

PARTING & GROOVING

INDUSTRY 4.0

contents

Tool Selection Guide

| | |
|------------------------|----|
| Holder Selection Guide | B4 |
|------------------------|----|

| | |
|------------------------|-----|
| Insert Selection Guide | B17 |
|------------------------|-----|

| | |
|---------------|-----|
| Grades | B24 |
|---------------|-----|

| | |
|----------------------|-----|
| Chip Breakers | B26 |
|----------------------|-----|

Toolholders

| | |
|-----------|-----|
| CUT-SFEED | B30 |
|-----------|-----|

| | |
|---------|-----|
| T-CLAMP | B36 |
|---------|-----|

| | |
|-----------|-----|
| FACE-RUSH | B84 |
|-----------|-----|

| | |
|----------|-----|
| T-GROOVE | B88 |
|----------|-----|

| | |
|---------|-----|
| TOP-CUT | B89 |
|---------|-----|

| | |
|-----------|-----|
| QUAD-RUSH | B91 |
|-----------|-----|

| | |
|-------------|------|
| QUAD-I-RUSH | B100 |
|-------------|------|

| | |
|-------------|------|
| MINI-I-RUSH | B101 |
|-------------|------|

| | |
|-------------------------------|------|
| COOL-BURST Accessories | B102 |
|-------------------------------|------|

Guide to Icons



➤ Holder Page



➤ Sleeve Page



➤ Insert Page



➤ Cutting Condition Page

















Inserts and Solid Bars

| | |
|---------------------------------------|-------------|
| Insert Designation System | B106 |
| CUT-SFEED | B108 |
| T-CLAMP | B109 |
| FACE-RUSH | B123 |
| T-GROOVE | B124 |
| TOP-MICRO Designation System | B125 |
| TOP-MICRO | B126 |
| TOP-CUT Designation System | B138 |
| TOP-CUT | B139 |
| QUAD-RUSH Designation System | B142 |
| QUAD-RUSH | B143 |
| QUAD-I-RUSH | B155 |
| MINI-I-RUSH | B155 |
| Tailor-made Designation System | B156 |
| Tailor-made Insert | B157 |
| Recommended Cutting Conditions | B161 |
| | |
| | |
| | |











Tool Selection Guide

Parting and grooving holders

| | | | | CUTSPEED | | | |
|--------------------|-----------|---|---|---|---|---|--|
| | | | | SFGB | COOLBURST SFGB-TB | SFER/L | COOLBURST SFER/L-TB |
| Series | | | |  |  |  |  |
| Pages | | | | B30 | B31 | B32 | B33 |
| Application | External | Parting |  | ● | ● | ● | ● |
| | | Grooving |  | ● | ● | ● | ● |
| | | Turning |  | | | | |
| | Facing | Grooving |  | | | | |
| | | Turning |  | | | | |
| | Internal | Grooving |  | | | | |
| | | Turning |  | | | | |
| | Profiling |  | | | | | |
| | Threading |  | | | | | |
| | Undercut |  | | | | | |







Tool Selection Guide

Parting and grooving holders

| Series | | | T-CLAMP <small>Parting & Grooving</small> | | | |
|--------------------|-----------|---|---|---------------|---------------|---------------------------------------|
| | | | <u>TGBFR/L</u> | <u>TGER/L</u> | <u>TCER/L</u> | <u>COOLBURST</u> <u>TCAER/L-TB</u> |
| Pages | | | B42 | B43 | B47 | B48 |
| Application | External | Parting |  | ● | ● | ● |
| | | Grooving |  | ● | ● | ● |
| | | Turning |  | | ● | ● |
| | Facing | Grooving |  | ● | | |
| | | Turning |  | | | |
| | Internal | Grooving |  | | | |
| | | Turning |  | | | |
| | Profiling |  | | | ● | ● |
| | Threading |  | | | | |
| | Undercut |  | | | | |

Tool Selection Guide

Parting and grooving holders

| T-CLAMP <small>PARTING & GROOVING</small> | QUADRUSH | | T-CLAMP <small>PARTING & GROOVING</small> | | |
|--|---|---|---|---|--|
| <u>TCFR/L</u> | <u>TQCR/L</u> | COOLBURST <u>TCAQR/L-TB</u> | <u>TTER/L-SH</u> | COOLBURST <u>TTER/L-SH-TB</u> | <u>TTER/L-D</u> |
|  |  |  |  |  |  |
| B49 | B50 | B51 | B58 | B59 | B60-B61 |
| | ● | ● | ● | ● | ● |
| | ● | ● | ● | ● | ● |
| | ○ | ○ | ● | ● | ● |
| ● | | | | | |
| ● | | | | | |
| | | | | | |
| | | | | | |
| | ○ | ○ | ● | ● | ● |
| | ● | ● | | | |
| | | | | | |

● Recommended, ○ Suitable

Tool Selection Guide







Parting and grooving holders

| Series | | | T-CLAMP <small>FOR FINING & GROOVING</small> | | | |
|-------------|-----------|----------|---|------------------|----------------|---------------|
| | | | <u>TTER/L</u> | <u>TTER/L-TB</u> | <u>TTSER/L</u> | <u>TGFR/L</u> |
| Pages | | | B62-B63 | B64 | B65 | B66 |
| Application | External | Parting | ● | ● | ○ | |
| | | Grooving | ● | ● | ● | ● |
| | | Turning | ● | ● | ● | ○ |
| | Facing | Grooving | | | | ● |
| | | Turning | | | | ○ |
| | Internal | Grooving | | | | |
| | | Turning | | | | |
| | Profiling | | ● | ● | ○ | |
| | Threading | | | | | |
| | Undercut | | | | | |

