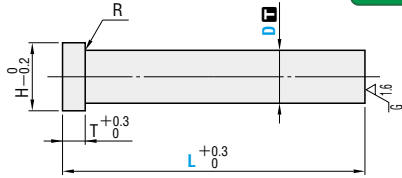


# PUNCH BLANKS

## Regular punch blanks

RoHS



| D         | R       |
|-----------|---------|
| 1.0 ~ 2.5 | R ≤ 0.2 |
| 3 ~ 25    | R ≤ 0.5 |

| Catalog No. | Shank diameter tolerance | M                         | H        | Applicable dim. D |
|-------------|--------------------------|---------------------------|----------|-------------------|
| SPB         | Dm5                      | Equivalent to SKD11       | 60~63HRC | D3 ~25            |
| SHB         |                          | Equivalent to SKH51       | 61~64HRC | D1.0~25           |
| PHB         |                          | Powdered high-speed steel | 64~67HRC | D1.6~25           |
| A-SPB       | D+0.005                  | Equivalent to SKD11       | 60~63HRC | D3 ~25            |
| A-SHB       |                          | Equivalent to SKH51       | 61~64HRC | D1.0~25           |
| A-PHB       |                          | Powdered high-speed steel | 64~67HRC | D1.6~25           |

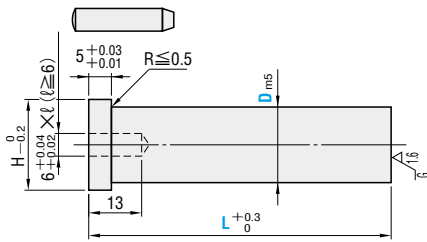
| H   | T | Catalog No.                         |     | 10mm increments | Base unit price 1 ~ 9 pieces |     |     |       |       |       |
|-----|---|-------------------------------------|-----|-----------------|------------------------------|-----|-----|-------|-------|-------|
|     |   | Type                                | D   | L               | SPB                          | SHB | PHB | A-SPB | A-SHB | A-PHB |
| 2.0 | 3 | (D <sub>m5</sub> )                  | 1.0 | 30~50           |                              |     |     |       |       |       |
| 2.6 |   |                                     | 1.6 |                 |                              |     |     |       |       |       |
| 3.0 |   |                                     | 2.0 |                 |                              |     |     |       |       |       |
| 3.5 |   |                                     | 2.5 |                 |                              |     |     |       |       |       |
| 5   | 5 | SHB                                 | 3   | 40~100          |                              |     |     |       |       |       |
| 7   |   | PHB                                 | 4   |                 |                              |     |     |       |       |       |
| 8   |   |                                     | 5   |                 |                              |     |     |       |       |       |
| 9   |   |                                     | 6   |                 |                              |     |     |       |       |       |
| 11  |   | (D <sup>+0.005</sup> <sub>0</sub> ) | 8   | 40~100          |                              |     |     |       |       |       |
| 13  |   | A-SPB                               | 10  |                 |                              |     |     |       |       |       |
| 16  |   | A-SHB                               | 13  |                 |                              |     |     |       |       |       |
| 19  |   | A-PHB                               | 16  |                 |                              |     |     |       |       |       |
| 23  |   |                                     | 20  |                 |                              |     |     |       |       |       |
| 28  |   |                                     | 25  |                 |                              |     |     |       |       |       |

Quotation

## Punch blanks with locating dowel holes

SPB-C

RoHS



- M Material equivalent to SKD11
- H Hardness 60 ~ 63HRC
- A Accessory MS6—25

| H  | Catalog No. | 10mm increments | Base unit price |
|----|-------------|-----------------|-----------------|
|    | Type        | D               | 1~9 pieces      |
| 13 | SPB-C       | 10              | Quotation       |
| 16 |             | 13              |                 |
| 19 |             | 16              |                 |
| 23 |             | 20              |                 |
| 28 |             | 25              |                 |
| 35 |             | 32              |                 |
| 41 |             | 38              |                 |
| 48 |             | 45              |                 |



