

# Locating Pins - High Hardness Stainless Steel Large Head, Tapered

## Press Fit / Tapped / Threaded

☎For products uncovered by e-Catalog Standard, see ☎ P131.

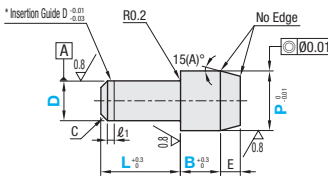
■Features: For High Hardness Stainless Steel Large Head Tapered Type, the configurable range of dimensions has been further widened and the number of available alterations has been increased. For orders of up to 1,000 pcs., the 7th Day Shipping is available. (For details, see P1617)



| Material                      | Hardness | Pin Shape | Press Fit |       |       |       | Tapped |        | Threaded |       |
|-------------------------------|----------|-----------|-----------|-------|-------|-------|--------|--------|----------|-------|
|                               |          |           | m6        | p6    | g6    | h7    | g6     | h7     | g6       | h7    |
| High Hardness Stainless Steel | 35HRC~   | Round     | AFBPA     | AFBPA | AFBGA | AFBHA | AFBTA  | AFBTHA | AFNA     | AFNHA |
|                               |          | Diamond   | AFBPD     | AFBPD | AFBGD | AFBHD | AFBTD  | AFBTHD | AFND     | AFNHD |

☎When the dia. exceeds Ø10, the center hardness may become 30HRC~.

### • Press Fit

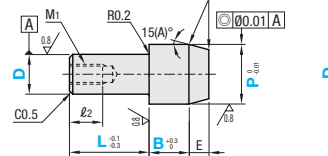


(Round)

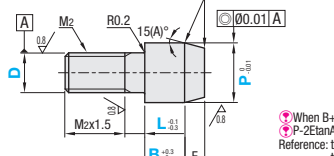
(Diamond)

6.3 / (0.8 / )

### • Tapped



### • Threaded



☎When B+E>20mm, the P dim. tolerance is 0-0.02.  
☎P-2EtanA≥0.73 (Tip dia. Ø0.73 or more)  
Reference: tan15°=0.267 tan30°=0.577  
tan45°=1 tan60°=1.732  
☎For D Tolerance g6, h7, no Insertion Guide is provided.

### ■Press Fit

| Part Number                                                       |    | P                |               | L               |                  | B               |                  | E               |                  | C | ℓ1  | (W) | Unit Price Round Shape | Unit Price Diamond Shape |
|-------------------------------------------------------------------|----|------------------|---------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|---|-----|-----|------------------------|--------------------------|
| Type                                                              | D  | 0.01mm Increment | 1mm Increment | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable |   |     |     |                        |                          |
| <Round><br>AFPBA (m6)<br>AFBPA (p6)<br>AFBGA (g6)<br>AFBHA (h7)   | 2  | 2.50~8.00        | 3(4)~16       | 1.0~20.0        | 1                | 0.5~10.0        | 0.5              | 1               | 1.2              | 0 | 1.2 |     |                        |                          |
|                                                                   | 3  | 3.50~8.00        |               |                 |                  |                 |                  |                 |                  |   |     |     |                        |                          |
|                                                                   | 4  | 4.50~8.00        |               |                 |                  |                 |                  |                 |                  |   |     |     |                        |                          |
|                                                                   | 5  | 5.50~8.00        |               |                 |                  |                 |                  |                 |                  |   |     |     |                        |                          |
| <Diamond><br>AFBBD (m6)<br>AFBPD (p6)<br>AFBGD (g6)<br>AFBHD (h7) | 6  | 6.50~12.00       |               |                 |                  |                 |                  |                 |                  |   |     |     |                        |                          |
|                                                                   | 8  | 8.50~15.00       |               |                 |                  |                 |                  |                 |                  |   |     |     |                        |                          |
|                                                                   | 10 | 10.50~16.00      |               |                 |                  |                 |                  |                 |                  |   |     |     |                        |                          |
|                                                                   | 12 | 12.50~17.50      |               |                 |                  |                 |                  |                 |                  |   |     |     |                        |                          |

☎L, B dimensions in ( ) are applicable to Diamond Shape. ☎When L=3, C=0.5, ℓ1=1.

