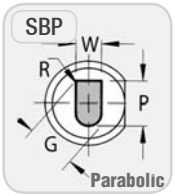


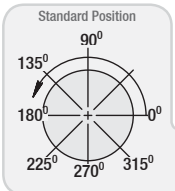


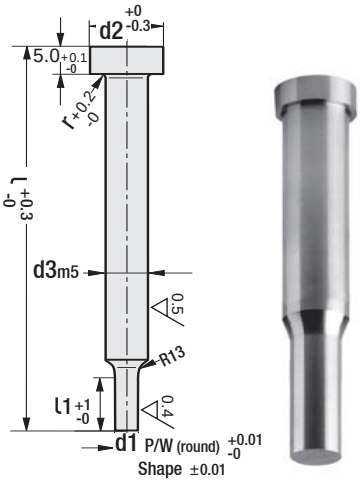












ISO 8020

Cylinder Head Stepped Punch

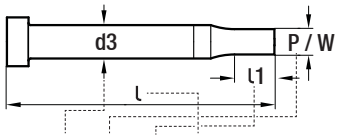
Code: SB..

Order Codes: **SBY - SBO - SBK - SBD - SBA - SBM - SBX - SBP**

Please refer to the table on the left side

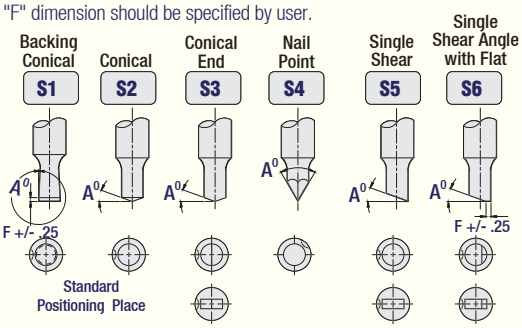
Order d3	Head d2	d1 / Shape (SBY) Round P	d1 / Shape Other Shapes W G/P	Standard l1	Alternative l1 Min.	Alternative l1 Max.	l mm
SB..04	6	1.6 ~ 3.99	1.6 - 4.0	8	10	-	50 63 71 80 90 100 125
SB..05	8	1.6 ~ 4.99	1.6 - 5.0	13	10	-	
SB..06	9	1.6 ~ 5.99	1.6 - 6.0	13	10	-	
SB..08	11	2.5 ~ 7.99	2.5 - 8.0	19	13	-	
SB..10	13	3.2 ~ 9.99	3.2 - 10	19	13	25	
SB..13	16	5.0 ~ 12.99	4.5 - 13	19	13	25	
SB..16	19	8.0 ~ 15.99	6.0 - 16	19	13	25	
SB..20	23	10 ~ 19.99	8.0 - 20	19	13	25	63 71 80 90 100 125
SB..25	28	12 ~ 24.99	9.0 - 25	19	13	25	
SB..32	35	16 ~ 31.99	10 - 32	25	19	30	
SB..40	43	30 ~ 39.99	14 - 40	25	19	30	

How to order:
Shape
d3
P/W
l1
l
Material



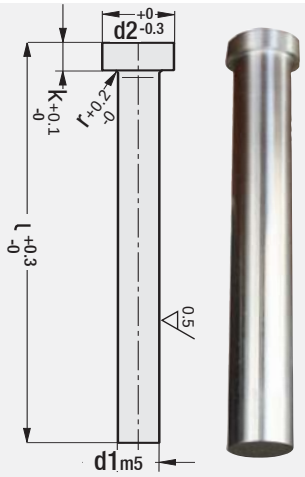
SBY x 10 x P7.0 x 13 x 80 - M2
SBO x 10 x P8.2 x W5.2 x 25 x 100 - M2

Cutting Angles (special tools): In case of demand, "A" angle and "F" dimension should be specified by user.

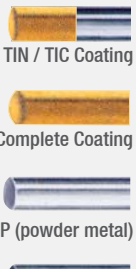


Note: Parts are viewed in die position looking from above the die.
Punches are viewed looking through the body.
Matrixes are viewed through top face.