Price

Quotation



Alterations



Catalog No. — L(LC) — (HC·TC, etc.)  
SHB 3 — LC65

## Punch blanks other than jector

| Alteration                 | Code | Spec.                                                                                                                                                                                             | 1Code     |
|----------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Alterations to full length | LC   | •SPB ·SHB<br>•A-SPB ·A-SHB →15≤LC<L<br>•SPB-C →20≤LC<L<br>•PHB-A-PHB →30≤LC<L<br>0.1mm increments<br>(If combined with LKC-LKZ, 0.01mm increments can be selected.)                               |           |
|                            | LKC  | Full length tolerance change $L+0.3 \rightarrow +0.05$                                                                                                                                            |           |
|                            | LKZ  | Full length tolerance change $L+0.3 \rightarrow +0.01$<br>⊗ Cannot be used for D>25, or for L(LC)<16.                                                                                             |           |
| Alterations to head        | KC   | Addition of single key flat to head                                                                                                                                                               | Quotation |
|                            | WKC  | Addition of double key flats in parallel                                                                                                                                                          |           |
|                            | HC   | Head diameter change<br>$D \leq HC < H$ 0.1 mm increments                                                                                                                                         |           |
|                            | TC   | $2 \leq TC < T$ 0.1mm increments<br>(If combined with TKC-TKM, 0.01mm increments can be selected.)<br>⊗ Full length L is shortened by (T-TC).<br>If combined with LC, full length is equal to LC. |           |
|                            | TKC  | Head thickness tolerance change $T+0.3 \rightarrow +0.02$                                                                                                                                         |           |
|                            | TKM  | Head thickness tolerance change $T+0.3 \rightarrow -0.02$                                                                                                                                         |           |

## Jector punch blanks

| Alteration                 | Code | Spec.                                                                                                                                                                                                                                                                                                                        | 1Code     |
|----------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Alterations to full length | LC   | •SJB-SJVB-PJB-PJVB-SJFB<br>•A-SJB-A-SJVB-A-PJB-A-PJVB→30≤LC<L<br>•SJXB-SJB-C-SJVB-C-SJBL<br>•A-SJXB-A-SJXVB-A-PJBL-A-SJBL<br>•LFSJB-LFSJVB-A-LFSJB-A-LFSJVB→40≤LC<L<br>•SJB-C-SJXVB-C→90≤LC<L<br>0.1mm increments ⊗ S dimension is shortened accordingly.<br>(If combined with LKC-LKZ, 0.01 mm increments can be selected.) |           |
|                            | LKC  | Full length tolerance change $L+0.3 \rightarrow +0.05$                                                                                                                                                                                                                                                                       |           |
|                            | LKZ  | Full length tolerance change $L+0.3 \rightarrow +0.01$<br>⊗ Cannot be used for D>25.                                                                                                                                                                                                                                         |           |
| Alterations to head        | KC   | Addition of single key flat to head                                                                                                                                                                                                                                                                                          | Quotation |
|                            | WKC  | Addition of double key flats in parallel                                                                                                                                                                                                                                                                                     |           |
|                            | HC   | Head diameter change<br>$D \leq HC < H$ 0.1 mm increments                                                                                                                                                                                                                                                                    |           |
|                            | TC   | $3.5 \leq TC < 5$ 0.1mm increments<br>(If combined with TKC-TKM, 0.01mm increments can be selected.)<br>⊗ Full length L is shortened by (5-TC).<br>⊗ If combined with LC, full length is equal to LC.                                                                                                                        |           |
|                            | TKC  | Head thickness tolerance change $T+0.3 \rightarrow +0.02$                                                                                                                                                                                                                                                                    |           |
|                            | TKM  | Head thickness tolerance change $T+0.3 \rightarrow -0.02$                                                                                                                                                                                                                                                                    |           |
| Alterations to shank       | AC   | AIR 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.<br>⊗ Cannot be used for LFSJB-A-LFSJB.                                                                                                                                                |           |
|                            | NC   | The jector pin is removed.<br>⊗ Cannot be combined with AC.                                                                                                                                                                                                                                                                  |           |