### ■Tapped

| Part Number                            |    | P                |               | L               |                  | B               |                  | E               |                  | M1 (Coarse) | * Recommended Tightening Torque N·cm | ℓ2 | (W) | Unit Price Round Shape | Unit Price Diamond Shape |
|----------------------------------------|----|------------------|---------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-------------|--------------------------------------|----|-----|------------------------|--------------------------|
| Type                                   | D  | 0.01mm Increment | 1mm Increment | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable |             |                                      |    |     |                        |                          |
| <Round><br>AFBTA (g6)<br>AFBTHA (h7)   | 6  | 6.50~12.00       | 6(9)~16       | 1.0~30.0(20.0)  | 3                | 0.5~10.0        | M3               | 147             | 5                | 3           |                                      |    |     |                        |                          |
|                                        | 8  | 8.50~15.00       |               |                 |                  |                 |                  |                 |                  |             |                                      |    |     |                        |                          |
|                                        | 10 | 10.50~16.00      |               |                 |                  |                 |                  |                 |                  |             |                                      |    |     |                        |                          |
|                                        | 12 | 12.50~17.50      |               |                 |                  |                 |                  |                 |                  |             |                                      |    |     |                        |                          |
| <Diamond><br>AFBTD (g6)<br>AFBTHD (h7) | 6  | 6.50~12.00       |               |                 |                  |                 | M4               | 333             | 6                | 3.5         |                                      |    |     |                        |                          |
|                                        | 8  | 8.50~15.00       |               |                 |                  |                 |                  |                 |                  |             |                                      |    |     |                        |                          |
|                                        | 10 | 10.50~16.00      |               |                 |                  |                 |                  |                 |                  |             |                                      |    |     |                        |                          |
|                                        | 12 | 12.50~17.50      |               |                 |                  |                 |                  |                 |                  |             |                                      |    |     |                        |                          |

☎Note the strength of under-head part ☎P1618 ☎L, B dimensions in ( ) are applicable to Diamond Shape. ☎Please confirm pilot hole depth on ☎P1618. Holes may go through.

\* Tightening torque (reference) is of Tightening Torque Strength Class (10.9) indicated on Technical Data ☎P2365. Not applicable when using locking materials or lock washers.

### ■Threaded

| Part Number                                                     |    | P                |               | L               |                  | B               |                  | E               |                  | M2 (Coarse) | * Recommended Tightening Torque N·cm | (W) | Unit Price Round Shape | Unit Price Diamond Shape |
|-----------------------------------------------------------------|----|------------------|---------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-------------|--------------------------------------|-----|------------------------|--------------------------|
| Type                                                            | D  | 0.01mm Increment | 1mm Increment | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable |             |                                      |     |                        |                          |
| <Round><br>AFBNA (g6)<br>AFBPA (p6)<br>AFBGA (g6)<br>AFBHA (h7) | 3  | 3.50~8.00        | 0~10          | 1.0~20.0        | 0.5              | 0.5~10.0        | M3               | 147             | 1.5              |             |                                      |     |                        |                          |
|                                                                 | 4  | 4.50~8.00        |               |                 |                  |                 |                  |                 |                  |             |                                      |     |                        |                          |
|                                                                 | 5  | 5.50~8.00        |               |                 |                  |                 |                  |                 |                  |             |                                      |     |                        |                          |
|                                                                 | 6  | 6.50~12.00       |               |                 |                  |                 |                  |                 |                  |             |                                      |     |                        |                          |
| <Diamond><br>AFBND (g6)<br>AFBNDH (h7)                          | 8  | 8.50~15.00       |               |                 |                  |                 | M4               | 333             | 1.8              |             |                                      |     |                        |                          |
|                                                                 | 10 | 10.50~16.00      |               |                 |                  |                 |                  |                 |                  |             |                                      |     |                        |                          |
|                                                                 | 12 | 12.50~17.50      |               |                 |                  |                 |                  |                 |                  |             |                                      |     |                        |                          |
|                                                                 | 12 | 12.50~17.50      |               |                 |                  |                 |                  |                 |                  |             |                                      |     |                        |                          |

☎When L-Pitchx2, the incomplete threaded portion (Pitch x 2) is included in M2. For Coarse Thread Pitch Dims., see ☎P2360. ☎B dimension in ( ) is applicable to Diamond Shape.