The standard location of key flats is at 0⁰.
Alternate locations of 90⁰, 180⁰ or 270⁰ can be specified.



Punch as per request:



Cylinder Head Punch - ISO 8020

Code: SBZ

Mounting of cylinder head type punch to the holder plate during usage is planned, guiding process is provided by the stripper plate.
By mounting punches in this style, the elimination of axial errors that resulted from incorrect mounting of die set or press is more easier.
The use of this mounting method provided the alteration between the transmission of punching power and bearing.

Material: 1.3343 (M2) completely ground
Heat Treated: 62 - 64 HRC
Head Hardness: 52 ± 3 HRC
Surface: ≥ 950 HV 0.3

Also, full or partial coating can be preferred upon request, by providing resistance against heat and friction on external layer, it solves problems such as winding and cold welding. For harder work pieces, ASP / PS (powder metal) and for very hard and abrasive work pieces, sintered carbide punches are preferred.

Code: SBZ

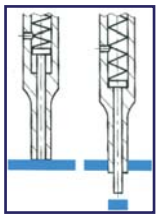
d1	l	d2	k	r
2.0 2.5	71 80 100	5.0	3	0.2
3.0 3.5	71 80 100	6.0	3	
4.0 4.5	71 80 100	7.0 7.5	5	0.3
5	71 80 100	8.0	5	
6.0	71 80 100 125	9.0	5	
8.0	71 80 100 125	11	5	
10	71 80 100 125	13	5	0.3
13	71 80 100 125	16	5	
16	71 80 100 125	19	5	
20	80 100 125 160	23	5	
25	80 100 125 160	28	5	
32	80 100 125 160	35	5	

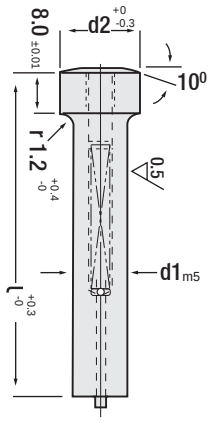
Order: SBZ. d1 x l

Order Example:
SBZ. 10 x 100

NEW

Coating as per request





Heavy Duty Headed Punch with Ejector

Code: SFZF

* Larger-headed

(Blank type)

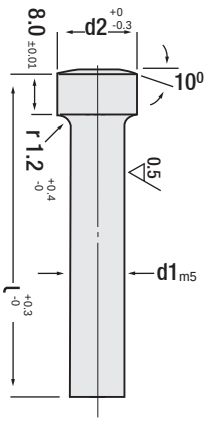
d1	l	d2
8	70 80 100	13
10		15
12		17
13		18
16		21
20		25
25		30

Material:
1.3343 (M2) completely ground
Heat Treated:
60 - 63 HRC
Head Hardness:
40 - 55 HRC

Order: SFZF. d1 x l

Order Example: SFZF. 20 x 100

NEW



Heavy Duty Headed Punch

Code: SBZF

* Larger-headed

(Blank type)

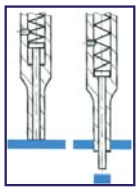
d1	l	d2
6	70 80 100	11
8		13
10		15
12		17
13		18
16		21
20		25
25		30

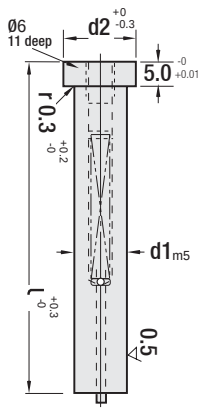
Material:
1.3343 (M2) completely ground
Heat Treated:
60 - 63 HRC
Head Hardness:
40 - 55 HRC

Order: SBZF. d1 x l

Order Example: SBZF. 8 x 80

NEW





Center Dowel Headed Punch with Ejector

Code: DFZ

(Blank type)

