

Locating Pins

Small Diameter, Selectable Tip

Feature: Locating pins with O3 or less pin diameter. Selectable from four types of tip shape.

Locating Pins – Small Diameter, Selectable Tip

RoHS 10

L Selectable			L Configurable				L Configurable and Tolerance Selectable Type				Materials	Hardness
Flat	Sphere	Tapered	Flat	Sphere	Taper R	Tapered	Flat	Sphere	Taper R	Tapered		
SFKT	SPKT	SXKT	SFST	SPST	STST	SXST	SFFPT	SPPT	STPT	SXFPT	W1-9 Tool Steel Equivalent	Treated Hardness: 50~58 HRC min.
SFKS	SPKS	SXKS	SFSS	SPSS	STSS	SXSS	SFPS	SPPS	STPS	SXFPS	304 Stainless Steel Equivalent	—
—	—	—	SFSXC	SPSXC	STXC	SXSXC	SFPXC	SPPXC	STPXC	SFXPXC	440C or 420 Stainless Steel	Treated Hardness: 50~55 HRC min.
—	—	—	—	SPSSG	—	—	—	—	—	—	304 Stainless Steel Equivalent (SR Parts Polished)	—
—	—	—	—	SPSDG	—	—	—	—	—	—	H13 Tool Steel (SR Parts Polished)	Treated Hardness: 40~52 HRC min.

Tip Shape Selection

Flat

Taper R

Sphere

Tapered

SR is Ground

① Features of W1-9 Tool Steel P.1617

Tip Shapes
Select from the diagram on the right.

6.3 / (0.4) ^G

L Selectable

Part Number	D	D Dimension Tolerance	L Selection							E	
			3	4	5	6	8	10	12		15
Flat Spherical Tapered	1	0 -0.005	3	4	5	6	8	10	12	15	0.5
SFKT SPKT SXKT	1.5		5	6	8	10	12	15	1		
SFKS SPKS SXKS	2		5	6	8	10	12	15	1		
	3		5	6	8	10	12	15	1		

L Configurable

Part Number	D 0.1 mm Increment	D Dimension Tolerance	L 0.5 mm Increment	E 0.5 mm Increment	R
SFST SPST STST SXST	1.0-2.0	0 -0.005	3.0-30.0	0.5-2.5	0.2
SFSS SPSS STSS SXSS					
SFSXC SPSXC STSXC SXSXC					
SFPXC SPPXC STPXC SFXPXC	2.1-3.0				0.4

① For Taper R, L-1 ≥ (Dx1.85)-(Rx2.75) ② For Tapered Type, L ≥ E + 1D ≥ E

L Configurable & Tolerance Selectable Type

Type	Part Number	D Tolerance	D 0.01 mm Increment	L 0.1 mm Increment	E 0.5 mm Increment	R
SFFPT SPPT STPT SXFPT	P	+0.005 0	0.50-1.00	3.0-30.0	—	—
SFPS SPPS STPS SXFPS	Q	±0.002	1.01-2.00	3.0-30.0	0.5-2.5	0.2
SFPXC SPPXC STPXC SFXPXC	R	0 -0.005	2.01-3.00	3.0-30.0	0.5-2.5	0.4
	H	0 -0.01				

① For Taper R, L-1 ≥ (Dx1.85)-(Rx2.75) ② For Tapered Type, L ≥ E + 1 D ≥ E

L Selectable Type

D	Available Types							
	Flat Type		Sphere		Tapered Type			
	SFKT	SFKS	SPKT	SPKS	SXKT	SXKS		
1	•	•	•	•	•	•		
1.5	•	•	•	•	•	•		
2	•	•	•	•	•	•		
3	•	•	•	•	•	•		

L Configurable

D	Available Types													
	Flat Type			Sphere			Taper R Type			Tapered Type				
	SFST	SFSS	SFSXC	SPST	SPSS	SPSXC	SPSSG	SPSDG	STST	STSS	STSXC	SXST	SXSS	SXSXC
1.0-2.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2.1-3.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•

