

Locating Pins for Fixtures - Pedestal Pins / Height Adjusting Pins

Height Adjusting Washers / Locating Pin Holders for Fixtures Threaded / Tapped

The pocket is to collect dust (spatter etc.) generated during welding.

Pedestal Pin RoHS 10

Type	Material	Hardness
KMFR (No Pocket Type)	SCM415	Carburized Treated Hardness: 55HRC - (Depth 0.7 - 0.8)
MFR (No Pocket Type)	SCM415	Carburized Treated Hardness: 55HRC - (Depth 0.7 - 0.8)

D _{H7}	H
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	-0.021

Part Number Type	H	D 1mm Increment	P 0.1mm Increment	B 1mm Increment	L 1mm Increment	T 1mm Increment	M
KMFR	18, 22, 25	12-20	8.0-12.0	5-10	3-10	15-40	6 8
MFR	28, 30	H-2>D	8.0-17.0				

Ordering Example: **KMFR30** - D15 - P8.0 - B8 - L5 - T18 - M6

Alterations

Wear Groove Example: Locating of work piece in both vertical and horizontal directions is possible. It is possible with the pocket to collect dust (spatter etc.) generated during welding. Usable as locating pins for arc welding processes, during which a large amount of spatter

Spec. Adds a 0.25mm groove at a position of 4mm from the edge of P dimension. **Ordering Code** MZ

Height Adjusting Pins RoHS 10

Type	Material	Hardness
HUPNA (Threaded)	SCM435	Treated Hardness 35-40HRC
HUPND (Diamond)	SCM435	Treated Hardness 35-40HRC
THUPNA (Threaded)	SCM415	Carburized Treated Hardness: 55HRC - (Depth 0.7-0.8)
THUPND (Diamond)	SCM415	Carburized Treated Hardness: 55HRC - (Depth 0.7-0.8)

Reference: $\sin 15^\circ = 0.259$, $\sin 30^\circ = 0.5$, $\sin 45^\circ = 0.707$, $\sin 60^\circ = 0.866$, $\tan 15^\circ = 0.267$, $\tan 30^\circ = 0.577$, $\tan 45^\circ = 1$, $\tan 60^\circ = 1.732$

Threaded **Tip Shape** (Select from the diagram on the right)

Set Screw **Tip Shape** (Select from the diagram on the right)

Tip Shape (Round) **Tip Shape** (Diamond)

Tip Shape (Tapered) **Tip Shape** (Taper R)

*For T 5.0-7.0, detent width is 3mm. For T 7.1-20.0, detent width is 5mm.

*No relief at P dimension.

*For Diamond Shape, a step of 0.25 max. will be engraved at the bottom of P dimension.

Part Number Type	Tip Shape	D _{H7}	P 0.1mm Increment	B 1mm Increment	L 1mm Increment	T 0.1mm Increment	H 1mm Increment	A	E (Shape A) 1mm Increment	ℓ	L1	ℓ1	d	R	Applicable Set Screw	W
Threaded HUPNA HUPND THUPNA THUPND	A	6	3.0-7.0	5	8 10	9-20	30	6	8	4	1	3	1	M5	1(2)	
		8	7.1-12.0	5	8 10 12 15	11-20	30	10	8	5	1.5	4	3.5	M5	1(2)	
		10	9.1-16.0	5	8 10 12 15	11-20	30	12	10	8	2	4	4	M6	1-3	
		12	12.1-20.0	5	8 10 12 15	11-20	30	15	10	8	4	5	5	M6	4	
		14	14.1-20.0	5	8 10 12 15	11-20	30	18	10	8	5	6	6	M8	1-3	
		16	18.1-32.0	5	8 10 12 15 18	11-20	30	18	12	10	13	8	8	M8	5	
	Set Screw HUPTA HUPTD THUPTA THUPTD	B	10T	4.5-12.0	5-50 (B≤Px4)	(5) (8) 10 12 15	5.0-20.0	13-25	90	1-15	7	2	2	4	M6	1-3
			12	12.1-20.0	5-50 (B≤Px4)	(8) 10 12 15 18	5.0-20.0	13-25	120	1-15	9	3	3	4	M6	4
			14	14.1-25.0	5-50 (B≤Px4)	(10) 12 15 18 20	5.0-20.0	13-25	150	1-15	11	4	4	4	M8	6
			16	18.1-32.0	5-50 (B≤Px4)	(10) 12 15 18 20	5.0-20.0	13-25	180	1-15	13	4	4	4	M8	5
			18	18.1-32.0	5-50 (B≤Px4)	(10) 12 15 18 20	5.0-20.0	13-25	210	1-15	15	4	4	4	M8	5
			20	18.1-32.0	5-50 (B≤Px4)	(10) 12 15 18 20	5.0-20.0	13-25	240	1-15	18	4	4	4	M8	8

