JECTOR PUNCHES FOR HEAVY LOAD
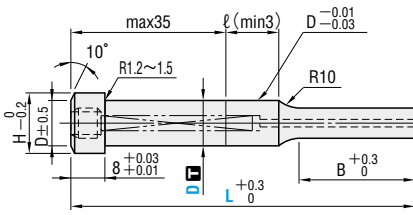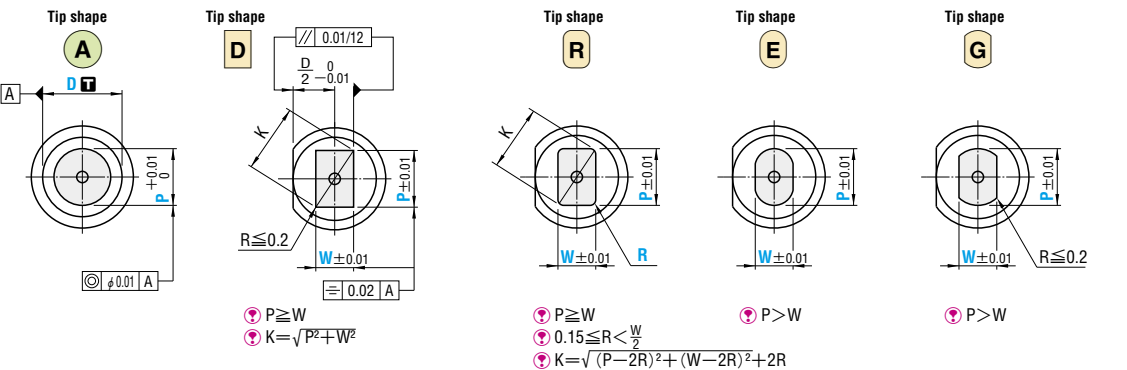## —FINISHED FOR RETAINERS·WPC® TREATMENT·HW COATING·SPRING AND PIN REINFORCED TYPE—

PRODUCTS DATA P.1601·1605·1611

RELATED PRODUCTS P.161

- For details of jector holes, refer to Jector Punch Blanks. P.238
- For details of jector pins, refer to Jector Pin Sets. P.241

⚫ Projection length of the jector pin is 2mm for reinforced types and 4mm for non-reinforced types.

Type	Shank diameter D T tolerance	M H	Catalog No.			The tip shape can be selected from Tip shape A~G in the figure below.
			Type	Tip shape	B Tip length	
—WPC® treatment— RoHS	Dm5	WPC® treatment Powdered high-speed steel 64~67 HRC Surface 1000~1100HV	W—APJ W—APJV Spring and pin reinforced type	A D R E G	S L	
—HW coating—	D +0.005 0	HW coating Powdered high-speed steel 64~67HRC Surface 3000 HV	HW—APJ HW—APJV Spring and pin reinforced type			
		WPC® treatment Powdered high-speed steel 64~67 HRC Surface 1000~1100HV	AW—APJ AW—APJV Spring and pin reinforced type			
		HW coating Powdered high-speed steel 64~67HRC Surface 3000 HV	AHW—APJ AHW—APJV Spring and pin reinforced type		Tip length (B) L>S	⚫ The tip edge are very slightly rounded.

For shank diameter tolerance D T, select either m5 or +0.005/0

Tip shape dimensional figures:

Tip shape A: P≥W
Tip shape D: K=√(P²+W²)
Tip shape R: 0.15≤R<W/2, K=√((P−2R)²+(W−2R)²)+2R, P≥W
Tip shape E: P>W
Tip shape G: P>W, R≤0.2