L Configurable & Tolerance Selectable Type

D	Available Types											
	Flat Type			Sphere			Taper R Type			Tapered Type		
	SFFPT	SFPS	SFPXC	SPPT	SPPS	SPPXC	STPT	STPS	STPXC	SXFPT	SXFPS	SFXPXC
0.50-1.00	•	•	•	•	•	•	•	•	•	•	•	•
1.01-2.00	•	•	•	•	•	•	•	•	•	•	•	•
2.01-3.00	•	•	•	•	•	•	•	•	•	•	•	•



Part Number Example

L Selectable

Part Number - D - L

SPKS - D1 - L5

L Configurable

Part Number - D - L - E

SPST - D1.5 - L8.5 (Sphere)

SXST - D1.5 - L5.0 - E1.0 (Taper)

L Configurable & Tolerance Selectable Type

Part Number - D - L - E

Type D Tolerance

SPPT P - D0.55 - L5.0 (Sphere)

SXFPT P - D2.82 - L5.0 - E2.5 (Taper)

⊗ Combination of GDC and CC is not available. ⊗ Not applicable to L Selectable type.

Alterations	Insertion Guide	C Chamfered Size
Code	GDC	CC
Spec.	<p>Adds Insertion Guide.</p> <p>Ordering Code: GDC</p> <p>Insertion Guide Part D ^{-0.01}/_{-0.03}</p> <p>① Machines one side only for Flat Type.</p> <p>② Applicable when D ≥ 2.1 and L ≥ 5.0 for L Configurable Type.</p> <p>③ Applicable when D ≥ 2.01 and L ≥ 5.0 for L Configurable and Tolerance Selectable Type.</p>	<p>D dimension C chamfering 0.1 is changed to 0.3.</p> <p>Ordering Code: CC</p> <p>C0.3</p> <p>① D ≥ 1.5 is applicable to L Configurable Type.</p> <p>② D ≥ 1.50 is applicable to L Configurable and Tolerance Selectable Type.</p>



Part Number Alterations

Part Number - D - L - E - (GDC / CC)

SFST - D2.0 - L10 - CC

Locating Pins

Small Diameter, Small Head

Ⓛ L Dimension Selectable Type is now available.

Locating Pins – Small Diameter, Small Head

RoHS10

- Ⓛ Chamfering of mounting portion and change of tolerance are available as alterations.
- Ⓛ Material code SG and DG are applicable to L Configurable Type of Sphere only.
- Ⓛ L Selectable Type is applicable to Sphere only.
- Ⓛ Features of W1-9 Tool Steel P1542

Part Number			Material	Hardness
Insertion Guide Shape	Type	Material Code		
SF Flat SP Sphere ST Taper R SX Taper	KH L Selectable SH L Configurable	T	W1-9 Tool Steel Equivalent	Treated Hardness: 50-58HRC min.
		S	304 Stainless Steel Equivalent	—
	PH L Configurable & Tolerance Selectable	SG	304 Stainless Steel Equivalent (SR Parts Polished)	—
		DG	H13 Tool Steel (SR Parts Polished)	Treated Hardness: 40-52HRC min.
		C	440C or 420 Stainless Steel	Treated Hardness: 50-55 HRC min.

Tip Shape Selectable

<p>Flat</p>	<p>Taper R</p>
<p>Spherical</p> <p>SR is Ground</p>	<p>Tapered</p>

Tip Shapes
Select from the diagram on the right.

L Selectable

Insertion Guide Shape	Part Number			D	D Dimension Tolerance	L Selection				P	P Dimension Tolerance	B	Available Types	
	Type	Material Code	Tolerance			3	5	10	0.95				0	2
SP Sphere	KH	T	2	0	3	5	10	0.95	0	2	•	•		
			S	3	-0.005	3	8	10	1.95	-0.01	4	•	•	

L Configurable

Insertion Guide Shape	Part Number			D	D Dimension Tolerance	L	P	P Dimension Tolerance	B	E	R
	Type	Material Code	Tolerance								
SF Flat SP Sphere	ST Taper R SX Taper	SH	T	1.0-2.0	0	3.0-20.0	0.9-1.9 (D>P)	0	1.5-10.0 (B-P/2≥1.0)	0.5-2.5	0.2
			S	2.1-3.0	-0.005	1.9-2.9 (D>P)	-0.01	0.5-2.5	0.4		

