

Locating Pins for Grippers / Plate Centering Pins

Stepped / Counterbored / Tapped

Locating Pins for Grippers

RoHS 10

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

Stepped

Counterbored

Tapped

Ⓢ Center holes may disappear depending on dimension B.

Stepped

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

Counterbored

Part Number Type	0.1 mm Increment		d ₁	d ₂	H	
	No.	D				
IPZA	3	10.0-15.0	5.0-30.0	3.5	6.5	3.5
	4	10.0-32.0	6.0-30.0	4.5	8	4.5
SIPZA	5	12.0-32.0	7.0-30.0	5.5	9.5	5.5

Tapped

Part Number Type	0.1 mm Increment	
	M	L
IPTA	3	10.0-20.0
	4	10.0-32.0
SIPTA	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

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

Ⓢ 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		1.0-20.0	0.2
BCMPA	9.0-24.0	10.1-25.0	5.0-20.0	1.5-20.0	0.5
SCMPA	15.0-39.0	25.1-40.0		2.0-20.0	1

Part Number Example

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

Application Example

Applicable for center alignment of thin objects.

Part Number Alterations

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

Alteration Code	Removal Tip
NTP	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

Standard		Material	Surface Treatment	Hardness
Round	Triangle			
FESM	FESMT	O1 Tool Steel or Equivalent	Hard Chrome Plating	Treated Hardness: 60-63 HRC min. Hardness: 50-55 HRC min. Plating Hardness :750 HV min.
GFESM	—			
SFESM	—	304 Stainless Steel	Hard Chrome Plating	Plating Hardness 750 HV min.
HFESM	HFESMT			
CFESM	—	440C or 420 Stainless Steel	—	Treated Hardness: 50-55 HRC min.

Ⓢ P-2Etan15°≥0.73 (Tip dia. 0.73 or more. Reference: tan15°=0.267)

Ⓢ No Insertion Guide for D2 Press Fit.

Standard, Round

Standard, Triangle

Type	Part Number	0.1 mm Increment			
		D	P	L	B
Round FESM GFESM SFESM HFESM CFESM	2	2.50-5.00	2-6	2.0-10.0	0.5-10.0
	3	3.50-5.00	3-6	2.0-10.0	
	4	4.50-7.00	4-8	2.0-10.0	
	5	5.50-8.00	5-10	2.0-10.0	
	6	6.50-10.00	6-12	2.0-12.0	
	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

Tapped		Material	Surface Treatment	Hardness
Round	Triangle			
FESG	GFESG	O1 Tool Steel or Equivalent	Hard Chrome Plating	Treated Hardness: 60-63 HRC min. Hardness: 50-55 HRC min. Plating Hardness :750 HV min.
SFESG	HFESG			
CFESG	—	440C or 420 Stainless Steel	—	Treated Hardness: 50-55 HRC min.

Ⓢ P-2Etan15°≥0.73 (Tip dia. 0.73 or more. Reference: tan15°=0.267)

Tapped, Round

Type	Part Number	0.1 mm Increment				M (Coarse Thread)
		D	P	L	B	
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. P1542 Ⓢ Please confirm pilot hole depth on P1542. Holes may go through.
*The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on MISUMI 2019 catalog P4015). Not applicable when using locking agents or spring washers.

Feed Pins (Straight) - Threaded

Threaded		Material	Surface Treatment	Hardness
Round	Triangle			
FEPST	FEPST	O1 Tool Steel or Equivalent	Hard Chrome Plating	Treated Hardness: 60-63 HRC min. Hardness: 50-55 HRC min. Plating Hardness :750 HV min.
GFEPST	—			
SFEPST	SFEPST	304 Stainless Steel	Hard Chrome Plating	Plating Hardness 750 HV min.
HFEPST	HFEPST			
CFEPST	—	440C or 420 Stainless Steel	—	Treated Hardness: 50-55 HRC min.

Ⓢ P-2Etan15°≥0.73 (Tip dia. 0.73 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

Type	Part Number	0.1 mm Increment				M (Coarse)
		D	P	L	B	
Round FEPST GFEPST SFEPST HFEPST CFEPST	3	3.50-6.00	0-12	2.0-10.0	0.5-10.0	M3
	4	4.50-7.00				M4
	5	5.50-8.00				M5
	6	6.50-10.00				M6
	8	9.00-13.00				M8
	10	10.00-13.00				M10

*The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on MISUMI 2019 catalog P4015). 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
FEPST3 - P3.50 - L3 - B6.0 - E2.0

Part Number Alterations

Part Number - P - L - B - E - (DRC, NNC)
FEPST3 - P3.50 - L3 - B6.0 - E2 - DRC

Alterations	Screwdriver Slot	Relief
	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.
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