

High Speed Steel
SKH51 equivalent

Shape processing
P · W_{-0.01}
Free designation

RECTANGULAR EJECTOR PINS WITH TIP PROCESS

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

Part Number	Head Thickness	P · W
ER□X · ER□Y	4mm(T4)	$\begin{matrix} 0 \\ -0.01 \end{matrix}$
ERJ□X · ERJ□Y	4 · 6 · 8mm(JIS)	$\begin{matrix} 0 \\ -0.01 \end{matrix}$

Ⓢ Range of guaranteed shaft diameter precision (D) (Details [P.1301](#))
 Ⓢ Step R (Details [P.1302](#))

Unit of designation	Unit of designation
G±10°	1° increments
R±0.05	0.1mm increments
A±0.02	0.01mm increments
V±0.02	0.01mm increments
C±0.02	0.01mm increments

Select a tip shape from [P.235 · 236](#)
 $P \geq W$, $K = \sqrt{P^2 + W^2}$
 SKH51 equivalent
 58~60HRC
 Range of guaranteed base material hardness (Details [P.1303](#))

Order

Part Number: ER 1X 4 - 150.00 - P3.00 - W1.00 - N50 - G15

In the order of V · A · C · R · G

Days to Ship **Quotation**

Alterations

Part Number: ER1X4 - 150.00 - P3.00 - W1.00 - N50 - G15 - NHC-3

In the order of V · A · C · R · G (AKC · AWC · NHC...etc.)

Quotation

Alterations	Code	Spec.	1Code
	AKC	AKC=1° increments 0 ≤ AKC < 360 When combined with KSA/WSA, 90° increments only.	
	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	Quotation
	KGD	KGD=1° increments 0 < KGD < 360	Quotation
	HC	HC=0.1mm increments D+1 ≤ HC < H	
	HCC	HCC=0.1mm increments 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	

Alteration details [P.195](#)

Alterations	Code	Spec.	1Code										
	TC	TC=0.1mm increments T/2 ≤ TC < T (Dimension L and N remain unchanged.)											
	NC	Dowel hole boring NC=90° increments 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 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	Quotation										
	MC	Tapping D8 · 8.5 → M4 D10 · 10.5 → M5 ERJA available when D ≥ 8 Only available combination is with CSW · CSF	Quotation										
	CSW	C chamfering processing at 2 points on top (except tip) for relief is performed. Designation method CSW1-E25	<table border="1"> <thead> <tr> <th>W</th> <th>CSW, CSF</th> </tr> </thead> <tbody> <tr> <td>1.0 ≤ W < 1.5</td> <td>0.3</td> </tr> <tr> <td>W ≥ 1.5</td> <td>0.5</td> </tr> <tr> <td></td> <td>1</td> </tr> <tr> <td></td> <td>1.5</td> </tr> </tbody> </table>	W	CSW, CSF	1.0 ≤ W < 1.5	0.3	W ≥ 1.5	0.5		1		1.5
W	CSW, CSF												
1.0 ≤ W < 1.5	0.3												
W ≥ 1.5	0.5												
	1												
	1.5												
	CSF	C chamfering processing at 4 points (except tip) for relief is performed. Designation method CSF0.5-E30	<ul style="list-style-type: none"> P ≥ 1.5 CSW, CSF < W/2 E=1mm increments 0 ≤ E ≤ (L-N)-20 										

4mm head		JIS head		Part Number			0.01mm increments			Kmax.	N 1mm increments	Nmin.
H	T	H	T	Type	Tip shape	D	L	P	W			
4		4		ER (4mm head) ERJ (JIS Head)	1X 1Y 2X 2Y 3X 3Y 4X 4Y 5X 5Y 6X 6Y 7X 7Y	2	50.00~250.00	0.80~1.80	0.60~	1.9	N ≥ 33 (L > 200 → N ≥ 50)	
5		5	4			2.5		0.80~2.30		2.4		
6		6	6			3		1.00~2.80		2.9		
7		7	7			3.5		1.00~3.30		3.4		
8		8	8			4		1.00~3.80		3.9		
		9	6			4.5		1.20~4.30		4.4		
		10	10			5		1.50~4.80		4.9		
		11	11			5.5		1.80~5.30		5.4		
		12	12			6		2.00~5.80		5.9		
		13	13			6.5		2.00~6.30		6.4		
		14	14			7		2.30~6.80		6.9		
		15	15			8		2.30~7.80		7.9		
		16	16			8.5		2.30~8.30		8.4		
		17	17			10		3.00~9.80		9.9		
						10.5		3.00~10.30		10.4		

Ⓢ Designate P · W dimensions within the Kmax. $K = \sqrt{P^2 + W^2}$ Ⓢ P ≥ W Ⓢ Select a tip shape for 1X~7Y [P.235 · 236](#)

Precision Standard

Squareness of the tip corner

$P_{max.}$, $P_{min.}$, W plane as the base
($P_{max.} - P_{min.}$) ≤ 0.02

Corner R value of the tip corner

$R_{max.}$
 $R_{max.} \leq 0.03$ (Trimming R)
 The tip corners have been slightly trimmed to measure the P · W dimensions. (Details [P.1313](#))

P Price **Quotation**

Rectangular Ejector Pins

High Speed Steel SKH51 equivalent

Shape processing P · W_{-0.01} Free designation