Ⓛ For Taper R: B-1≥1.85P-2.75R Ⓛ For Tapered Type: B≥E+1, P≥E

L Configurable & Tolerance Selectable Type

Insertion Guide Shape	Part Number			D	D Tolerance	P	P Tolerance	D	L	P	B	E	R
	Type	Material Code	Tolerance										
SF Flat SP Sphere	ST Taper R SX Taper	PH	T	P +0.005/0	P +0.005/0	0.51-1.00	3.0-20.0	0.50-0.99 (D>P)	1.5-5.0 (B-P/2≥1.0)	0.5-2.5	0.2	0.4	
			S	Q ±0.002/0	Q ±0.002/0	1.01-2.00		0.50-1.99 (D>P)	1.5-10.0 (B-P/2≥1.0)				
			C	R -0.005/0	R -0.005/0	2.01-3.00		1.00-2.99 (D>P)					

Ⓛ For Taper R: D≥1.01, B-1≥1.85P-2.75R Ⓛ For Tapered Type: D≥1.01, B≥E+1, P≥E

L Configurable

D	Available Types													
	Flat Type			Sphere				Taper R Type			Tapered Type			
1.0-2.0	SFSHT	SFSHS	SFSHC	SPSHT	SPSHS	SPSHSG	SPSHDG	SPSHC	STSHT	STSHS	STSHC	SXSHT	SXSHS	SXSHC
2.1-3.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•

L Configurable & Tolerance Selectable Type

D	Available Types												
	Flat Type			Sphere				Taper R Type			Tapered Type		
0.51-1.00	SFPHT	SFPHS	SFPHC	SPPHT	SPPHS	SPPHC	STPHT	STPHS	STPHC	SXPHT	SXPHS	SXPHC	
1.01-2.00	•	•	•	•	•	•	•	•	•	•	•	•	
2.01-3.00	•	•	•	•	•	•	•	•	•	•	•	•	

Part Number Example

Ⓛ - D - L

SPKHT - D2 - L5

L Selectable

Part Number - D - L

SPKHT - D2 - L5

L Configurable

Part Number - D - L - P - B - E

SPSHS - D1.5 - L10.0 - P0.9 - B1.5 (Sphere)

SXSHT - D1.5 - L10.0 - P1.2 - B2.0 - E1.0 (Taper)

L Configurable & Tolerance Selectable Type

Part Number - D - L - E

Type | D Tolerance

SPPT | P | -D0.55 - L5.0 (Sphere)

SXFPT | P | -D2.82 - L5.0 - E2.5 (Taper)

Part Number Alterations

Part Number - D - L - P - B - E - (GDC / CC)

SFSHT - D2.5 - L20 - P2.0 - B5.0 - GDC


- ⊗ Combination of GDC and CC is not available.
- ⊗ Alterations are not applicable to L Dimension Selectable Type.

Alterations	Insertion Guide Machining	C Chamfered Size
Code	GDC	CC
TSpec.	<p>Adds Insertion Guide.</p> <p>Ordering Code: GDC</p> <p>Ⓛ Applicable when D≥2.1 and L≥5.0 for L Configurable Type.</p> <p>Ⓛ Applicable when D≥2.01 and L≥5.0 for L Configurable and Tolerance Selectable Type.</p>	<p>D dimension C chamfering 0.1 is changed to 0.3.</p> <p>Ordering Code: CC</p> <p>Ⓛ D≥1.5 is applicable to L Configurable Type.</p> <p>Ⓛ D≥1.50 is applicable to L Configurable and Tolerance Selectable Type.</p>

Locating Pins

Small Diameter with Base

Locating Pins – Small Diameter with Base

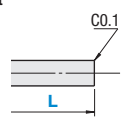


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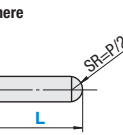
Part Number			Materials
Insertion Guide Shape	Tolerance	Material Code	
SF Flat SP Sphere SX Taper	SZ Tolerance Standard PZ Tolerance Selectable	S	304 Stainless Steel

