

# TAPERED HEAD JECTOR PUNCHES

—NORMAL · WPC® TREATMENT · TiCN COATING · HW COATING—



Type	M	S	Catalog No.	Shape
—Normal—	Punch Equivalent to SKH51 61~64HRC	—	<b>TSSJAS</b> <b>TSSJAL</b>	<p>                     ⚠ The tip end of a TiCN coating punch is ground before the coating is applied.                      ⚠ The tip edges of a WPC® treatment or HW coating punch are very slightly rounded.                 </p>
—WPC® treatment—			WPC® treatment Surface 1000~1100HV	
—TiCN coating—	TiCN coating Surface 3000HV	<b>H-TSSJAS</b> <b>H-TSSJAL</b>		
	HW coating Surface 3000HV	<b>HW-TSSJAS</b> <b>HW-TSSJAL</b>		
—HW coating—	Taper ring NAK80 37~43HRC	—	<b>TSPJAS</b> <b>TSPJAL</b>	
			Powdered high speed steel 64~67HRC	
—WPC® treatment—	Taper ring NAK80 37~43HRC	—	<b>H-TSPJAS</b> <b>H-TSPJAL</b>	
			TiCN coating Surface 3000HV	

Catalog No.		D	0.1 mm increments L	0.01mm increments min. P max.	B	H	d <sub>1</sub>	d <sub>2</sub>
Type								
S	—WPC® treatment— <b>TSSJAS</b> <b>TSPJAS</b>	8	50.0 ~ 80.0	4.00 ~ 7.99	13	13	1.5	3.4
	—TiCN coating— <b>H-TSSJAS</b> <b>H-TSPJAS</b>	10	55.0 ~ 90.0	5.00 ~ 9.99		15	1.8	4.4
	—HW coating— <b>HW-TSSJAS</b> <b>HW-TSPJAS</b>	13	65.0 ~ 100.0	6.00 ~ 12.99	18	2.8		
		16		10.00 ~ 15.99	19	21		
L	—WPC® treatment— <b>TSSJAL</b> <b>TSPJAL</b>	8	60.0 ~ 80.0	4.00 ~ 7.99	19	13	1.5	3.4
	—TiCN coating— <b>H-TSSJAL</b> <b>H-TSPJAL</b>	10	60.0 ~ 90.0	5.00 ~ 9.99		18	1.8	4.4
	—HW coating— <b>HW-TSSJAL</b> <b>HW-TSPJAL</b>	13	70.0 ~ 100.0	6.00 ~ 12.99	15	2.8		
		16		10.00 ~ 15.99	25	21		

⚠ P > D - 0.03 → ℓ = 0 If P > D - 0.03, D = 0.01 (press-in lead) is not included.  
 ⚠ Jector holes are based on the jector punch blanks for heavy load. P.238

Order **Catalog No.** — **L** — **P**  
**TSSJAS10** — **82** — **P8.30**

Days to Ship **Quotation**

Price **Quotation**

Alterations **Catalog No.** — **L** — **P** — (BC-SC, etc.)  
**W-TSSJAL 10** — **82** — **8.60** — **PRC0.3**

Alteration	Code	Spec.	1Code
	<b>BC</b>	Tip length change (shorter than standard) 2 ≤ BC ≤ B 0.1 mm increments	
	<b>SC</b>	Lapping of tip ⚠ P dimension tolerance and increment are the same. ⚠ Cannot be used with TiCN coating, WPC® treatment and HW coating.	<b>Quotation</b>
	<b>PRC</b>	Rounding of tip side edge 0.3 ≤ PRC ≤ 1 0.1 mm increments ⚠ PRC ≤ (P - d <sub>1</sub> - 0.5) / 2 ⚠ Cannot be combined with PCC. ⚠ For WPC® treatment or HW coating, the tolerance is PRC ± 0.1.	
	<b>PCC</b>	Chamfering to tip side edge 0.3 ≤ PCC ≤ 1 0.1 mm increments ⚠ PCC ≤ (P - d <sub>1</sub> - 0.5) / 2 ⚠ Cannot be combined with PRC. ⚠ For WPC® treatment or HW coating, the tolerance is PCC ± 0.1.	

Alteration	Code	Spec.	1Code
	<b>PKC</b>	Tip dimension change $P \begin{matrix} +0.01 \\ 0 \end{matrix} \Rightarrow \begin{matrix} +0.005 \\ 0 \end{matrix}$ ⚠ (P dimension can be selected in 0.001 mm increments.) ⚠ TiCN or HW coating cannot be used for D > 13.	
	<b>LKC</b>	Full length tolerance change $L \begin{matrix} +0.3 \\ 0 \end{matrix} \Rightarrow \begin{matrix} +0.05 \\ 0 \end{matrix}$	<b>Quotation</b>
	<b>NC</b>	<del>WPC® treatment</del> The jector pin is removed.	
	<b>NDC</b>	No press-in lead $\ell \geq 3 \Rightarrow \ell = 0$	

## Example

### Features

- Tapered head jector punches are designed for punching of stainless steel, high-tensile steel, and for general heavy loads. The strength and convenience are superior to conventional heavy-load jector punches due to improvements to the following points.
  - There is no side hole on the shank. Such a hole can be a cause of punch breakage during punching for heavy loads.
  - A problem with conventional jector punches is that the tip length B is shortened if an LC alteration is used. However tapered head jector punches are designed to maintain the same tip length B for any L dimension.
- When used with the accessory taper rings, the tapered head jector punches eliminate the need for machining of tapered holes in the punch plates and for machining to align the thickness of the plate and punch head.
- Guide to tapered head punches P.1611

### Note

- The head thickness tolerance of a tapered head punch,  $8 \begin{matrix} +0.03 \\ +0.01 \end{matrix}$ , is achieved by machining a match between the actual individual punch and its taper ring. Be sure to use a taper ring that has the same ID mark as the punch. If the punch is combined with a tapered ring that has a different ID number, the head thickness may deviate from the tolerance listed in the catalog.
- When a punch is replaced, replace both punch and taper ring as a set. (The punch and taper ring are not sold individually.)