ISO 8020, with center dowel

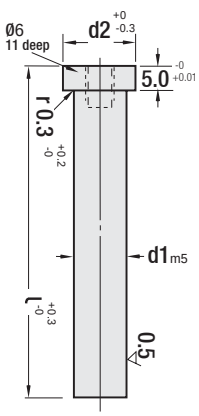
d1	l	d2
10	71 80 90 100	13
13		16
16		19
20		23
25		28
32		35

Material:
1.3343 (M2) completely ground
Heat Treated:
60 - 63 HRC
Head Hardness:
40 - 55 HRC

Order: DFZ. d1 x l

Order Example: DFZ. 13 x 100

NEW



Center Dowel Headed Punch

Code: DSZ

(Blank type)

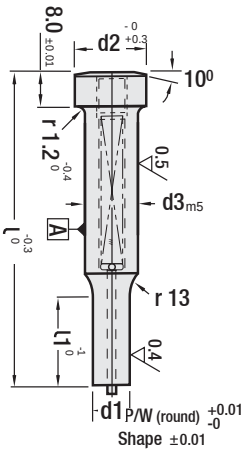
ISO 8020, with center dowel

d1	l	d2
10	71 80 90 100	13
13		16
16		19
20		23
25		28
32		35

Material:
1.3343 (M2) completely ground
Heat Treated:
60 - 63 HRC
Head Hardness:
40 - 55 HRC

Order: DSZ. d1 x l

Order Example: DSZ. 10 x 71



Heavy Duty Stepped Punch with Ejector

Code: SF..F

* Larger-headed

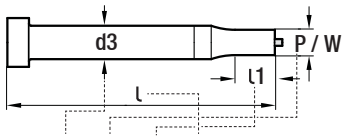
Order Codes:

SFYF - SFOF - SFKF - SFDF - SFAF - SFMF - SFXF - SFPF

Please refer to the table on the right side →

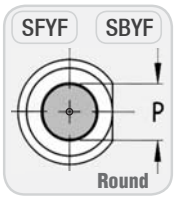
Order d3	Head d2	d1 / Shape (SFYF) Round P	d1 / Shape Other Shapes W G/P	Standard l1	Alternative l1 Min.	Alternative l1 Max.	l mm
SF..F08	13	4.0 ~ 7.99	4.0 - 8	13	13	25	60
SF..F10	15	5.0 ~ 9.99	5.0 - 10	13	13	25	70
SF..F13	18	6.0 ~ 12.99	6.0 - 13	13	13	25	80
SF..F16	21	10 ~ 15.99	6.0 - 16	19	13	25	90
SF..F20	25	13 ~ 19.99	6.0 - 20	19	13	25	100
SF..F25	30	18 ~ 24.99	6.0 - 25	19	13	25	

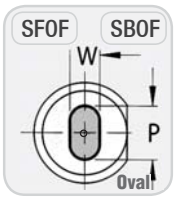
How to order:
Shape
d3
P/W
l1
l
Material

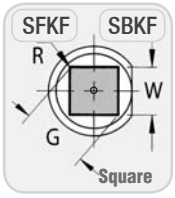


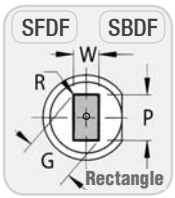
SFYF x 10 x P7.0 x 13 x 80 - M2
SFOF x 10 x P8.2 x W5.2 x 25 x 100 - M2

