

High Speed Steel
SKH51 equivalent

Shape processing Precision
P · W_{-0.005}
Free designation

PRECISION RECTANGULAR EJECTOR PINS WITH TIP PROCESS

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

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

| | | |
|-----------------|------------------|---|
| ERV□X · ERV□Y | 4mm(T4) | $\begin{matrix} 0 \\ -0.005 \end{matrix}$ |
| ERVJ□X · ERVJ□Y | 4 · 6 · 8mm(JIS) | $\begin{matrix} 0 \\ -0.005 \end{matrix}$ |

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

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)

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 |

Order

Part Number: ERV 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: ERV1X4 - 150.00 - P3.00 - W1.00 - N50 - G15 - NHC-3

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

Quotation

Alteration details P.195

| 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 | | | | | | | | | | | |
| | KGD | KGD=1° increments 0 < KGD < 360 | | | | | | | | | | | |
| | 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 | | | | | | | | | | | |
| | TC | TC=0.1mm increments T/2 ≤ TC < T (Dimension L and N remain unchanged.) | | | | | | | | | | | |
| | 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 | | | | | | | | | | | |
| | MC | Tapping D8 → M4 D10 → M5 ERVJ Available when D ≥ 8 Only available combination is with CSW · CSF | | | | | | | | | | | |
| | CSW | C chamfering processing at 2 points on top (except tip) for relief is performed. [Designation method] CSW1—E25 | <table border="1"> <tr> <td>W</td> <td>CSW, CSF</td> </tr> <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> </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 | | | | | | | | | | | |

| 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 | | | |
| 3 | — | — | — | ERV (4mm head) | 1X 1Y 2X 2Y 3X 3Y 4X 4Y 5X 5Y 6X 6Y 7X 7Y | +1.5 | 50.00~250.00 | 0.80~1.30 | 0.60~ | 1.4 | N ≥ 33 (L > 200 → N ≥ 50) | |
| 4 | 4 | 4 | 4 | | | 2 | | 0.80~1.80 | | 1.9 | | |
| 5 | 5 | 5 | 5 | | | 2.5 | | 0.80~2.30 | | 2.4 | | |
| 6 | 6 | 6 | 6 | | | 3 | | 1.00~2.80 | | 2.9 | | |
| 7 | 7 | 7 | 7 | | | 3.5 | | 1.00~3.30 | | 3.4 | | |
| 8 | 8 | 8 | 8 | | | 4 | | 1.00~3.80 | | 3.9 | | |
| 9 | 9 | 9 | 9 | | | 4.5 | | 1.20~4.30 | | 4.4 | | |
| 10 | 10 | 10 | 10 | | | 5 | | 1.50~4.80 | | 4.9 | | |
| 11 | 11 | 11 | 11 | | | 5.5 | | 1.80~5.30 | | 5.4 | | |
| 12 | 12 | 12 | 12 | | | 6 | | 2.00~5.80 | | 5.9 | | |
| 13 | 13 | 13 | 13 | | | 6.5 | | 2.00~6.30 | | 6.4 | | |
| 14 | 14 | 14 | 14 | | | 7 | | 2.30~6.80 | | 6.9 | | |
| 15 | 15 | 15 | 15 | | | 8 | | 2.30~7.80 | | 7.9 | | |
| | | | | | | 10 | | 3.00~9.80 | | 9.9 | | |

*D1.5 is only for ERV□□ 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
 $(P_{max.} - P_{min.}) \leq 0.01$

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)

Price **Quotation**

Rectangular Ejector Pins
High Speed Steel SKH51 equivalent
Shape processing Precision P · W_{-0.005} Free designation