\* Tightening torque (reference) is of Tightening Torque Strength Class (10.9) indicated on Technical Data ☎P2365. Not applicable when using locking materials or lock washers.

| Part Number      |       | P                |               | L               |                  | B               |                  | E               |                  |
|------------------|-------|------------------|---------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|
| Type             | D     | 0.01mm Increment | 1mm Increment | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable |
| Ordering Example | AFPBA | 8                | P9.02         | L10             | B3.2             |                 |                  |                 |                  |
|                  | AFBPA | 6                | P8.00         | L5              | B4.0             | E5.0            |                  |                 |                  |

| Part Number      |        | P                |               | L               |                  | B               |                  | E               |                  |
|------------------|--------|------------------|---------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|
| Type             | D      | 0.01mm Increment | 1mm Increment | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable |
| Ordering Example | AFPBA8 | P9.05            | L12           | B6.4            |                  |                 |                  |                 |                  |
|                  | AFBPA8 | P9.05            | L12           | B6.4            |                  |                 |                  |                 |                  |

| Alterations | Tapping                                                       | Air Vent                                                    | Wrench Hole                                                                                                                                                                   | Hex Socket Machining                                                                                                                    | Screwdriver Slot                             | Relief                                               | P Dimension Tolerance                                            | Taper Angle                                                    |
|-------------|---------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------|
| Code        | MH                                                            | AC                                                          | LAC                                                                                                                                                                           | RAC                                                                                                                                     | DRC                                          | NNC                                                  | PM/PP/PG/PH                                                      | A                                                              |
| Spec.       | Adds a tapped hole. (Ordering Code) MH                        | Adds an air vent. (Ordering Code) AC                        | Machines wrench holes. (Ordering Code) LAC                                                                                                                                    | Machines hex sockets. (Ordering Code) RAC                                                                                               | Adds a screwdriver slot. (Ordering Code) DRC | Adds a relief at the thread end. (Ordering Code) NNC | Changes the P dim. tolerance. (Ordering Code) PM                 | Changes the taper angle. (Ordering Code) A                     |
|             | Applicable when D≥6<br>B≥E+4<br>Applicable to Press Fit only. | Not applicable to Threaded Type.<br>It has a relief groove. | Diamond Shape Hole is drilled on the diamond head vertically but with arbitrary orientation of its diamond surfaces against those of the diamond head.<br>Applicable when D≥6 | Applicable Dimension<br>Values in ( ) are applicable to Tapped Type.                                                                    | Width 0.8mm<br>Depth 1mm                     | Applicable when L=0.                                 | Not applicable when B+E>20.<br>Applicable to Threaded Type only. | Applicable Dimension<br>Angle<br>A30 30°<br>A45 45°<br>A60 60° |
|             | D MH (Coarse)<br>M3 4<br>8-12 M4 6                            |                                                             | Applicable Dimension Wrench Hole Dimensions<br>P B Q<br>~9.99 5.0~9.9 2<br>10.0~30.0 2.5<br>5.0~7.9 2<br>10.00~ 8.0~11.9 2.5<br>12.0~30.0 3.5                                 | Applicable Dimension Hex Hole Dimensions<br>D B S e<br>6 6.5(11.0)~ 3 2<br>8 7.0(12.0)~ 4 2.5<br>10 8.0(13.0)~ 5 3<br>12 9.0(13.0)~ 6 4 |                                              |                                                      |                                                                  |                                                                |
|             |                                                               |                                                             |                                                                                                                                                                               |                                                                                                                                         |                                              |                                                      | 3 Days<br>Volume discount rate is applicable.                    | 3 Days<br>Volume discount rate is applicable.                  |

# Locating Pins - High Hardness Stainless Steel Sphere Large Head

## Press Fit / Tapped / Threaded

☎For products uncovered by e-Catalog Standard, see ☎ P131.

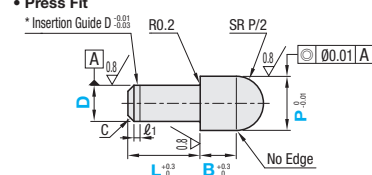
■Features: For High Hardness Stainless Steel Sphere Large Head Type, the configurable range of dimensions has been further widened. For orders of up to 1,000 pcs., 7th Day Shipping is available. (For details, see P1617.)



| Material                      | Hardness | Pin Shape | Press Fit |       |        | Tapped |        | Threaded |        |        |
|-------------------------------|----------|-----------|-----------|-------|--------|--------|--------|----------|--------|--------|
|                               |          |           | m6        | p6    | g6     | h7     | g6     | h7       | g6     | h7     |
| High Hardness Stainless Steel | 35HRC~   | Round     | AFPQA     | AFPQA | AFPQGA | AFPQHA | AFPQTA | AFPQTHA  | AFPQNA | AFPQNA |
|                               |          | Diamond   | AFPQD     | AFPQD | AFPQGD | AFPQHD | AFPQTD | AFPQTHD  | AFPQND | AFPQND |

☎When the dia. exceeds Ø10, the center hardness may become 30HRC~.