	Catalog No.				L	0.01mm increments			0.01 mm	B	H
	Type	Tip shape	B Tip length	D		Ⓐ min. P max.	D R E G P·Kmax.	D R E G P·Wmin.	R R		
(Dm5) —WPC® treatment— W—APJ Spring and pin reinforced type W—APJV (D+0.005/0) —WPC® treatment— AW—APJ Spring and pin reinforced type AW—APJV		A D R E G	S	8	(50) 60 70 80 90 100 (110) (120) (130)	4.00 ~ 7.99	7.97	4.00			13
				10		5.00 ~ 9.99	9.97	5.00	13	15
				13		6.00 ~12.99	12.97	6.00		18
				16		10.00 ~15.99	15.97	6.00		21
				20		13.00 ~19.99	19.97	6.00	19	25
				25		18.00 ~24.99	24.97	6.00		30
—HW coating— HW—APJ Spring and pin reinforced type HW—APJV —HW coating— AHW—APJ Spring and pin reinforced type AHW—APJV			L	8	60 70 80 90 100 (110) (120) (130)	4.00 ~ 7.99	7.97	4.00	0.15≤R<W/2 (R only)	19	13
				10		5.00 ~ 9.99	9.97	5.00		15
				13		6.00 ~12.99	12.97	6.00		18
				16		10.00 ~15.99	15.97	6.00		21
				20	70 80 90 100 (110) (120) (130)	13.00 ~19.99	19.97	6.00	25	25
				25		18.00 ~24.99	24.97	6.00		30

⚫ The spring constants of W—APJV, AW—APJV, HW—APJV, and AHW—APJV are twice those of W—APJ, AW—APJ, HW—APJ, and AHW—APJ respectively. ✕ L(110)(120)(130)···L110, 120, and 130 cannot be used for spring and pin reinforced types.
⚫ L(50)···B=8 If the full length is (50), the tip length is 8mm in all cases.
⚫ Ⓐ: P>D−0.03 ···ℓ=0 If P>D−0.03 for a round punch, D−0.01/0.03 (press-in lead) is not included.
⚫ D R E G: P·K>D−0.05···ℓ=0 If P·K>D−0.05 for a shaped punch, D−0.01/0.03 (press-in lead) is not included.

Order
Catalog No. — L — P — W — R(R only)
W—APJAS 20 — 80 — P15.00

Days to Ship Quotation

■Effect of spring and pin reinforced type
The spring constant is twice that of the standard type, resulting in improved scrap removal. In addition, the improved strength under the pin head prevents breakage below the head.

Alterations
Catalog No. — L(LC) — P — W — R — (BC·KC, etc.)
W—APJDS 20 — LC79 — P15.00 — W6.00 — BC13

Alteration	Code	Ⓐ	D R E G	1Code
Alterations to tip BC	BC	Tip length change (shorter than standard) 2≤BC<B 0.1 mm increments		Quotation
PRC±0.1	PRC	Rounding of tip side edge 0.3≤PRC≤1 0.1 mm increments ⚫ PRC≤(P−d₁−0.5)/2 d₁ dimension P.238 ✕ Cannot be combined with PCC.	—	
PCC±0.1	PCC	Chamfering to tip side edge 0.3≤PCC≤1 0.1 mm increments ⚫ PCC≤(P−d₁−0.5)/2 d₁ dimension P.238 ✕ Cannot be combined with PRC.	—	
PKC P·W	PKC	Tip tolerance change P+0.01/0 ⇒ +0.005/0 ⚫ (P dimension can be selected in 0.001 mm increments.) ✕ HW coating cannot be used for D>13.	Tip tolerance change P·W±0.01 ⇒ +0.01/0	
Alterations to full length LC	LC	Full length change LC<L (reduction in tip length) 0.1 mm increments (If combined with LKC, 0.01 mm increments can be selected.) ⚫ Tip length B is shortened by (L−LC). ⚫ The projection length of the jector pin is 2mm for spring and pin reinforced types and 4mm for non-reinforced types.		
LKC L T	LKC	Full length tolerance change L+0.3/0 ⇒ +0.05/0		

Alteration	Code	Ⓐ	D R E G	1Code
Alterations to head	KC	Addition of single key flat to head	Key flat position change 1° increments	Quotation
	WKC	Addition of double key flats in parallel	Double key flats in parallel Can be combined with KC.	
	KFC	Double key flats at 0° and a selected angle 1° increments	Double key flats at 0° and a selected angle 1° increments ✕ Cannot be combined with KC·WKC.	
	NKC	—	No key flat	
Alterations to shank	SKC	Single key flat on shank Ⓐ P≤D−2.2 D R E G W≤D−2.2 (Machining width 1) ✕ Cannot be combined with KC·WKC·KFC.		
	AC	The jector pin is removed to create an air path and the side vent hole is plugged from the inside by inserting a resin (ABS) ring.		
	NC	The jector pin is removed. ✕ Cannot be combined with AC.		
	NDC	No press-in lead ℓ≥3 ⇒ ℓ=0		

P Price **Quotation**

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