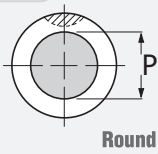
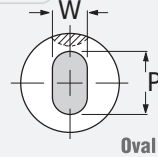


### Shapes

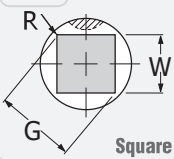
BHY



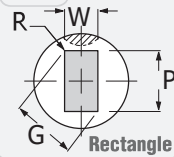
BHO



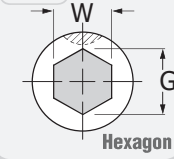
BHK



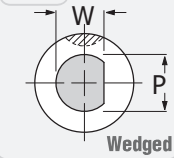
BHD



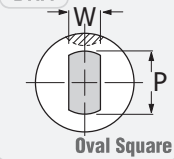
BHA



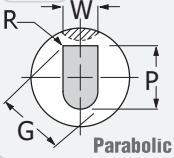
BHM



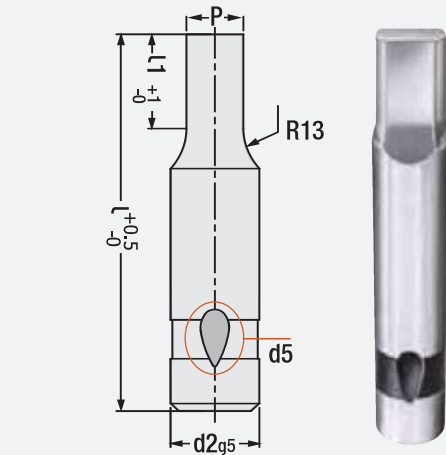
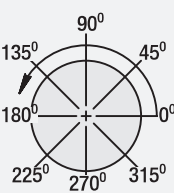
BHX



BHP



Standard Position



LIGHT DUTY

### Ball Lock Stepped Punch - Light Duty

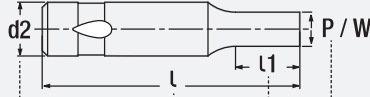
Code: BH..

Types: **BHY - BHO - BHK - BHD - BHA - BHM - BHX - BHP**

← Please refer to the table on the left side

How to order:

Shape  
d2  
P/W  
L1  
L  
Material



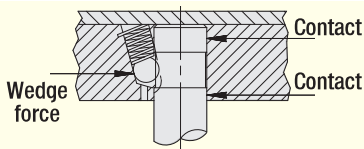
BHY x 10 x P8.2 x 19 x 90 - M2

- When P = d2 shank / body tolerances apply.  
- Standard ball socket location is at 90°.

| Order d2 | Ball Socket d5 | d1 / Shape    |                    | Standard L1 | Alternative L1 |      | L mm |
|----------|----------------|---------------|--------------------|-------------|----------------|------|------|
|          |                | (BHY) Round P | Other Shapes W G/P |             | Min.           | Max. |      |
| BH..06   | 6              | 2.2 ~ 5.9     | 2.2 - 5.9          | 13          | 10             | -    | 63   |
| BH..10   | 8 mm           | 2.5 ~ 9.9     | 2.5 - 9.9          | 19          | 10             | 19   | 71   |
| BH..13   |                | 5.0 ~ 12.9    | 4.5 - 12.9         | 19          | 13             | 25   | 80   |
| BH..16   |                | 8.0 ~ 15.9    | 6.0 - 15.9         | 19          | 13             | 25   | 90   |
| BH..20   |                | 12 ~ 19.9     | 8.0 - 19.9         | 19          | 13             | 25   | 100  |
| BH..25   |                | 16 ~ 24.9     | 10 - 24.9          | 19          | 13             | 25   | 100  |
| BH..32   |                | 24 ~ 31.9     | 12.5 - 31.9        | 25          | 25             | 30   | 80   |
| BH..38   |                | 30 ~ 37.9     | 14 - 37.9          | 25          | 25             | 30   | 90   |

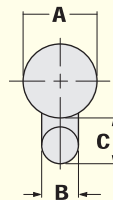
Order: **BH**(type). d2 x (P/W) x L1 x L

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

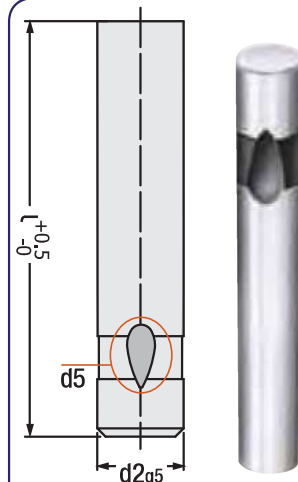


#### Requirements of Ball Locking Place

| Punch Dia. A | Ball Dia. B | Clearance C |
|--------------|-------------|-------------|
| 6.0          | 8           | 10          |
| 10           |             |             |
| 13           |             |             |
| 16           |             |             |
| 20           |             |             |
| 25           |             |             |
| 32           |             |             |
| 38           | 11          |             |

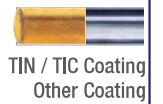


for precise retainers, please add 1.7 to "C" dimension



LIGHT DUTY

Punch as per request:



### Ball Lock Punch - Light Duty

Code: BHZ

(Blank type)

Body and cutting edge are precision ground. It is for durable parts in all kinds of dies. 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, coating thickness is 2 - 4 microns.

| d2      | d5   | L   | d2      | d5   | L   |
|---------|------|-----|---------|------|-----|
| Ø 20 mm | 8 mm | 63  | Ø 6 mm  | 6 mm | 63  |
|         |      | 71  |         |      | 71  |
|         |      | 80  |         |      | 80  |
|         |      | 100 |         |      | 100 |
|         |      | 125 |         |      | 125 |
|         |      | 150 |         |      | 150 |
| Ø 25 mm | 8 mm | 175 | Ø 10 mm | 8 mm | 63  |
|         |      | 63  |         |      | 71  |
|         |      | 71  |         |      | 80  |
|         |      | 80  |         |      | 100 |
|         |      | 100 |         |      | 110 |
|         |      | 125 |         |      | 120 |
|         |      | 150 |         |      | 125 |
| Ø 32 mm | 8 mm | 175 | Ø 13 mm | 8 mm | 63  |
|         |      | 200 |         |      | 71  |
|         |      | 71  |         |      | 80  |
|         |      | 80  |         |      | 100 |
|         |      | 100 |         |      | 125 |
|         |      | 125 |         |      | 150 |
|         |      | 150 |         |      | 175 |
| Ø 38 mm | 8 mm | 200 | Ø 16 mm | 8 mm | 63  |
|         |      | 80  |         |      | 71  |
|         |      | 100 |         |      | 80  |
|         |      | 125 |         |      | 100 |
|         |      | 150 |         |      | 125 |
|         |      | 175 |         |      | 150 |
|         |      | 200 |         |      | 175 |

Order: **BHZ**. d2 x L

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

Note: Special dimensions on request.

Dies



Page

195