

STRAIGHT EJECTOR SLEEVE & ONE-STEP CENTER PIN SETS

— L DIMENSION DESIGNATION TYPE —

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

Part Number	Ejector Sleeve Head Thickness (T)	Center Pin Head Thickness (J)	Head Thickness (T · J)
ESV-S-□	4mm	4mm	$\begin{matrix} 0 \\ -0.02 \end{matrix}$

Head diameter of center pin	
V	Q
1	3
1.5	4
2	5
2.5	6
3	7
3.5	8
4	9
4.5	10
5	11
5.5	12
6	13
6.5	14
7	15
8	16
9	17
10	18
11	19
12	20

$C = V + (0.2 \sim 0.4)$

①② SKH51 equivalent
 58~60HRC
 Range of guaranteed shaft diameter precision (Details P.1305)
 Range of guaranteed base material hardness (Details P.1307)

Step S (Not processed)

Alteration CX Designate in $0.3 \leq CX \leq 0.5$, $CX < V/2$
 Alteration RX Designate in $0.3 \leq RX \leq 0.5 \sim 1.0$, $RX < V/2$
 Alteration SR $SR = V/2$

Step A

Default $\alpha = 0$
 When CX code is used $\alpha = CX$
 When RX code is used $\alpha = RX$
 When SR code is used $\alpha = E/2$

Ⓢ $\ell \geq 0.5 + \alpha$

Step B

Default $\alpha = 0$
 When CX code is used $\alpha = CX$
 When RX code is used $\alpha = RX$
 When SR code is used $\alpha = E/2$

Ⓢ $\ell \geq 0.7 + \alpha$

Step C

Ⓢ $\ell \geq \frac{V-A}{2} + 0.5 + \alpha$
 When AC code is used
 Ⓢ $\ell \geq \frac{V-A}{2 \tan AC} + 0.5 + \alpha$
 Default $\alpha = 0$
 When CX code is used $\alpha = CX$
 When RX code is used $\alpha = RX$
 When SR code is used $\alpha = E/2$

Step D

Ⓢ $0.1 \leq C \leq 1.5$
 Ⓢ $C < \frac{V-A}{2}$
 Ⓢ $\ell \geq C + 0.5 + \alpha$
 Default $\alpha = 0$
 When CX code is used $\alpha = CX$
 When RX code is used $\alpha = RX$
 When SR code is used $\alpha = E/2$

Step E

Ⓢ $0.3 \leq R \leq \frac{V-A}{2}$
 Ⓢ $\ell \geq R + 0.5 + \alpha$
 Default $\alpha = 0$
 When CX code is used $\alpha = CX$
 When RX code is used $\alpha = RX$
 When SR code is used $\alpha = E/2$

H	Part Number		D	L			V			S	0.01mm increments				0.1mm increments C · R	ℓ max											
	Type	Step		0.01mm increments	0.5mm increments	1mm increments	0.5mm increments	X	F		A	Emin.	V	Emin.													
7	ESV-S- A B C D E	S	4	50.00~120.00	1~2.5				1.0 ≤ S ≤ (V×3) and S ≤ 25	L+20 ≤ X ≤ L+100 and X ≤ Xmax.	F ≥ 50.00	No need to designate A · E when [Step] S is selected.	No need to designate A · E when [Step] A is selected.	Ⓢ Step D only 0.1 ≤ C ≤ 1.5 and C < $\frac{V-A}{2}$	Ⓢ Step E only R ≥ 0.3 and R < $\frac{V-A}{2}$	50											
8			5		1~3.5																						
9			6	50.00~150.00		2~4.5																					
10			7			3~5.5																					
11			8			4~6																					
14			9			5~7																					
15			10			6~7	8																				
16			11	50.00~200.00		7~9																					
17			12				7~10																				
18			13					7~10																			
19			14					7~10 · 12																			

Ⓢ 1 → [Step] Eis V ≥ 1.5 Ⓢ Refer to the drawing for ℓ min. (normally, α = 0)

Order Part Number — L — V — S — X — F — A — E — C · R
 ESV-S-D6 — 145.50 — V3.0 — S8 — X220.00 — F200.00 — A2.50 — E1.50 — C0.4

Days to Ship **Quotation**

Price **Quotation**

Alterations Part Number — L — V — S — X — F — A — E — C · R — (KC · WKC · etc.)
 ESV-S-D6 — 145.50 — V3.0 — S8 — X220.00 — F200.00 — A2.50 — E1.50 — C0.4 — HC10-WC1.75
 Alteration details P.275

Alterations	Code	Spec.	1Code	Alterations	Code	Spec.	1Code
	KC WC	KC · WC = 0.1mm increments KC = D/2 → 0.05mm increments possible WC = V/2 → 0.05mm increments possible Ⓢ D/2 ≤ KC < H/2, V/2 ≤ WC < Q/2	Quotation		CX	CX = 0.1mm increments Ⓢ 0.3 ≤ CX ≤ 0.5, CX < E (or V)/2 E (or V) is a dimension prior to CX machining. α = CX	Quotation
	WKC WWC	WKC · WWC = 0.1mm increments WKC = D/2 → 0.05mm increments possible WWC = V/2 → 0.05mm increments possible Ⓢ D/2 ≤ WKC < H/2, V/2 ≤ WWC < Q/2			RX	RX = 0.1mm increments Ⓢ V > 4.5, 0.3 ≤ RX ≤ 0.5, RX < E (or V)/2 V > 4.5, 0.3 ≤ RX ≤ 1.0 E (or V) is a dimension prior to RX machining. α = RX	
	HC QC	HC · QC = 0.1mm increments Ⓢ D ≤ HC < H, V ≤ QC < Q Ⓢ in relation to the diameter tolerance, alteration may create a straight piece with little diameter difference between the head and shaft.			SR	Finishes the tip in spherical shape (SR). α = E (or V)/2 Ⓢ X is +0.05 E (or V) is a dimension prior to SR machining.	
	TC JC	TC · JC = 0.1mm increments (Dimensions L · X and F remain unchanged.) Ⓢ T/2 ≤ TC < T, T - TC ≤ Lmax. - L J/2 ≤ JC < J, J - JC ≤ Xmax. - X			AC	Changes the standard angle (Ks = 45°). AC = 1° increments Ⓢ 30 ≤ AC ≤ 60 Ⓢ Available for [Step] J, D Ⓢ Combination with RR not available. When [Step] D, C ≤ 1.0, A + 2(C × tan AC) < V	
Ⓢ ① Alterations for Ejector Sleeves : KC, WKC, HC, TC Ⓢ ② Center pin alteration : WC, WWC, QC, JC, CX, RX, SR, AC, RR					RR	Changes R (normally 0.2 or less) to R0.3~0.5. (for Strength improvement) Ⓢ Designation method RR Ⓢ Available for [Step] B, C, D Ⓢ V - A ≥ 1.0 When [Step] D, C ≥ 0.5	

Ⓢ CX, RX, SR are available when V ≥ 2