Locating Pins for Grippers / Plate Centering Pins

Stepped / Counterbored / Tapped

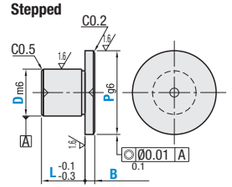
Locating Pins for Grippers

RoHS10

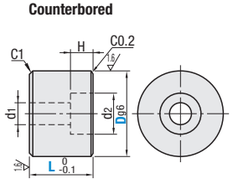
Type			Material	Surface Treatment
Stepped	Counterbored	Tapped		
IPMA	IPZA	IPTA	1045 Carbon Steel or Equivalent	Electroless Nickel Plating
SIPMA	SIPZA	SIPTA	304 Stainless Steel	—

6.3 (1.6)

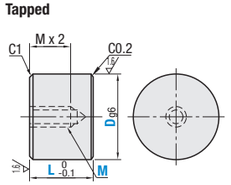
Stepped



Counterbored



Tapped



Center holes may disappear depending on dimension B.

Stepped

Part Number		0.1 mm Increment	
Type	D	P	L	B
IPMA SIPMA	5	6.0–15.0	5.0–10.0	1.0–10.0
	6	7.0–20.0		
	8	10.0–20.0		
	10	12.0–25.0		
	12	16.0–32.0		

Counterbored

Part Number		0.1 mm Increment		d_1	d_2	H
Type	No.	D	L			
IPZA	3	10.0–15.0	5.0–30.0	3.5	6.5	3.5
SIPZA	4	10.0–32.0	6.0–30.0	4.5	8	4.5
	5	12.0–32.0	7.0–30.0	5.5	9.5	5.5

Tapped

Part Number		0.1 mm Increment	
Type	M	D	L
IPTA	3	10.0–20.0	3.0–30.0
SIPTA	4	10.0–32.0	
	5	12.0–32.0	

*When L is less than M x 4, the tapped hole or pilot hole for tapping may go through.

Part Number Example

Stepped

Part Number	-	P	-	L	-	B
IPMA8	-	P13.0	-	L9.0	-	B1.5

Counterbored

Part Number	-	D	-	L
IPZA4	-	D17.0	-	L7.0

Tapped

Part Number	-	D	-	L
IPTA4	-	D17.0	-	L7.0

Application Example

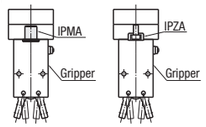
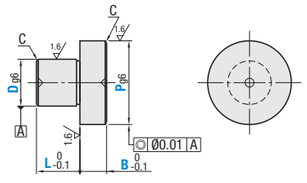


Plate Centering Pins

RoHS10

Part Number	Material	Surface Treatment
CMPA	1045 Carbon Steel or Equivalent	Electroless Nickel Plating
BCMPA		Black Oxide
SCMPA	304 Stainless Steel	—

6.3 (1.6)



Center holes may disappear depending on dimension B.

Part Number	0.1 mm Increment				C
	D	P	L	B	
CMPA	2.0–9.0	3.0–10.0	5.0–20.0	1.0–20.0	0.2
BCMPA	9.0–24.0	10.1–25.0		1.5–20.0	0.5
SCMPA	15.0–39.0	25.1–40.0		2.0–20.0	1

D≦P-1 L≦Dx5 B≦Px5

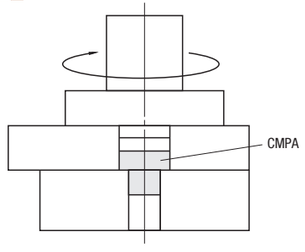
Part Number Example

Part Number	-	D	-	P	-	L	-	B
CMPA	-	D5.0	-	P7.0	-	L9.0	-	B1.5

Part Number Alterations

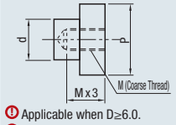
Part Number	-	D	-	P	-	L	-	B	-	(NTP)
CMPA	-	D6.0	-	P7.0	-	L9.0	-	B1.5	-	NTP

Application Example



Applicable for center alignment of thin objects.

Alteration Code	Removal Tip: NTP
Spec.	Adds a tap on P dimension part. **Ordering Code:** NTP



D	M (Coarse)
6.0–10.0	M3
10.1–15.0	M4
15.1–20.0	M5
20.1–28.0	M6
28.1–39.0	M8

Applicable when D≧6.0.
When L+B≦Mx5, the pilot hole of tapped may go through.

Feed Pins (Straight)

Standard / Tapped / Threaded

Feed Pins (Straight) – Standard

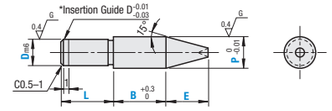
RoHS10

Standard		Material	Surface Treatment	Hardness
Round	Triangle			
FESM	FESMT	01 Tool Steel or Equivalent	—	Treated Hardness: 60~63 HRC min.
GFESM	—		Hard Chrome Plating	Hardness: 50~55 HRC min. Plating Hardness :750 HV min.
SFESM	—	304 Stainless Steel	—	—
HFESM	HFESMT		Hard Chrome Plating	Plating Hardness 750 HV min.
CFESM	—	440C or 420 Stainless Steel	—	Treated Hardness: 50~55 HRC min.

