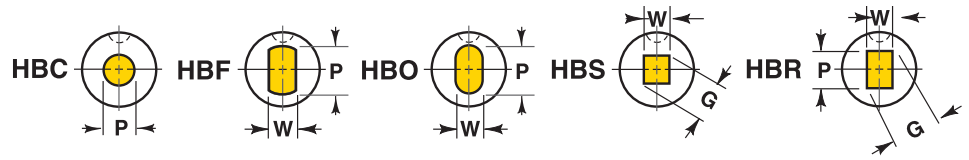
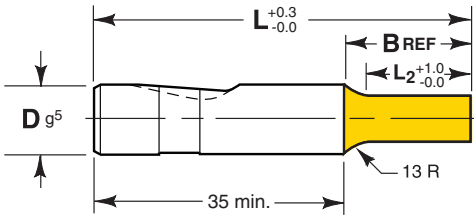
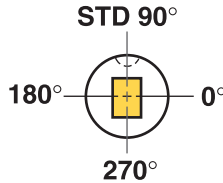


PORTER Heavy Duty Bal-Lok Solid Punch (HB-)



Ordering Example:

Qty Steel Type Code B L₂/L W P
13 M2 HBO 016 B 1980 7.50 x 15.00



Standard ball seat location is at 90° using reflected view for punches. Alternate locations of 0°, 180° and 270° are available at no extra charge. Custom ball seat locations can be specified as number of degrees counterclockwise from 0°. Example call out: BS 180°

Steel: M2 Rc 60-63

TOLERANCES

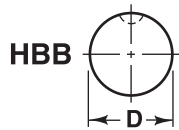
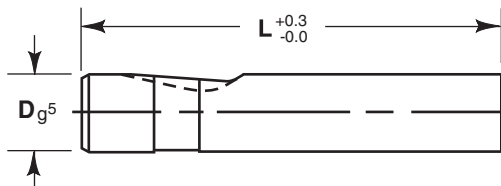
Round P ^{+0.01} / _{-0.00}	◎ 0.01	P to D
Shape P, W ±0.01	◎ 0.02	P,W to D

Manufactured to ISO and NAPMA standards where applicable.
Back Draft 0.1/100mm L₂ max.

Shank		Point Length L ₂			Lengths L								Point			
D mm	Code No.	Std.	Alt.	Alt.	63	71	80	90	100	110	125	150	Round Range P		Shape Min W Max P/G	
													10	010	19	10
13	013	19	13	25	◆	●	●	●	●	●	●	●		5.00 – 12.97	4.50	12.97
16	016	19	13	25	◆	●	●	●	●	●	●	●		8.00 – 15.97	6.00	15.97
20	020	19	13	25	◆	●	●	●	●	●	●	●		12.00 – 19.97	8.00	19.97
25	025	19	13	25		●	●	●	●	●	●	●		16.00 – 24.97	10.00	24.97
32	032	19	13	25		●	●	●	●	●	●	●		24.00 – 31.97	12.50	31.97
40	040	25	19	30			●	●	●	●	●			30.00 – 39.97	14.00	39.97

◆ = L₂, 25 is not available.

PORTER Heavy Duty Bal-Lok Punch Blank (HBB)



Ordering Example:

Qty Steel Type Code L
6 M2 HBB 025 110

Shank		Lengths L							
D mm	Code No.	63	71	80	90	100	110	125	150
13	013	●	●	●	●	●	●	●	●
16	016	●	●	●	●	●	●	●	●
20	020	●	●	●	●	●	●	●	●
25	025		●	●	●	●	●	●	●
32	032		●	●	●	●	●	●	●
40	040			●	●	●	●	●	

Standard Alterations are changes that are beyond the ranges listed in the catalog that can be altered for a minimal charge. See page 37.

For additional standard forms and configurations see pages 32 and 33.