

SCRAP RETENTION BUTTON DIES, CONFIGURABLE SIZE

— CONFIGURABLE FULL LENGTH, HOLE DEPTH, AND RELIEF HOLE TYPE —



| — Headed type — | | RoHS | M | H | D dimension | Catalog No. | |
|-----------------|------------------------------|------|---|---|-------------|---|--|
| | Equivalent to SKD11 60~63HRC | RoHS | M | H | D6~56 | A SR-FMHD D SR-FHDD R SR-FHDR E SR-FHDE G SR-FHDG | |
| | | | | | D8~56 | A SR-FMHDS D SR-FHDDS R SR-FHDRS E SR-FHDES G SR-FHDGS | |
| | | | | | D10~56 | A SR-FMHDS D SR-FHDDS R SR-FHDRS E SR-FHDES G SR-FHDGS | |

| — Straight type — | | RoHS | M | H | D dimension | Catalog No. | |
|-------------------|------------------------------|------|---|---|-------------|---|--|
| | Equivalent to SKD11 60~63HRC | RoHS | M | H | D6~56 | A SR-FMSD D SR-FSDD R SR-FSDR E SR-FSDE G SR-FSDG | |
| | | | | | D8~56 | A SR-FMSDS D SR-FSDDS R SR-FSDRS E SR-FSDES G SR-FSDGS | |
| | | | | | D10~56 | A SR-FMSDS D SR-FSDDS R SR-FSDRS E SR-FSDES G SR-FSDGS | |

| D tolerance | | Catalog No. | | L | 0.01mm increments | | | | 1mm increments | G | 0.01mm increments | 0.005mm increments |
|-------------|--------|-------------|--------------------------|----------------------------|-------------------|-------|------|------|----------------|-----------|-------------------|--------------------|
| D | m5 | n5 | Type | | D | A | D | R | | | | |
| 6 | +0.009 | +0.013 | | 16.0~40.0 | 1.00~3.20 | | | | 3~4 | 3.0~3.6 | 0.2mm | |
| 8 | +0.012 | +0.016 | Headed type (Dm5) | | 1.00~4.40 | 4.40 | 1.00 | | 3~4 | 3.0~4.8 | 0.2mm | |
| 10 | +0.006 | +0.010 | Straight type (Dn5) | | 1.00~6.40 | 6.40 | 1.00 | | 3~6 | 3.0~6.8 | 0.2mm | |
| 13 | +0.015 | +0.020 | A SR-FMHD SR-FMSD | | 1.50~8.50 | 8.50 | 1.00 | | 3~8 | 3.0~9.0 | 0.5mm | |
| 16 | +0.007 | +0.012 | D SR-FHDD SR-FSDD | | 2.50~10.50 | 10.50 | 1.00 | | 3~8 | 3.0~11.0 | 0.5mm | |
| 20 | +0.017 | +0.024 | R SR-FHDR SR-FSDR | | 3.50~12.50 | 12.50 | 1.50 | | 3~8 | 4.0~13.0 | 0.5mm | |
| 25 | +0.008 | +0.015 | E SR-FHDE SR-FSDE | | 5.00~16.50 | 16.50 | 1.50 | | 3~8 | 5.5~17.0 | 0.5mm | |
| 32 | | | G SR-FHDG SR-FSDG | | 7.50~21.00 | 21.00 | 2.00 | | 3~8 | 8.0~21.5 | 0.5mm | |
| 38 | +0.020 | +0.028 | | | 9.50~27.00 | 27.00 | 2.50 | | 3~8 | 9.5~27.5 | 0.5mm | |
| 45 | +0.009 | +0.017 | | | 12.50~36.00 | 36.00 | 3.00 | | 3~8 | 13.0~36.5 | 0.5mm | |
| 50 | | | | 16.50~41.00 | 41.00 | 3.50 | | 3~8 | 17.0~41.5 | 0.5mm | | |
| 56 | +0.024 | +0.033 | | 19.00~46.00 | 46.00 | 4.00 | | 3~8 | 19.5~46.5 | 0.5mm | | |
| 10 | +0.012 | +0.016 | 40.1~80.0 (40.01) | 1.00~6.00 | 6.00 | 1.00 | | 3~10 | 5.0~6.5 | 0.2mm | | |
| 13 | +0.015 | +0.020 | | Headed type (Dm5) | 1.50~8.50 | 8.50 | 1.00 | | 3~10 | 5.0~9.0 | 0.2mm | |
| 16 | +0.007 | +0.012 | | Straight type (Dn5) | 2.50~10.50 | 10.50 | 1.00 | | 3~10 | 5.0~11.0 | 0.2mm | |
| 20 | +0.017 | +0.024 | | A SR-FMHDS SR-FMSDS | 3.50~12.50 | 12.50 | 1.50 | | 3~12 | 5.0~13.0 | 0.5mm | |
| 25 | +0.008 | +0.015 | | D SR-FHDDS SR-FSDDS | 5.00~16.50 | 16.50 | 1.50 | | 3~12 | 6.0~17.0 | 0.5mm | |
| 32 | | | | R SR-FHDRS SR-FSDRS | 7.50~21.00 | 21.00 | 2.00 | | 3~15 | 9.0~21.5 | 0.5mm | |
| 38 | +0.020 | +0.028 | | E SR-FHDES SR-FSDES | 9.50~27.00 | 27.00 | 2.50 | | 3~15 | 11.5~27.5 | 0.5mm | |
| 45 | +0.009 | +0.017 | | G SR-FHDGS SR-FSDGS | 12.50~36.00 | 36.00 | 3.00 | | 3~20 | 14.0~36.5 | 0.5mm | |
| 50 | | | | | 16.50~41.00 | 41.00 | 3.50 | | 3~20 | 18.0~41.5 | 0.5mm | |
| 56 | +0.024 | +0.033 | | | 19.00~46.00 | 46.00 | 4.00 | | 3~20 | 20.0~46.5 | 0.5mm | |