Tip Shape Selection

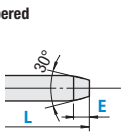
Flat

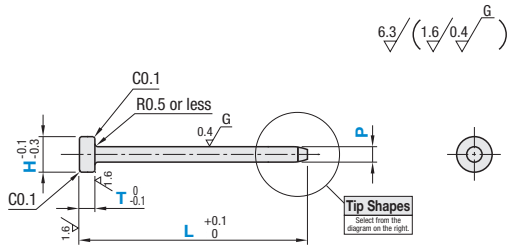


Sphere



Tapered





Tip Shapes
Select from the diagram on the right.

Tolerance Standard

Part Number			P	P Dimension	L	T	H	E
Insertion Guide Shape	Tolerance	Material Code	0.1 mm Increment	Tolerance	0.5 mm Increment	1 mm Increment		0.5 mm Increment
SF Flat SP Sphere SX Tapered	SZ	S	1.0–1.3 1.4–2.5 2.6–3.5	0 -0.01	13.0–30.0	3–5	2 4 6	0.5 0.5–1.5 0.5–2.5

⊖ L-T≥10 ⊕ For tapered type, P≥E

Tolerance Selectable

Part Number			P	L	T	H	E	
Insertion Guide Shape	Tolerance	Material Code	P Tolerance	0.01 mm Increment	0.1 mm Increment	0.1 mm Increment	0.1 mm Increment	0.5 mm Increment
SF Flat SP Sphere SX Tapered	PZ	S	P (+0.005/0) Q (±0.002) R (0/-0.005)	1.00–1.40 1.41–2.50 2.51–3.50	13.0–30.0	3.0–5.0	2.0–3.0 2.0–4.0 3.0–8.0	0.5 0.5–1.5 0.5–2.5

⊖ L-T≥10 ⊕ P + 0.5 ≤ H ⊕ For tapered type, P≥E

Part Number Example

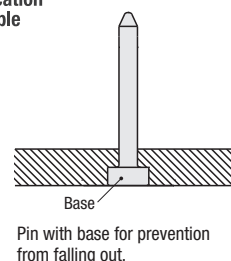
Tolerance Standard

Part Number	P	L	T	E	
SPSZS	P1.5	L18.5	T3		(Sphere)
SXSZS	P2.5	L20.0	T4	E1.5	(Taper)

Tolerance Selectable

Part Number	P	L	T	H	E	
SPPZS	P	P1.55	L15.0	T3.2	H3.8	(Sphere)
SXPZS	Q	P1.00	L19.0	T4.5	H2.5	E0.5 (Taper)

Application Example



Locating Pins

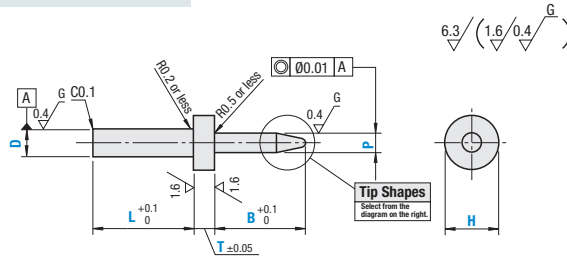
Small Diameter, with Shoulder



RoHS 10

Part Number			Material	Hardness
Insertion Guide Shape	Tolerance, Mounting Method	Material Code		
SF Flat SP Sphere ST Taper R SX Taper	SS Tolerance Standard, Press Fit PS Tolerance Configurable, Press Fit	T	W1-9 Tool Steel Equivalent	50-58 HRC min.
		S	304 Stainless Steel	—

Ⓜ Features of W1-9Tool Steel P.1542 Ⓜ Some combinations are not available. Refer to the price list to select the available combination.



