

# PRECISION CARBIDE STRAIGHT PUNCHES

**RoHS** • Tip machining limit

Tip shape: **D** (Normal), **R** (Rounded), **E** (Chamfered)

$P \geq W$  (D, R)  
 $P \geq W$  and  $0.15 \leq R < \frac{W}{2}$  (R)  
 $P > W$  (E)

| Material           | Tip dimension P·W | Normal   | Tapped   | With key groove                                | Single flange                                     | Double flanges                                 |
|--------------------|-------------------|--|--|--|---|--|
| V30 (HIP) 88~89HRA | 2.000~20.000      | <b>D</b> VZPCD, <b>R</b> VZPCR, <b>E</b> VZPCE | <b>D</b> VZMCD, <b>R</b> VZMCR, <b>E</b> VZMCE | <b>D</b> VZKCD, <b>R</b> VZKCR, <b>E</b> VZKCE | <b>D</b> VZFC D, <b>R</b> VZFC R, <b>E</b> VZFC E | <b>D</b> VZWCD, <b>R</b> VZWCR, <b>E</b> VZWCE |
| V30 (HIP) 88~89HRA | 12.000~20.000     |  |  |  |   |  |
| V30 (HIP) 88~89HRA | 2.000~16.000      |  |  |  |   |  |
| V30 (HIP) 88~89HRA | 2.000~16.000      |  |  |  |   |  |

| Catalog No. | Type | Tip shape | L             | W           | P           | 2.000<br>5.000 | 5.001<br>10.000 | 10.001<br>16.000 | 16.001<br>20.000 | 0.1mm increments | T   | U |    |             |   |    |              |   |    |               |   |
|-------------|------|-----------|---------------|-------------|-------------|----------------|-----------------|------------------|------------------|------------------|-----|---|----|-------------|---|----|--------------|---|----|---------------|---|
| VZPC        | D    | R         | 40            | 3.001~4.000 | 4.001~5.000 | ○              | ○               | ○                | ●                | T ≥ 2            | 1.0 |   |    |             |   |    |              |   |    |               |   |
| VZKC        |      |           |               |             |             | R              | 50              | 5.001~6.000      | ○                |                  |     |   | ○  | ○           | ● |    |              |   |    |               |   |
| VZFC        |      |           |               |             |             |                |                 |                  | R                |                  |     |   | 60 | 6.001~8.000 | ○ | ○  | ○            | ● |    |               |   |
| VZWC        |      |           |               |             |             |                |                 |                  |                  |                  |     |   |    |             | R | 70 | 8.001~10.000 | ○ | ○  | ○             | ● |
|             |      |           |               |             |             |                |                 |                  |                  |                  |     |   |    |             |   |    |              | R | 70 | 10.001~16.000 | ○ |
|             | R    | 70        | 16.001~20.000 | ○           | ○           | ○              | ○               | ●                |                  |                  |     |   |    |             |   |    |              |   |    |               |   |

| Catalog No. | Type | Tip shape | L  | W             | P             | 12.000<br>16.000 | 16.001<br>20.000 | M (a) |               |   |    |               |   |    |
|-------------|------|-----------|----|---------------|---------------|------------------|------------------|-------|---------------|---|----|---------------|---|----|
| VZMC        | D    | R         | 40 | 12.000~13.000 | 13.001~16.000 | ○                | ○                | 8 10  |               |   |    |               |   |    |
|             |      |           |    |               |               | R                | 50               |       | 13.001~16.000 | ○ | ○  |               |   |    |
|             |      |           |    |               |               |                  |                  |       |               | R | 60 | 16.001~20.000 | ○ | ○  |
|             |      |           |    |               |               |                  |                  |       |               |   |    |               | R | 70 |

**Order**

Catalog No. — L — P — W — R (R only) — T — K·F·WF

0.001mm increments

VZPCD — 60 — P14.280 — W9.280  
 VZMCR — 60 — P15.000 — W12.000 — R0.300  
 VZKCR — 60 — P14.280 — W9.280 — R0.500 — T25.5 — K0  
 VZFC E — 60 — P10.000 — W5.500 — F0  
 VZWCE — 60 — P12.010 — W8.050 — WFO

**Days to Ship** **Quotation**

**Price** **Quotation**

**Alterations** Catalog No. — L(LC) — P — W — R — T — K·F·WF — (HC·TC·LKC, etc.) — LKC

VZPCD — LC65.5 — P5.80 — W5.20

| Alteration                 | Code | Spec.   | 1Code            |
|----------------------------|------|---|------------------|
| Alterations to full length | LC   | Full length change<br>20 ≤ LC < L<br>0.1mm increments<br>(If combined with LKC, 0.01mm increments can be selected.)   |                  |
|                            | LKC  | Full length tolerance<br>L +0.1 / 0 ⇔ +0.01 / 0<br>change   |                  |
| Alteration to key groove   | WK   | Addition of key groove at symmetrically opposite position<br>An additional key groove is added at a position symmetrically opposite to the specified key groove.<br>W — (2×U (UK)) ≥ 2 (K0)<br>P — (2×U (UK)) ≥ 2 (K90)<br>Can be combined with UK. | <b>Quotation</b> |
|                            | UK   | Key groove depth change<br>0.5 ≤ UK ≤ U + 0.2<br>0.1mm increments<br>W(P) — UK ≥ 2<br>Can be combined with WK.  |                  |
| Alterations to flange      | HC   | Flange width change<br>0 ≤ HC < 1.5<br>0.1mm increments   |                  |
|                            | TC   | Flange thickness change 2 ≤ TC < 5<br>0.1mm increments<br>Full length L is shortened by (5 — TC).<br>If combined with LC, full length is equal to LC.   |                  |
|                            | FK   | Relief chamfering to flange top edge<br>Flange edge is chamfered to prevent flange breakage.<br>Cannot be used for normal, tapped, and types with key grooves.  |                  |

**Key groove position specified**

K0, K90

**Flange position specified**

F0, F90, WFO, WF90

Tip shape (E) Can be selected for F0-WFO only.

For F90 or WF90, H dimension is as shown below.

Tip shape (D): H=W

Tip shape (R): 2 ≤ W — 2R — 1 H=W — 2R — 1

Flanged types (both single flange and double flanges) with shapes (R) are provided with 0.5 mm straight parts on each of the flange sides.

| Alteration                  | Code | Spec.   | 1Code            |
|-----------------------------|------|---|------------------|
| Alterations to tap diameter | MC   | Tap diameter change<br>For change from M8 to M6<br>The dimensions are M×2+4m (reference level).   |                  |
| Others                      | PHM  | Shank diameter tolerance<br>P·W +0.003 / 0 ⇔ P·W — 0.003 / 0  | <b>Quotation</b> |
|                             | CCN  | Chamfering to shank (4 positions)<br>5 ≤ CCN ≤ L (LC) 1mm increments<br>Can be used for tip shape (D) only.<br>Flange side of flanged punch becomes CCN — T (TC). |                  |