*W Dimension D6, D8: W=2 when P>5.0, D10, D10T: W=1 when P<5.0, W=3 when P>7.0 *L dimension in () is applicable to Round Shape only. *P+2.5H<Px5

Ordering Example: **HUPNA** A 10 - P4.8 - B10 - L10 - T20.0 - H20 - A60 - E5

Alterations

Alterations	Flat Position	Flat Machining	Wrench Flats	Thread Dia.
Code	KC	KD	SC	MC
Spec.	Ordering Code KC Changes the flat position to 90° from the standard position 0°. *Applicable to Diamond Shape Type only.	Ordering Code KD Machining on one side. For T5.0-7.0: 3mm For T7.1-20.0: 5mm *Applicable to Round Shape Type only.	Ordering Code SC10 Adds wrench flats. SC=1mm Increment SC>P-SC-H-2 *Relief at thread end is available. *Applicable to Threaded Type only.	Ordering Code MC8 Changes the thread diameter. *D/3<M<D Mmin3 *Relief at thread end is available. *Applicable to Threaded Type only.

Example: Locating of work piece in both vertical and horizontal directions is possible.

Height Adjusting Washer RoHS 10

Type	Material	Hardness
HUK	SCM435	Hardening 35-40HRC
THUK	SCM415	Carburized Treated Hardness: 55HRC - (Depth 0.7-0.8)

*P+3≤H, D+3≤P

Part Number Type	D	P 0.1mm Increment	T 0.1mm Increment	H 1mm Increment
HUK	6	8.0-12.0		10-20
	8	10.0-16.0		12-20
	10	12.0-20.0	5.0-20.0	14-25
	12	14.0-25.0		16-30
THUK	16	18.0-32.0		20-35

Ordering Example: **HUK6** - P11.8 - T10.0 - H20

Holder, Integrated RoHS 10

Type	Material	Hardness
YGID (Threaded)	S45C	Treated Hardness: 40-45HRC
YGIDB (Tapped)	S45C	Treated Hardness: 40-45HRC

Integrated

Type	Material	Hardness
YGIDP (Threaded)	S45C	Treated Hardness: 40-45HRC
YGIDPB (Tapped)	S45C	Treated Hardness: 40-45HRC

Tip Shape Selectable

Holder, Threaded **Holder, Tapped** **Integrated, Threaded** **Integrated, Tapped**

*Direct-mounting at the tip of the cylinder is possible.

*Direct-mounting at the tip of the cylinder is possible.

*When L≤Mx4, tapped hole goes through. *W>S+N/2+2 *S>N/2+2 *When L≤Mx4, tapped hole goes through.

Part Number Type	D _{g6}	P(H7)	L 1mm Increment	F 1mm Increment	M Threaded	M Tapped
Holder (Threaded) YGID	16	8	70-200	5-25	6 8 10	8 10
	20	8 10 12			8 10	10 14
	25	10 12 16				10 14 18
	30	12 16				

Part Number Type	Tip Shape	D _{g6}	P 0.1mm Increment	B 1mm Increment	L 1mm Increment	A	E (Shape A) 1mm Increment	M Threaded	M Tapped	R
Integrated (Threaded) YGIDP	A	12	6.0-11.0	5-35 (B≤Px4)	60-150	30	1-10	6 8 10	8 10	3
	B	16	6.0-15.0			60		6 8 10 8 10		
		20	6.0-16.0			90		10 14		
		30	16.0-24.0			120		10 14 18		4

Tapped Type Mx3≤L

Ordering Example: **YGIDP** B 20 - P12.8 - B30 - L100 - A30 - M8

Alterations: **YGID25** - P16 - L100 - F20 - M10 - KD10

Alterations	Flat Machining	Wrench Flats	Side Hole	Thread Length
Code	KD	SC	RH	FC
Spec.	Ordering Code KD10 Machines one side for detent. KD=1mm Increment KD=3-10 *Not applicable to Integrated Type.	Ordering Code SC10-X10 Adds wrench flats. SC, X=1mm Increment Holder : 1≤SC≤L/3, SC=0 SC+X<L-ℓ Integrated: 1≤SC<L/3, SC=0 5≤X≤15 *Integrated Type is changed from size 10.	Ordering Code RH15 Adds hole for driving out the pin when exchanged. RH=1mm Increment *Not applicable to Integrated Type.	Ordering Code FC Changes the thread length to Mx2.