

Hair Pins / Cotter Pins / Scale Tapes

Hair Pins

RoHS 10

RNP

JNP
JNSPN
(Stainless Steel)

Type	Material	Surface Treatment
RNP	JIS-SWRH6	Trivalent Chromate
JNP	JIS-SWRH6	Trivalent Chromate
JNSPN	EN 1.4301 Equiv.	-

Part Number	d (Wire Dia.)	L	L1	L2	R	h	D1 (Applicable Shaft Dia.)	D2 (Shaft Bore Dia.)	Unit Price	Volume Discount Rate
RNP	6	1.2	25.2	9.7	3.9	3	1.4	6	1.5	
	8	1.6	33.8	13.1	5.3	4	2.1	8	1.9	
	10	1.8	40.2	15.7	5.7	5	3	10	2.2	
	12	2	46	17.5	6	6	4	12	2.4	

Part Number	d (Wire Dia.)	d1	L	L1	L2	R	h	S	D1 (Applicable Shaft Dia.)	D2 (Shaft Bore Dia.)	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
JNP	4	1	3	16.3	6	2	1	0.5	4	1.2				
	5	1.2	3.6	17.9	6.5	2.5	1.5	0.5	5	1.5				
	6	1.2	3.6	21.2	7.8	3	1.8	0.6	6	1.5				
	8	1.6	4.8	27.7	10.4	4	2.4	0.8	8	1.9				
	10	1.8	5.4	32.6	12.2	5	3.2	0.9	10	2.2				
	12	1.8	5.4	35.8	13.2	6	4.2		12	2.2				

Cotter Pins

RoHS 10

NPN
NSPN
(Stainless Steel)

Part Number	L	d	a (Approx.)	b	c	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	
NPN	0.8	8	10	12	0.7	1.6	2.4	1.4		
	1	10	12	15	0.9	3	1.8			
	1.2	10	12	15	1	3	2			
	1.6	10	12	15	1.4	3.2	2.8			
	2	12	15	1.8	4	3.6				
NSPN	2.5	15	20	2.3	5	4.6				
	3.2	20	2.9	3.2	6.4	5.8				
	4	20	3.7	8	7.4					
	5	35	4.6	10	9.2					

Ordering Example: Part Number - L
RPN6 - L
NSPN3.2 - 20

Material: JIS-SWRM
Material: EN 1.4301 Equiv.

Scale Tapes

RoHS 10

TMEL
(Zero Left End)

TMELF
(Zero Left End)

TMER
(Zero Right End)

TMERF
(Zero Right End)

TMEPL
(Zero Left End)

TMEPR
(Zero Right End)

TMEPN
(No Number)

Material Structure

- Protection Film 0.06mm
- PET Film 0.10mm
- Aluminum Foil 0.05mm
- Adhesive Layer (Acrylic) 0.03mm
- Backing Paper 0.08mm

Zero Point Position (Graduation)	Part Number	Thickness	Scale Increment	Unit Price
Left End (0 ~ 1000)	TMEL	0.18	1mm Increment	
Right End (0 ~ 1000)	TMER			
Left End (0 ~ 100)	TMEPL			
Right End (0 ~ 100)	TMEPR			
-	TMEPN			
Left End (0 ~ 1000, 1000 ~ 2000)	TMELF	2000		
Right End (0 ~ 1000, 1000 ~ 2000)	TMERF			

• TMER, TMEL, TMEPL, TMEPR, TMEPN

Ordering Example: Part Number
TMEPL-2000

• TMERF, TMELF

Ordering Example: Part Number
TMERF-2000

Peel off the surface protection film before use.
Wipe the dirt off the surface.

Angle Scales / Bubble Levels

* Use as measuring tool for adjustment of machines and equipment.

Angle Scales - Plate Type

RoHS 10

MEAA (180-Degree Type)

MEAB (90-Degree Type)

* Zero at Right (R)
* Zero at Left (L)
* Zero at Center (C)

Material: EN 1.4301 Equiv. No Tape

Part Number	Graduation Direction	D	V	H	X	Y	Unit Price
MEAA	C (Zero at Center)	40	20	3	13.5	11.5	
		60	30		20	17	
		100	50		36	26	
		140	80		48	40	

Part Number	Graduation Direction	D	V	H	X1	Y1	X2	Y2	Unit Price
MEAB	L (Zero at Left) R (Zero at Right) C (Zero at Center)	20	10	3	12	5	5	12	
		30	15		17	7	7	17	
		50	25		29	12	12	29	
		70	40		43	18	18	43	

Ordering Example: Part Number - V - H
MEABC50 - 25 - 3

Angle Scales - Double-Sided Adhesive Tape

RoHS 10

MEAN

* Zero at Left (L)
* Zero at Right (R)
* Zero at Center (C)

Hole Machining Mark

For D40 and D60, angle graduations are marked in 5 degree increment.
For D100 and D140, angle graduations are marked in 1 degree increment.

Material: EN AW-1050 Equiv. With Tape

Part Number	Graduation Direction	D	V Selection	Unit Price
MEAN	L (Zero at Left) C (Zero at Center) R (Zero at Right)	40	10 12 16 20	
		60	16 20 25 30	
		100	30 35 40 50	
		140	40 50 60 80	

Zero position changes depending on the scale direction.
Similar products are available. For Adjusting Collars P.1155

Alterations: Part Number - V - (HC)
MEANC140 - 60 - HC

Alterations	Code	Spec.
Hole Machining	HC	Adds mounting holes at hole machining marks. MEAN: Ø3.5x2 places Adhesive tape is affixed to the back. (Mounting Hole Dimension Diagram) Available for MEAN only.

D	X	Y
40	13.5	11.5
60	20	17
100	36	26
140	51	36

Bubble Levels (Mounting Type)

RoHS 10

SMTP

Material: EN AW-5052 Equiv. Glass
Surface Treatment: Black Anodize
Max. Operating Temperature: 55°C

Bubble Levels (Embedded Type)

RoHS 10

SMH

Material: ABS Plastic
Glass
Max. Operating Temperature: 55°C

Part Number	A	B	h	h2	Mounting Hole (N)	Sensitivity	Unit Price
SMTP	28	16	22	10.5	3.5	2	38'12" (R-180)
	32	20	27	12.0	4.0	3	38'12" (R-180)

Part Number	A	h	h2	Sensitivity	Unit Price
SMH	20	16.7	11	9.5	38'12" (R-180)

Bubble Levels

- Level the surface to be mounted prior to placing the bubble level, then mount while adjusting the bubble level so the air bubble stays within the red circle in the center.
- When the bubble moves 2mm away from the center, the mounting surface is inclined approximately 0.6 degrees.
- Mounting interface of these bubble levels have no accuracies built-in. Upon installation, customer adjustment required.

Ordering Example: Part Number
SMTP28