Tip Shape Selectable			
Flat SF		Taper R ST	
Sphere SP		Tapered SX	

Standard Tolerance Type

Part Number			D	D Dimension Tolerance (m6)	L 0.5 mm Increment	P 0.1 mm Increment	P Dimension Tolerance	B 0.5 mm Increment	H 0.1 mm Increment	T 0.5 mm Increment	E 0.5 mm Increment (Taper Only)	R
Insertion Guide Shape	Mounting Method	Material Code										
SF Flat	ST Taper R	SS Press Fit	1	+0.008 +0.002	2.0-5.0	1.0-2.9	0 -0.01	1.0-10.0	1.1-3.0	1.0-10.0	0.5-5.0	0.2
			2		4.0-10.0	1.0-4.0			2.1-7.0			
SP Sphere	SX Taper	S	3	6.0-10.0	1.5-6.0	1.0-30.0		3.1-8.0	1.0-20.0	0.3		
			4	8.0-10.0	2.0-7.0			4.1-9.0		0.4		

Ⓜ P<H Ⓜ D<H Ⓜ For sphere, B-1≥P/2 Ⓜ For Taper R, B-1≥1.85P-2.75R Ⓜ For Tapered Type: B≥E+1, P≥E

Tolerance Selectable

Part Number			D	D Tolerance Selection	P Tolerance Selection	L 0.1 mm Increment	P 0.01 mm Increment	B 0.1 mm Increment	H 0.01 mm Increment	T 0.1 mm Increment	E 0.5 mm Increment (Taper Only)	R	
Insertion Guide Shape	Mounting Method	Materials Code											
SF Flat	ST Taper R	PS Press Fit	1	P +0.005 0	P +0.005 0	2.0-5.0	1.00-2.90	1.0-10.0	1.10-3.00	1.0-10.0	0.5-5.0	0.2	
			2	Q ±0.002	Q ±0.002	4.0-10.0	1.00-4.00		2.10-7.00				
SP Sphere	SX Taper	S	3	R 0 -0.005	R 0 -0.005	6.0-10.0	1.50-6.00	1.0-30.0	3.10-8.00	1.0-20.0			0.3
			4			8.0-10.0	2.00-7.00		4.10-9.00				0.4

Ⓜ P<H Ⓜ D<H Ⓜ For sphere, B-1≥P/2 Ⓜ For Taper R, B-1≥1.85P-2.75R Ⓜ For Tapered Type: B≥E+1, P≥E

Tolerance Standard

D	Available Types							
	Flat Type (SFSS)		Sphere Type (SPSS)		Taper R Type (STSS)		Tapered Type (SXSS)	
	SFSST	SFSSS	SPSST	SPSSS	STST	STSSS	SXSST	SXSSS
1	•	•	•	•	•	•	•	•
2	•	•	•	•	•	•	•	•
3	•	•	•	•	•	•	•	•
4	•	•	•	•	•	•	•	•

Tolerance Selectable

D	Available Types							
	Flat Type (SFPS)		Sphere Type (SPPS)		Taper R Type (STPS)		Tapered Type (SXPS)	
	SFPST	SFPSS	SPPST	SPPSS	STPST	STPSS	SXPST	SXPSS
1	•	•	•	•	•	•	•	•
2	•	•	•	•	•	•	•	•
3	•	•	•	•	•	•	•	•
4	•	•	•	•	•	•	•	•

Part Number Example

Part Number - L - P - B - H - T - E
 SXSSS4 - L10.0 - P6.2 - B5.0 - H8.0 - T3.0 - E3.0
 SPPSTP2 - L8.0 - P2.0 - B4.0 - H3.5 - T5.0 -

Part Number Alterations

Part Number - L - P - B - H - T - E - (GDC, CC)
 SFSST3 - L6.0 - P3.0 - B6.0 - H5.0 - T2.0 - CC

Alterations Code	Insertion Guide	C Chamfered Size
Spec.	Adds Insertion Guide. Ordering Code: GDC 	D dimension C chamfering 0.1 is changed to 0.3. Ordering Code: CC
	Ⓜ Applicable to D≥3, L≥8.0	Ⓜ Applicable when D≥2 Ⓧ Combination of GDC and CC is not available.