### • Press Fit

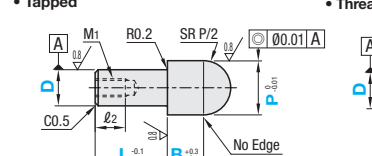


(Round)

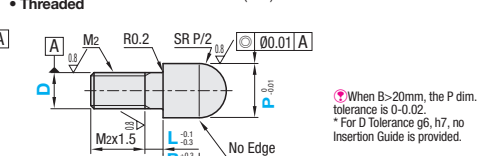
(Diamond)

6.3 / (0.8 / )

### • Tapped



### • Threaded



☎When B>20mm, the P dim. tolerance is 0-0.02.  
☎For D Tolerance g6, h7, no Insertion Guide is provided.

### ■Press Fit

| Part Number                                                          |    | P                |               | L               |                  | B               |                  | E               |                  | C | ℓ1 | (W) | Unit Price Round Shape | Unit Price Diamond Shape |
|----------------------------------------------------------------------|----|------------------|---------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|---|----|-----|------------------------|--------------------------|
| Type                                                                 | D  | 0.01mm Increment | 1mm Increment | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable | 0.1mm Increment | Not Configurable |   |    |     |                        |                          |
| <Round><br>AFPQA (m6)<br>AFPQPA (p6)<br>AFPQGA (g6)<br>AFPQHA (h7)   | 2  | 2.50~8.00        | 3(4)~16       | 1.0~20.0        | 0.5              | 1.2             | 1                | 1.2             | 0                |   |    |     |                        |                          |
|                                                                      | 3  | 3.50~8.00        |               |                 |                  |                 |                  |                 |                  |   |    |     |                        |                          |
|                                                                      | 4  | 4.50~8.00        |               |                 |                  |                 |                  |                 |                  |   |    |     |                        |                          |
|                                                                      | 5  | 5.50~8.00        |               |                 |                  |                 |                  |                 |                  |   |    |     |                        |                          |
| <Diamond><br>AFPQD (m6)<br>AFPQPD (p6)<br>AFPQGD (g6)<br>AFPQHD (h7) | 6  | 6.50~12.00       |               |                 |                  |                 |                  |                 |                  |   |    |     |                        |                          |
|                                                                      | 8  | 8.50~15.00       |               |                 |                  |                 |                  |                 |                  |   |    |     |                        |                          |
|                                                                      | 10 | 10.50~16.00      |               |                 |                  |                 |                  |                 |                  |   |    |     |                        |                          |
|                                                                      | 12 | 12.50~17.50      |               |                 |                  |                 |                  |                 |                  |   |    |     |                        |                          |

☎L, B dimensions in ( ) are applicable to Diamond Shape. ☎When L=3, C=0.5, ℓ1=1.

### ■Tapped

| Part Number                            |    | P                | L             | B               | M1       | * Tightening Torque | ℓ2 | (W) | Unit Price  | Unit Price    |
|----------------------------------------|----|------------------|---------------|-----------------|----------|---------------------|----|-----|-------------|---------------|
| Type                                   | D  | 0.01mm Increment | 1mm Increment | 0.1mm Increment | (Coarse) | N·cm                |    |     | Round Shape | Diamond Shape |
| <Round><br>AFPQTA (g6)<br>AFPQHTA (h7) | 6  | 6.50~12.00       | 6(9)~16       | 1.0~30.0(20.0)  | M3       | 147                 | 5  | 3   |             |               |
|                                        | 8  | 8.50~15.00       | 8(12)~16      |                 | M4       | 333                 | 6  | 3.5 |             |               |
| <Round><br>AFPQTD (g6)<br>AFPQHTD (h7) | 10 | 10.50~16.00      | 10(12)~20     |                 | M5       | 676                 | 8  | 4   |             |               |
|                                        | 12 | 12.50~17.50      | 12~25         |                 |          |                     |    | 5   |             |               |