



SEGMENT APPLICATION GUIDELINES

Wear & Die Applications



Ultrafine

Submicron

Medium

Coarse

Bimodal

HB Grade Code	Forming Dies	Compacting Dies	Stamping Dies	Punches	Ejector Pins	Nozzles	Drawing Dies	Rolls	Thread Rolling	Slitter Knives	EDM Blanks	Forging Hammers	High Impact Forming Applications	Fastener Forming Dies	Light Stamping Carbide Dies & Nibs Deep Draw
HB-3						○									
HB-110					○	○				○					
HB-115				○	○		○			○					
HB-2					○										
HB-312	○	○		○		○	○	○	○		○	○			○
HB-315		○	○				○		○		○	○		○	○
HB-320	○	○	○				○	○			○		○	○	○
HB-325	○		○				○	○			○	○	○	○	

○ RECOMMENDED

○ INCREASE WEAR RESISTANCE

○ INCREASE TRANSVERSE RUPTURE STRENGTH





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HB Grade Code	Fastening Tools		Drawing Tools - Ferrous Metals (Dies & Mandrels) large Ø → small Ø			Drawing Tools - Non-Ferrous Metals (Dies & Mandrels) large Ø → small Ø			Hammering Tools			Hammering Mandrels			Cold Forming Punches		
	Clamping Dies	Cutting Knives	High Toughness	Medium Toughness Medium Wear Resistance	High Wear Resistance	High Toughness	Medium Toughness Medium Wear Resistance	High Wear Resistance	High Toughness	Medium Toughness Medium Wear Resistance	High Wear Resistance	High Toughness	Medium Toughness Medium Wear Resistance	High Wear Resistance	High Toughness	Medium Toughness Medium Wear Resistance	High Wear Resistance
HB-3					○		○	○									
HB-110				○			○	○									○
HB-115				○	○		○	○						○		○	○
HB-2			○		○									○			○
HB-312	○	○				○			○		○	○	○			○	○
HB-315	○	○				○				○	○	○	○		○	○	
HB-320	○	○							○	○		○			○	○	
HB-325			○						○	○		○			○		
HB-411		○			○			○	○							○	



RECOMMENDED



INCREASE WEAR RESISTANCE



INCREASE TRANSVERSE RUPTURE STRENGTH



H.B. Carbide



SEGMENT APPLICATION GUIDELINES

Wear & Die Applications



HB Grade Code	Extrusion Dies			Calibration Dies large Ø → small Ø			Simple Cold Forming Dies		
	High Toughness	Medium Toughness Medium Wear Resistance	High Wear Resistance	High Toughness	Medium Toughness Medium Wear Resistance	High Wear Resistance	High Toughness	Medium Toughness Medium Wear Resistance	High Wear Resistance
HB-3						○			
HB-110			○			○			
HB-115			○			○			
HB-2					○				
HB-312		○	○	○	○				○
HB-315	○	○	○	○	○			○	○
HB-320	○	○	○	○	○		○	○	
HB-325	○	○			○		○	○	
HB-411								○	



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HB Grade Code	Ammunition Dies	Casing & Bullet Die Blanks	Draw Dies	Cartridge Drawing Die	Header Dies	Fine Blanking Dies	Stamping Dies	Fastener Forming Dies	Forging Hammers	Punches & Ejector Pins	Impact Punches
HB-3											
HB-110										○	
HB-115			○							○	○
HB-312	○		○	○		○	○		○	○	
HB-315	○	○	○		○	○	○	○	○		○
HB-320	○	○		○	○	○	○	○	○		
HB-325					○			○			
HB-411										○	○

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H.B. CARBIDE DRILLING MAXIMUMS

DRILL DIAMETER (Inches)	MAXIMUM BLINDHOLE DEPTH (Holding .010 hole drift)
.016	.350"
.025	4.00"
.030	5.50"
.040	5.50"
.050	7.00"
.060	8.00"
.080	10.00"
.100+	12.00"

DRILL DIAMETER (mm)	MAXIMUM BLINDHOLE DEPTH (Holding .25 mm hole drift)
.40	8.9 mm
.64	101 mm
.76	140 mm
1.00	140 mm
1.27	178 mm
1.50	203 mm
2.00	254 mm
2.50+	305 mm

Maximum Mill travel: Tool length + Blindhole depth = < 30" (762 mm)

Maximum tool length with through hole 20" (508 mm)

The longest drill body we keep in stock is 12.5" (317 mm)

PLEASE CALL IF ANY HOLES ARE REQUIRED OUTSIDE OF THESE PARAMETERS