* P=1.00 ~ 1.99 → Smax=4 If P is 1.00~1.99, the maximum S is 4mm
 * D (6) is a specification available for shape (A) (round) only. It is not available for shapes (D) (R) (E) (G).
 * Effective depth of scrap retention grooves (table below).
 * Perform shaped hole regrinding within the range of (Groove effective depth=1mm).
 * L (40.01) → When LKC-LKZ is selected, select an L dimension of 40.01 or larger.
 * Can be used only for workpiece materials with tensile strengths up to 1177 N/mm² (120kgf/mm²).
 * MT (workpiece material thickness) and C (clearance) are used as data for machining the scrap retention grooves.
 * Specify the shaped hole dimensions (P-W-R) when selecting the button die finishing dimensions.

| L | L ≤ 40.0 | L ≥ 40.1 |
|------------------------|--------------------------|--------------------------|
| Effective groove depth | Shaped hole depth B (BC) | Shaped hole depth B (BC) |
| | 3 | 5 |

Order Catalog No. — L — P — W — R (R only) — S — G — MT — C
 SR-FMHD 10 — 35.1 — P5.00 — S6 — G5.4 — MT1.5 — C0.105
 SR-FSDRS 25 — 65.5 — P10.00 — W8.00 — R2.25 — S10 — G14.5 — MT1.5 — C0.105

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

Alterations Catalog No. — L — P — W — R — S — G — MT — C — (BC-HC-TC, etc.)
 SR-FMHD 10 — 35.1 — P5.00 — S6 — G5.4 — MT1.5 — C0.105 — TC4-KC

| Alteration | Code | (A) | (D) (R) (E) (G) | 1Code |
|----------------------------|------|--|--|-----------|
| Alterations to shaped hole | BC | Shaped hole depth change P: 1.00~1.99, 2.00~3.99, 4.00~ 1 ≤ BC ≤ Bmax. 1 ≤ BC ≤ S 0.1mm increments * Cannot be used for L > 40. | Shaped hole depth change 1 ≤ BC < 2 0.1mm increments * Cannot be used for L > 40. | |
| | PKC | Shaped hole diameter tolerance change P: +0.01 → +0.005 | Shaped hole diameter tolerance change P-W ± 0.01 → +0.01 | |
| Alterations to full length | LKC | Full length tolerance change L: +0.4 → +0.05 | * If combined with LKC, L dimension can be selected in 0.01 mm increments. | Quotation |
| | LKZ | Full length tolerance change L: +0.4 → +0.01 | * If combined with LKZ, L dimension can be selected in 0.01 mm increments. * Cannot be used for D > 25. | |
| Alterations to head | KC | Addition of single key flat to head * Cannot be used for D6. | Key flat position 270° 0° change 1° increments | Quotation |
| | | Addition of single key flat * Cannot be used for D6. | Key flat position 180° 0° change 1° increments | |
| | WKC | Addition of double key flats in parallel * Can be combined with KC for shapes (D) (R) (E) (G). * Cannot be used for D6 straight type. | | |

| Alteration | Code | (A) | (D) (R) (E) (G) | 1Code |
|---------------------|------|--|--|-------|
| Alterations to head | KFC | 270° Double key flats at 0° and a selected angle 1° increments * Cannot be combined with KC-WKC. * Cannot be used for L (LL) < 16 or D > 25. * Cannot be used for straight types. | 270° Double key flats at 0° and a selected angle 1° increments * Cannot be combined with KC-WKC. * Cannot be used for L (LL) < 16 or D > 25. * Cannot be used for straight types. | |
| | HC | Head diameter change D ≤ HC < (D+3) 0.1mm increments | | |
| | TC | Head thickness change 2 ≤ TC < 5 0.1mm increments (if combined with TKC-TKM, 0.01mm increments can be selected.) * The full length remains as specified. | | |
| | TKC | Head thickness tolerance change T: +0.3 → +0.02 | | |
| Others | TKM | Head thickness tolerance change T: +0.3 → -0.02 | | |
| | RC | Can be used for headed types only. Head thickness is machined to a tolerance of -0.04~0 relative to the retainer surface. * Cannot be used for L < 30. | | |
| | SKC | Single key flat on shank * Can be used for headed types only. * D ≥ 8 Can be used for L ≥ 20. * Cannot be combined with KC-WKC-KFC. * Cannot be used for straight types. | | |