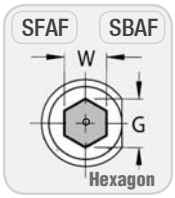
Shapes

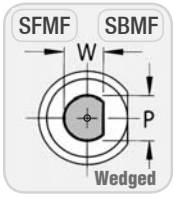


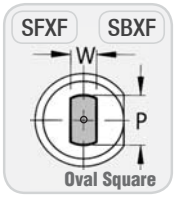


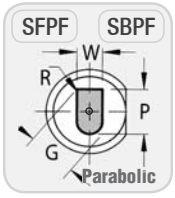


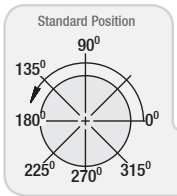


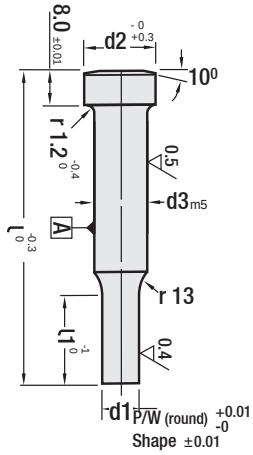












Heavy Duty Stepped Punch

Code: SB..F

* Larger-headed

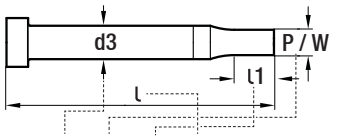
Order Codes:

SBYF - SBOF - SBKF - SBDF - SBAF - SBMF - SBXF - SBPF

← Please refer to the table on the left side

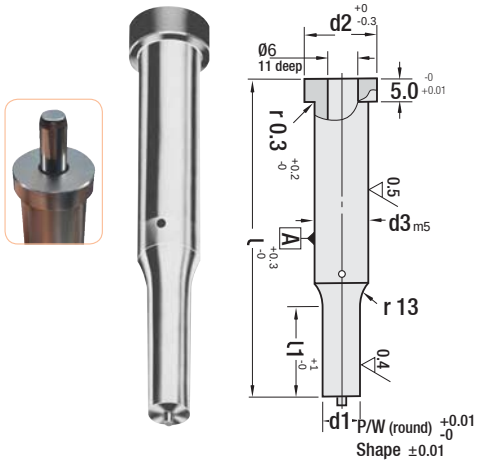
Order d3	Head d2	d1 / Shape (SBYF) Round P	d1 / Shape Other Shapes W G/P	Standard l1	Alternative l1 Min.	Alternative l1 Max.	l mm
SB..F08	13	3.0 ~ 7.99	3.0 - 8	13	13	25	60
SB..F10	15	3.0 ~ 9.99	3.0 - 10	13	13	25	70
SB..F13	18	6.0 ~ 12.99	3.0 - 13	13	13	25	80
SB..F16	21	10 ~ 15.99	4.0 - 16	19	13	25	90
SB..F20	25	13 ~ 19.99	5.0 - 20	19	13	25	100
SB..F25	30	18 ~ 24.99	6.0 - 25	19	13	25	

How to order:
Shape
d3
P/W
l1
l
Material



SBYF x 10 x P7.0 x 13 x 80 - M2
SBOF x 10 x P8.2 x W5.2 x 25 x 100 - M2

The standard location of key flats is at 0°.
Alternate locations of 90°, 180° or 270° can be specified.



Code: DF..

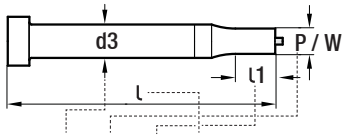
Center Dowel Stepped Punch with Ejector

Order Codes: **DFY - DFO - DFK - DFD - DFA - DFM - DFX - DFP**

Please refer to the table on the right side →

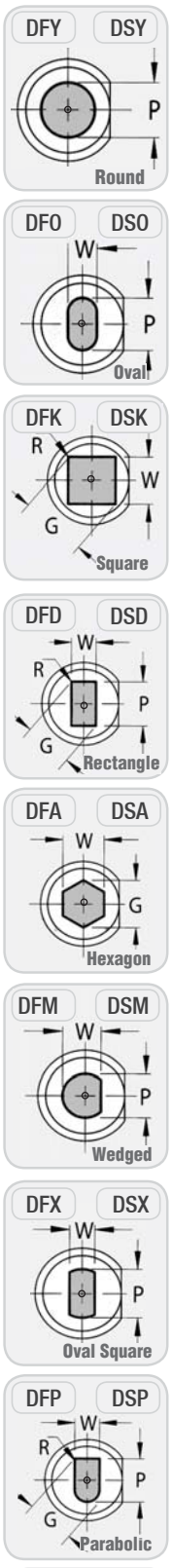
Order d3	Head d2	d1 / Shape (DFY) Round P	d1 / Shape Other Shapes W G/P	Standard l1	Alternative l1 Min.	Alternative l1 Max.	l mm
DF..10	13	4.5 ~ 9.99	4.5 - 10	19	13	25	
DF..13	16	6.0 ~ 12.99	6.0 - 13	19	13	25	63
DF..16	19	8.0 ~ 15.99	7.2 - 16	19	13	25	71
DF..20	23	10 ~ 19.99	8.0 - 20	19	13	25	80 90
DF..25	28	12 ~ 24.99	9.0 - 25	19	13	25	100
DF..32	35	16 ~ 31.99	10.0 - 32	25	19	30	

