

High Speed Steel
SKH51 equivalent

P · W_{-0.01}⁰
Free designation

RECTANGULAR EJECTOR PINS

— N DIMENSION SHORT TYPE —

Ⓜ Non JIS material definition is listed on P.1351 - 1352

Part Number | **Head Thickness** | **P · W**

ERSF	4mm(T4)	$\begin{matrix} 0 \\ -0.01 \end{matrix}$
ERSJF	4 · 6 · 8mm(JIS)	$\begin{matrix} 0 \\ -0.01 \end{matrix}$

Ⓜ Range of guaranteed shaft diameter precision (D) (Details: P.1301)
Ⓜ Step R (Details: see below of the right page)

Ⓜ SKH51 equivalent
Ⓜ 58~60HRC
Range of guaranteed base material hardness (Details: P.1303)

Alterations

Part Number — **L** — **P** — **W** — **N** — (AKC · AWC...etc.)

ERSF 1.5 — 100.00 — P0.60 — W0.30 — N20 — AWC60

Quotation

Alteration details P.195

Alterations	Code	Spec.	1Code
	VAK (precision)	VAK=45° increments AKC=1° increments Ⓜ 0 ≤ VAK or AKC < 360 Ⓜ (VAK) KSA, WSA not available Ⓜ (AKC) When combined with KSA/WSA, 90° increments only.	
	VAW	VAW=45° increments Ⓜ 0 ≤ VAW < 360 Ⓜ Combination with KSA/WSA not available.	
	AWC	AWC=1° increments Ⓜ 0 ≤ AWC < 360 Ⓜ When combined with KSA/WSA, 90° increments only.	
	ARC	ARC=1° increments Ⓜ 0 ≤ ARC < 360 Ⓜ When combined with KSA/WSA, 90° increments only.	
	ADC	ADC=1° increments Ⓜ 0 ≤ ADC < 360 Ⓜ When combined with KSA/WSA, 90° increments only.	
	KGA	KGA=1° increments Ⓜ 0 < KGA < 360	
	KGD	KGD=1° increments Ⓜ 0 < KGD < 360	
	HC HCC (precision)	HC, HCC=0.1mm increments Ⓜ (HC) D+1 ≤ HC < H Ⓜ (HCC) D+1 ≤ HCC < H-0.3	
	KSA	KSA=0.1mm increments Ⓜ W/2+0.1 ≤ KSA ≤ D/2-0.1	
	WSA	WSA=0.1mm increments Ⓜ W/2+0.1 ≤ WSA ≤ D/2-0.1	

Alterations	Code	Spec.	1Code
	TC	TC=0.1mm increments Ⓜ T/2 ≤ TC < T (Dimension L and N remain unchanged.) Ⓜ T-TC ≤ Lmax. -L	
	NC	Dowel hole boring NC=90° increments Ⓜ Available when H ≥ 4 Ⓜ Combination with other than NHC · NHN not available. How to order and detailed specifications: P.195	
	NCW	Dowel hole boring+Spring pin driving NCW=90° increments Ⓜ Available when H ≥ 4 Ⓜ Combination with other than NHC · NHN not available. How to order and detailed specifications: P.195	
	NHC	Numbering on the head How to order: P.196	
	NHN	Automatic sequential numbering on the head How to order: P.196	
	TMC	Lapping on the tip face	
	LKC	L dimension tolerance alteration L _{+0.02} ... _{+0.01} Ⓜ Available when L ≤ 200	
	MC	Tapping D8 → M4 D10 → M5 D12 → M6 Ⓜ Not available for ERSF Ⓜ Available when D ≥ 8 Ⓜ Only available combination is with CSW · CSF · TMC	
	CSW	C chamfering processing at 2 points on top (except tip) for relief is performed. Designation method: CSW1-E25	
	CSF	C chamfering processing at 4 points (except tip) for relief is performed. Designation method: CSF0.5-E30	

4mm head		JIS head		Part Number		0.01mm increments				Kmax.	N 1mm increments	Nmin.
H	T	H	T	4mm head	JIS head	D	L	P	W			
3		3				1.5		0.60~1.30	0.30~	1.4	10 ≤ (L-N) ≤ 80	20
4		4				2	40.00~100.00	0.80~1.80		1.9		23
5		5	4			2.5		1.00~2.30	0.40~	2.4		25
6		6				3		1.00~2.80		2.9	10 ≤ (L-N) ≤ 90	27
6		6				3.5		1.20~3.30		3.4		
7		7				4	40.00~120.00	1.50~3.80	0.50~	3.9		
8	4	8		ERSF (4mm head)	ERSJF (JIS Head)	4.5		1.50~4.30		4.4	10 ≤ (L-N) ≤ 120	29
8		8				5		1.80~4.80		4.9		
9		9	6			5.5		2.00~5.30		5.4		
9		9				6		2.00~5.80		5.9	10 ≤ (L-N) ≤ 165	31
10		10				6.5	50.00~150.00	2.50~6.30	0.60~	6.4		
10		10				7		2.50~6.80		6.9		
11		11				8		3.00~7.80		7.9	35	35
11		11				8		3.00~7.80		7.9		
15		15	8			10		3.00~9.80	0.80~	9.9		
—	—	—	—			10	50.00~200.00	4.00~11.80	1.00~	11.9		

Ⓜ Designate P · W dimensions within the Kmax. $K = \sqrt{P^2 + W^2}$ Ⓜ $P \geq W$

Order

Part Number — **L** — **P** — **W** — **N**

ERSF 1.5 — 100.00 — P0.60 — W0.30 — N20

Days to Ship

Quotation

Price

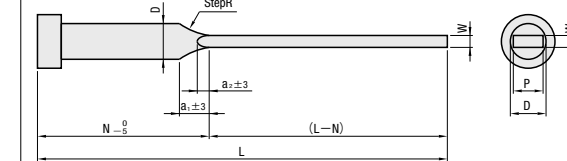
Quotation

Precision Standard	
Squareness of the tip corner	 W plane as the base (Pmax. - Pmin.) ≤ 0.02
Corner R value of the tip corner	 Rmax. ≤ 0.03 (Trimming R) Ⓜ The tip corners have been slightly trimmed to measure the P · W dimensions. (Details: P.1313)

Step R of Rectangular Ejector Pins - N dimension short type-

For N short type, Step R becomes smaller comparing with that of conventional rectangular ejector pin.

- Step radius (R): R65~75*
(*This is the size of grindstone used to process R section. This is not a guaranteed value for R.)



Formula used for calculating the length (a₁) and (a₂) of step R:

$$a_1 = 5 + \sqrt{\frac{D-W}{2} \times (2R - \frac{D-W}{2})}$$

$$a_2 = 5 + \sqrt{\frac{D-P}{2} \times (2R - \frac{D-P}{2})}$$

*The left formulas include profile error from rough and finish processing.

- Concentricity of the rectangular tip section (P · W) and shaft diameter (D): 0.2mm or less

Rectangular Ejector Pins

High Speed Steel SKH51 equivalent

P · W_{-0.01}⁰

Free designation