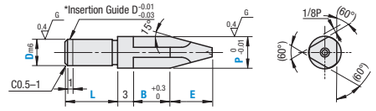
P-2Etan15°≧0.73 (Tip dia. Ø0.73 or more. Reference: tan15°=0.267)

6.3 (0.4) G *No Insertion Guide for D2 Press Fit.

Standard, Round



Standard, Triangle



Part Number			0.01 mm Increment	1 mm Increment	0.1 mm Increment	0.1 mm Increment
Type		D	P	L	B	E
Round	Triangle	2	2.50–5.00	2–6	2.0–10.0	0.5–10.0
FESM	FESMT	3	3.50–5.00	3–6	2.0–10.0	
GFESM	HFESMT	4	4.50–7.00	4–8	2.0–10.0	
SFESM		5	5.50–8.00	5–10	2.0–10.0	
HFESM		6	6.50–10.00	6–12	2.0–12.0	
CFESM		8	9.00–13.00	8–16	2.0–15.0	
		10	10.00–13.00	10–20	2.0–20.0	

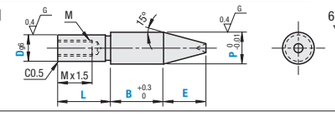
Feed Pins (Straight) – Tapped

RoHS10

Tapped	Material	Surface Treatment	Hardness
Round			
FESG	01 Tool Steel or Equivalent	—	Treated Hardness: 60~63 HRC min.
GFESG		Hard Chrome Plating	Hardness: 50~55 HRC min. Plating Hardness :750 HV min.
SFESG	304 Stainless Steel	—	—
HFESG		Hard Chrome Plating	Plating Hardness 750 HV min.
CFESG	440C or 420 Stainless Steel	—	Treated Hardness: 50~55 HRC min.

P-2Etan15°≧0.73 (Tip dia. Ø0.73 or more. Reference: tan15°=0.267)

Tapped, Round



6.3 (0.4) G

Part Number		P	L	B	E	M
Type	D	0.01 mm Increment	1 mm Increment	0.1 mm Increment	0.1 mm Increment	(Coarse Thread)
Round FESG GFESG SFESG HFESG CFESG	6	6.50–10.00	6–12	2.0–12.0	0.5–10.0	M3
	8	9.00–13.00	8–16	2.0–15.0		M4
	10	10.00–13.00	10–20	3.0–20.0		M5

Note the strength of under-head part. **P.1542** Please confirm pilot hole depth on **P.1542**. Holes may go through.

* The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on MISUMI 2019 catalog **P.4015**). Not applicable when using locking agents or spring washers.

Feed Pins (Straight) – Threaded

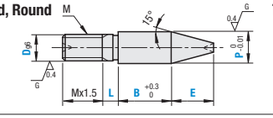
RoHS10

Threaded		Material	Surface Treatment	Hardness
Round	Triangle			
FEPS	FEPST	01 Tool Steel or Equivalent	—	Treated Hardness: 60~63 HRC min.
GFEPS	—		Hard Chrome Plating	Hardness: 50~55 HRC min. Plating Hardness :750 HV min.
SFEPS	SFEPST	304 Stainless Steel	—	—
HFEPS	HFEPST		Hard Chrome Plating	Plating Hardness 750 HV min.
CFEPS	CFEPST	440C or 420 Stainless Steel	—	Treated Hardness: 50~55 HRC min.

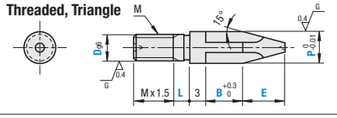
P-2Etan15°≧0.73 (Tip dia. Ø0.73 or more. Reference: tan15°=0.267)

When 0≦L<Pitchx2, the incomplete threaded portion of Threaded is included in Mx1.5.

Threaded, Round



Threaded, Triangle



6.3 (0.4) G

Part Number		P	L	B	E	M
Type	D	0.01 mm Increment	1 mm Increment	0.1 mm Increment	0.1 mm Increment	(Coarse)
Round FEPS GFEPS SFEPS HFEPS CFEPS	3	3.50–6.00	0–12	2.0–10.0	0.5–10.0	M3
	4	4.50–7.00		2.0–10.0		M4
	5	5.50–8.00		2.0–10.0		M5
	6	6.50–10.00		2.0–12.0		M6
	8	9.00–13.00		2.0–15.0		M8
	10	10.00–13.00		2.0–20.0		M10

* The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on MISUMI 2019 catalog **P.4015**). Not applicable when using locking agents or spring washers.

For full thread, specify a L dimension of 0 and NNC alteration.

Part Number Example

Part Number	-	P	-	L	-	B	-	E
FESM4	-	P5.00	-	L6	-	B5.0	-	E3.0
GFESG8	-	P9.50	-	L10	-	B10.0	-	E5.5
FEPS3	-	P3.50	-	L3	-	B6.0	-	E2.0

Part Number Alterations

Part Number	-	P	-	L	-	B	-	E	-	(DRC, NNC)
FEPS3	-	P3.50	-	L3	-	B6.0	-	E2	-	DRC

Alterations are applicable to Threaded Type only.

Alterations	Screwdriver Slot	Relief
		
Code	DRC	NNC
Spec.	Width 0.8mm Depth 1 mm **Ordering Code:** DRC	Adds a relief at the thread end. **Ordering Code:** NNC Applicable when L=0.