How to order:
Shape
d3
P/W
l1
l
Material

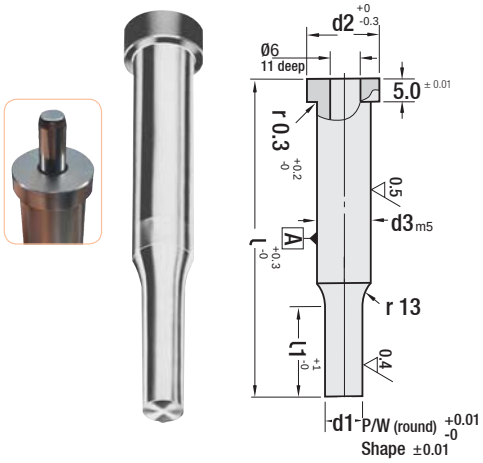


DFY x 10 x P7.0 x 13 x 80 - M2
DFO x 10 x P8.2 x W5.2 x 25 x 100 - M2

Shapes



The standard location of key flats is at 0⁰.
Alternate locations of 90⁰, 180⁰ or 270⁰ can be specified.



Code: DS..

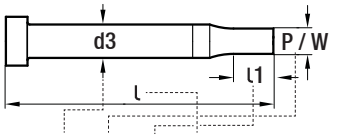
Center Dowel Stepped Punch

Order Codes: **DSY - DSO - DSK - DSD - DSA - DSM - DSX - DSP**

← Please refer to the table on the left side

Order d3	Head d2	d1 / Shape (DSY) Round P	d1 / Shape Other Shapes W G/P	Standard l1	Alternative l1 Min.	Alternative l1 Max.	l mm
DS..10	13	4.5 ~ 9.99	4.5 - 10	19	13	25	
DS..13	16	6.0 ~ 12.99	6.0 - 13	19	13	25	63
DS..16	19	8.0 ~ 15.99	7.2 - 16	19	13	25	71
DS..20	23	10 ~ 19.99	8.0 - 20	19	13	25	80 90
DS..25	28	12 ~ 24.99	9.0 - 25	19	13	25	100
DS..32	35	16 ~ 31.99	10.0 - 32	25	19	30	

How to order:
Shape
d3
P/W
l1
l
Material



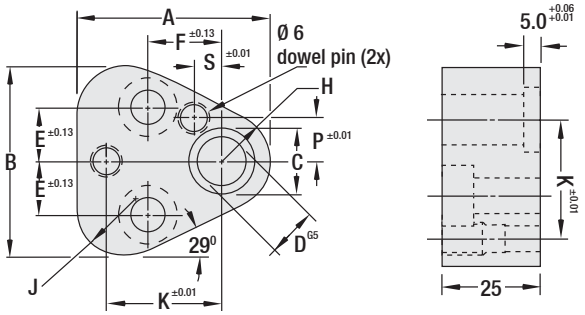
DSY x 10 x P7.0 x 13 x 80 - M2
DSO x 10 x P8.2 x W5.2 x 25 x 100 - M2

Punch Retainer

Code: GPR

For round punches / ISO 8020

- Centre of pin holes are reference points for punch hole position.
- Shim and backing plate should be supplied separately.
- Retainer includes 2 dowel pins + 2 screws.



