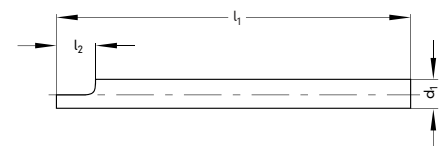


18012 - 18016 Engraver's Points

Type
With rough-ground profile.
Use
For use on tempered and chrome-nickel steel. For engraving lettering, profiling for contours, die-forged and moulded design etc.

18012
Section A
Quality
HSS-EW 9 Co 10 (10 % cobalt).

18014
Section A
Quality
HM K 10.
18016
Section D 60°
Quality
HM K 10.



Material	Engraver's point		Recommended values for Relief Angle
	Steel	Carbide K 10	
Steel, cast steel	50 - 70	60 - 100	-
Steel to 900 N/mm ²	40 - 70	120 - 160	15° - 25°
Steel over 900 N/mm ²	-	50 - 70	-
Brass, aluminium	200 - 250	200 - 400	35°
Plastics (Astralon, Plexiglas, Resopal, etc.)	200 - 300	200 - 600	35°
Light alloy, copper, gold, silver	200 - 250	200 - 400	30°

HSS-E			
d ₁ mm	l ₁ mm	l ₂ mm	18012 ...
2,5	40	6	101
4	60	10	102
6	80	14	103
8	90	16	104
8	125	16	105
10	125	18	106
12	125	18	107

HM-K10			HM-K10	
d ₁ mm	l ₁ mm	l ₂ mm	18014 ...	18016 ...
2,5	40	3	102	
3	40	3	103	103
4	40	4	104	104
4	60	4		105
6	70	6	107	107
8	80	8	108	108
10	80	10	109	

18020 Heavy-Duty Tool Bits DIN 4964 A

Type
Round. Hardened throughout, surface ground on all faces. Ready for immediate use after being ground to form.

Quality
HSS-1.3207
(EW 9 Co 10 - cobalt 10%).



HSS-E		
Ø x l mm	18020	...
4 x 100	103	
5 x 100	105	
6 x 100	107	
8 x 80	110	
8 x 100	111	
8 x 160	113	
10 x 80	115	

HSS-E		
Ø x l mm	18020	...
10 x 100	116	
10 x 125	117	
10 x 160	118	
10 x 200	119	
12 x 100	122	
12 x 160	124	
14 x 125	127	

HSS-E		
Ø x l mm	18020	...
16 x 125	131	
16 x 160	132	
18 x 200	135	
20 x 160	138	
20 x 200	139	

18021 Heavy-Duty Tool Bits

Type
Round. Ground, tolerance h5. Ready for immediate use after being ground to form.

Use
For engraving and profiling contours in tool- and mould making.

Quality
Solid carbide K10/K40.



Solid carbide		
Ø x l mm	18021	...
3 x 100	101	
4 x 100	102	
5 x 100	103	
6 x 100	104	

Solid carbide		
Ø x l mm	18021	...
8 x 100	105	
10 x 100	107	
12 x 100	108	