Locating Pins

Small Diameter, with Shoulder & Threaded Shank

Locating Pins – Small Diameter, with Shoulder & Threaded Shank

RoHS 10

Part Number			Material	Hardness
Insertion Guide Shape	Tolerance, Mounting Method	Material Code		
SF Flat	SN	T	W1-9 Tool Steel Equivalent	50~58 HRC min.
SP Sphere	Tolerance Standard, Threaded			
ST Taper R	PN			
SX Taper	Tolerance Configurable, Threaded	S	304 Stainless Steel	—

Ⓢ Features of W1-9 Tool Steel **P:1542** Ⓢ Some combinations are not available. Refer to the price list to select the available combination.

Tip Shapes
Select from the diagram on the right.

6.3 / (1.6 / 0.4) ^G

Ⓢ When L=0, an undercut will be added at the neck of the thread.

Tip Shape Selectable

<p>Flat SF</p>	<p>Taper R ST</p>
<p>Sphere SP</p>	<p>Tapered SX</p>

Standard Tolerance Type

Part Number				D	D Dimension Tolerance	L 0.5 mm Increment	P 0.1 mm Increment	P Dimension Tolerance	B 0.5 mm Increment	H 0.1 mm Increment	T 0.5 mm Increment	E 0.5 mm Increment (Taper Only)	R	M
Insertion Guide Shape	Mounting Method	Material Code	D											
SF Flat	ST Taper R	SN Threaded	T	2	0	0	1.0-4.0	0	1.0-30.0	2.1-7.0	1.0-20.0	0.5-5.0	0.2	M2
SP Sphere	SX Taper	S	S	3	-0.005	1.0-10.0	1.5-6.0	-0.01	1.0-30.0	3.1-8.0	1.0-20.0	0.5-5.0	0.3	M3
				4			2.0-7.0			4.1-9.0			0.4	M4

Ⓢ P<H Ⓢ D<H Ⓢ For sphere, B-1≥P/2 Ⓢ For Taper R, B-1≥1.85P-2.75R Ⓢ For Tapered Type: B≥E+1, P≥E

Tolerance Selectable

Part Number						D	L 0.1 mm Increment	P 0.01 mm Increment	B 0.1 mm Increment	H 0.01 mm Increment	T 0.1 mm Increment	E 0.5 mm Increment (Taper Only)	R	M
Insertion Guide Shape	Mounting Method	Material Code	D Tolerance Selection	P Tolerance Selection	D									
SF Flat	ST Taper R	PN Threaded	T	P +0.005 0 Q ±0.002	P +0.005 0 Q ±0.002	2	0 1.0-10.0	1.00-4.00 1.50-6.00 2.00-7.00	1.0-30.0	2.10-7.00 3.10-8.00 4.10-9.00	1.0-20.0	0.5-5.0	0.2	M2
SP Sphere	SX Taper	S	S	P 0 -0.005	P 0 -0.005	3							0.3	M3
						4							0.4	M4

Ⓢ P<H Ⓢ D<H Ⓢ For sphere, B-1≥P/2 Ⓢ For Taper R, B-1≥1.85P-2.75R Ⓢ For Tapered Type: B≥E+1, P≥E



Part Number Example

Part Number - L - P - B - H - T - E
 SPSNT3 - L3.5 - P2.5 - B10.5 - H4.2 - T5.5
 SXPNSQR2 - L2.0 - P3.2 - B8.0 - H4.00 - T3.0 - E3.0

Tolerance Standard

D	Available Types							
	Flat Type (SFSN_)		Sphere Type (SPSN_)		Taper R Type (STSN_)		Tapered Type (SXSXN_)	
	SFSNT	SFSNS	SPSNT	SPSNS	STSNT	STSNS	SXSNT	SXSNS
2	•	•	•	•	•	•	•	•
3	•	•	•	•	•	•	•	•
4	•	•	•	•	•	•	•	•

Tolerance Selectable

D	Available Types							
	Flat Type (SFPN_)		Sphere Type (SPPN_)		Taper R Type (STPN_)		Tapered Type (SXPNS)	
	SFPNT	SFPNS	SPPNT	SPPNS	STPNT	STPNS	SXPNT	SXPNS
2	—	•	•	•	•	•	—	—
3	—	•	•	•	•	•	—	—
4	—	•	•	•	•	•	—	—