Code: GPR

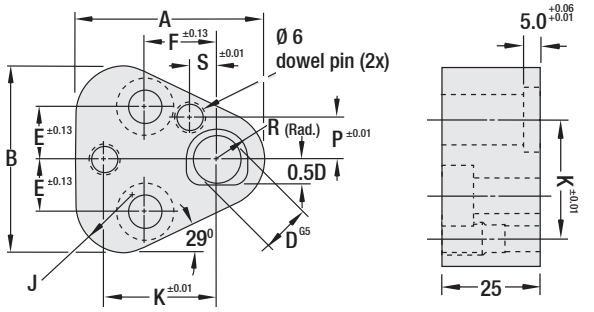
Order	GPR. 10	GPR. 13	GPR. 16	GPR. 20	GPR. 25	GPR. 32
D (punch)	10	13	16	20	25	32
A	44.5	50.8	54.0	60.3	69.9	69.9
B	43.7	50.0	53.2	59.5	69.1	69.1
C	14.0	17.0	20.0	24.0	29.0	36.0
E	11.1	14.3	15.9	17.5	19.8	19.8
F	19.0	19.0	19.0	19.0	23.8	23.8
H	9.5	12.7	14.3	17.5	22.2	22.2
J	12.0	15.2	16.8	20.0	24.7	24.7
K	26.925	29.970	31.750	33.530	40.640	40.640
P	9.0	12.0	13.5	16.5	22.0	22.0
S	7.5	6.5	6.0	5.0	7.0	7.0
Screw	M8	M8	M8	M10	M12	M12

Punch Retainer

Code: GPRS

For shaped punches / ISO 8020

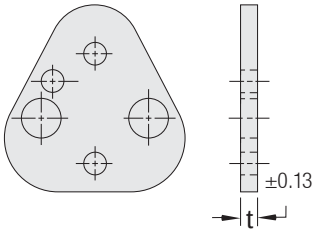
- Centre of pin holes are reference points for punch hole position.
- Shim and backing plate should be supplied separately.
- Retainer includes 2 dowel pins + 2 screws.



Code: GPRS

Order	GPRS. 10	GPRS. 13	GPRS. 16	GPRS. 20	GPRS. 25	GPRS. 32
D (punch)	10	13	16	20	25	32
A	44.5	50.8	54.0	60.3	69.9	69.9
B	43.7	50.0	53.2	59.5	69.1	69.1
E	11.1	14.3	15.9	17.5	19.8	19.8
F	19.0	19.0	19.0	19.0	23.8	23.8
R	7.0	8.5	10.0	12.0	14.5	18.0
H	9.5	12.7	14.3	17.5	22.2	22.2
J	12.0	15.2	16.8	20.0	24.7	24.7
K	26.925	29.970	31.750	33.530	40.640	40.640
P	9.0	12.0	13.5	16.5	22.0	22.0
S	7.5	6.5	6.0	5.0	7.0	7.0
Screw	M8	M8	M8	M10	M12	M12

Shim & Backing Plate for Punch Retainer



Shim Plate
t = 1.8 (soft)

Code: PRSP

Order Code	Compatible Retainer	D	t
PRSP.1018	GPR / GPRS	10	1.8
PRSP.1318	GPR / GPRS	13	1.8
PRSP.1618	GPR / GPRS	16	1.8
PRSP.2018	GPR / GPRS	20	1.8
PRSP.2518	GPR / GPRS	25	1.8
PRSP.3218	GPR / GPRS	32	1.8

Backing Plate
t = 4.8 (55 HRC)

Code: PRBP

Order Code	Compatible Retainer	D	t
PRBP.1048	GPR / GPRS	10	4.8
PRBP.1348	GPR / GPRS	13	4.8
PRBP.1648	GPR / GPRS	16	4.8
PRBP.2048	GPR / GPRS	20	4.8
PRBP.2548	GPR / GPRS	25	4.8
PRBP.3248	GPR / GPRS	32	4.8