

**LIGHT DUTY**

**Ball Lock Pilot - Conical** Code: **BPK**

"N" becomes = 1.2 x "P" minimum when "P" is below (see table).

Standard Tolerances

Round / P <sup>+01</sup> <sub>-00</sub>		,01	From P to d2
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When P = d2, shank / body tolerances apply.

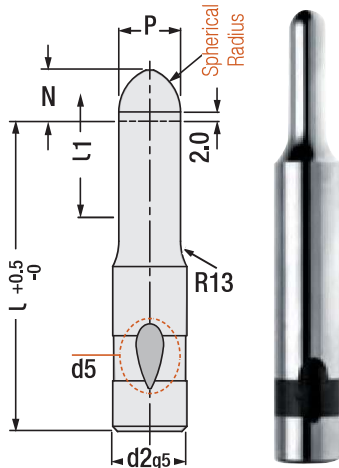
Material: 1.3343 (M2) Hardness: 60 - 62 HRC

d2	d5	P	L1	N	l
10	8 mm	5.9 ~ 9.9	19	8	71
13		9.9 ~ 12.9	19	10	80
16		12.9 ~ 15.9	25	15	100
20		15.9 ~ 19.9	25	20	71
25		19.9 ~ 24.9	25	25	80
32		24.9 ~ 31.9	25	30	100
38		31.9 ~ 37.9	30	35	125

Note: P / L selection as per request.  
- Special dimensions on request.



Order: **BPK**, d2 x P x L



**LIGHT DUTY**

**Ball Lock Pilot - Spherical** Code: **BPX**

- It is length of "L" pilot except end.  
- 2 mm length is guided to punch before punch contacting sheet metal.

P	N
≤ 10 mm	8 mm
10.1 mm - 15 mm	12 mm
> 15 mm	15 mm

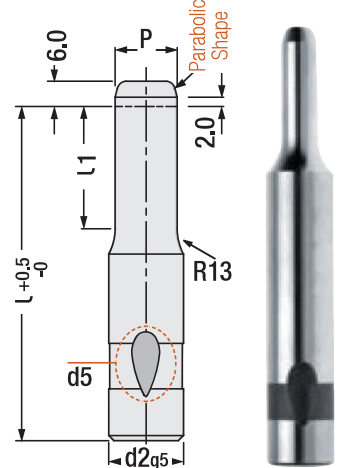
Material: 1.3343 (M2) Hardness: 60 - 62 HRC

d2	d5	P	L1	N	l
6	6	2.9 ~ 5.9	13	-	63 71 80 90 100
10	8 mm	5.9 ~ 9.9	19	8	
13		9.9 ~ 12.9	19	10	
16		12.9 ~ 15.9	25	15	
20		15.9 ~ 19.9	25	15	
25		19.9 ~ 24.9	25	20	
32		24.9 ~ 31.9	25	25	

Note: P / L selection as per request.  
- Special dimensions on request.



Order: **BPX**, d2 x P x L



**LIGHT DUTY**

**Ball Lock Pilot - Parabolic** Code: **BPP**

"N" becomes = 1.2 x "P" minimum when "P" is below (see table).

Standard Tolerances

Round / P <sup>+01</sup> <sub>-00</sub>		,01	From P to d2
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When P = d2, shank / body tolerances apply.

Material: 1.3343 (M2) Hardness: 60 - 62 HRC

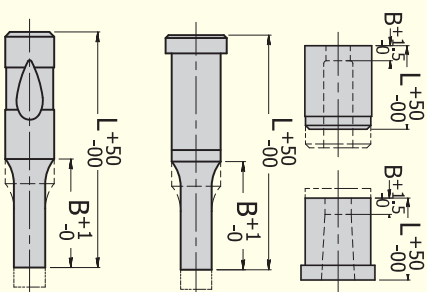
d2	d5	P	L1	N	l
6	6	2.2 ~ 6.0	13	-	63 71 80 90 100
10	8 mm	2.5 ~ 10	19	8	
13		5.0 ~ 13	19	10	
16		8.0 ~ 16	19	15	
20		12 ~ 20	19	20	
25		16 ~ 15	19	25	

Note: P / L selection as per request.  
- Special dimensions on request.



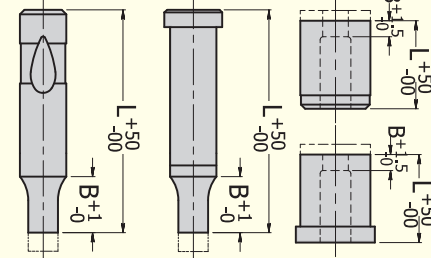
Order: **BPP**, d2 x P x L

**Alternative Selection Information: Gaps Except Punch Centre**



**X1** B: Main Dimension

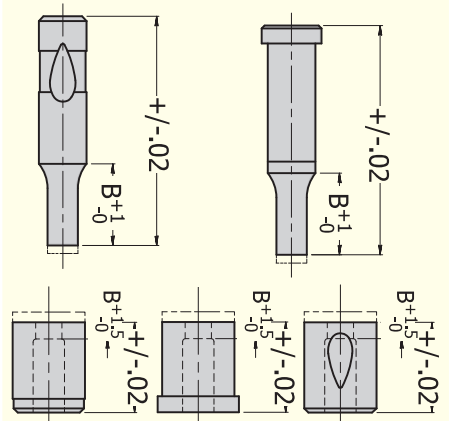
Shortening punch or matrix length maintaining "B" point or land length. Not available in counter bore style on headed or ball lock matrices.



**X2** B: Shortened Dimension

Shortening punch or matrix length but also decreases "B" dimension or land length.

**Technical Information !**



**X3**

Provides a precision overall length of ± 02  
Note: 5 maximum stock removal