Tool Selection Guide

Parting and grooving holders

















| <u>TGSFR/L</u> | <u>TFR/L</u> | <u>TTFR/L-RN</u> | <u>TGFPR/L</u> | <u>TTFPR/L</u> | <u>TGIFR/L</u> |
|--|---|---|---|---|--|
|  |  |  |  |  |  |
| B67 | B68 | B69-B70 | B71 | B72 | B73 |
| | | | | | |
| ● | | | ● | | |
| | | | ○ | | |
| ○ | ● | ● | ● | ● | ● |
| | ● | ● | ○ | ● | ○ |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

● Recommended, ○ Suitable

Tool Selection Guide






Parting and grooving holders

| | | | | T-CLAMP <small>PARTING & GROOVING</small> | | | |
|--------------------|-----------|----------|---|---|---|---|--|
| | | | | <u>TTFIR/L</u> | <u>TTIR/L-C</u> <u>TTIR/L</u> | COOLBURST <u>TTIR/L-TB</u> | <u>TTSIR/L</u> |
| Series | | | |  |  |  |  |
| Pages | | | | B74 | B75-B76 | B77 | B78 |
| Application | External | Parting |  | | | | |
| | | Grooving |  | | | | |
| | | Turning |  | | | | |
| | Facing | Grooving |  | ● | | | |
| | | Turning |  | ● | | | |
| | Internal | Grooving |  | | ● | ● | ● |
| | | Turning |  | | ● | ● | ● |
| | Profiling | |  | | | | |
| | Threading | |  | | | | |
| | Undercut | |  | | | | |

Tool Selection Guide

Parting and grooving holders











T-CLAMP
PARTING & GROOVING

| <u>TGSIR/L</u> | <u>TGEUR/L</u> | <u>TGIUR/L</u> | <u>TTER/L-15A</u> | <u>TGIUR/L-15A</u> |
|--|---|---|---|--|
|  |  |  |  |  |
| B79 | B80 | B81 | B82 | B83 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| ● | | | | |
| | | ○ | | |
| | | | ● | ● |
| | | | | |
| | ● | ● | | |

● Recommended, ○ Suitable






Tool Selection Guide

Parting and grooving holders

| Series | | | | <i>FACE RUSH</i> | | | |
|--------------------|-----------|----------|---|------------------|--------------------------------------|----------------|---------------------------------------|
| | | | | <u>TXFR/L</u> | <i>COOLBURST</i> <u>TXFR/L-TB</u> | <u>TXFPR/L</u> | <i>COOLBURST</i> <u>TXFPR/L-TB</u> |
| Pages | | | | B84 | B85 | B86 | B87 |
| Application | External | Parting |  | | | | |
| | | Grooving |  | ○ | ○ | | |
| | | Turning |  | ○ | ○ | | |
| | Facing | Grooving |  | ● | ● | ● | ● |
| | | Turning |  | ● | ● | ● | ● |
| | Internal | Grooving |  | | | | |
| | | Turning |  | | | | |
| | Profiling | |  | | | | |
| | Threading | |  | ○ | ○ | | |
| | Undercut | |  | | | | |

Tool Selection Guide















Parting and grooving holders

| <i>T</i> GROOVE | <i>TOP</i> CUT | | <i>QUAD</i> RUSH | |
|--|---|---|---|--|
| <u>TTLEN</u> | <u>TTVER/L</u> | <u>TTVBR/L</u> | <u>TQHR/L-20</u> | <i>COOL</i> BURST <u>TQHR/L-20-TB</u> |
|  |  |  |  |  |
| B88 | B89 | B90 | B91 | B92 |
| | ● | | ● | ● |
| ● | ● | | ● | ● |
| | ● | ● | ● | ● |
| | | | | |
| | | | | |
| | | | | |
| | | | ○ | ○ |
| | | ● | ● | ● |
| | | | | |

● Recommended, ○ Suitable






Tool Selection Guide

Parting and grooving holders

| | | | | QUADRUSH | | | |
|--------------------|-----------|----------|---|---|---|---|--|
| | | | | <u>TQBR/L-27</u> | <u>TQHR/L-27</u> | COOLBURST <u>TQHR/L-27-TB</u> | <u>TQHPR/L-27</u> |
| Series | | | |  |  |  |  |
| Pages | | | | B93 | B94 | B95 | B96 |
| Application | External | Parting |  | ● | ● | ● | ● |
| | | Grooving |  | ● | ● | ● | ● |
| | | Turning |  | | ○ | ○ | ○ |
| | Facing | Grooving |  | | | | |
| | | Turning |  | | | | |
| | Internal | Grooving |  | | | | |
| | | Turning |  | | | | |
| | Profiling | |  | | ○ | ○ | ○ |
| | Threading | |  | | ● | ● | ● |
| | Undercut | |  | | | | |

Tool Selection Guide

Parting and grooving holders

| QUAD <i>RUSH</i> | | | QUAD <i>RUSH</i> | MINI <i>RUSH</i> |
|--|---|---|---|--|
| <u>TQHR/L-34</u> | <i>COOLBURST</i> <u>TQHR/L-34-TB</u> | <u>TQHPR/L-34</u> | <u>TQHIR/L</u> | <u>TMIHN</u> <u>TMIHN-C</u> |
|  |  |  |  |  |
| B97 | B98 | B99 | B100 | B101 |
| ● | ● | ● | | |
| ● | ● | ● | | |
| ○ | ○ | ○ | | |
| | | | | |
| | | | | |
| | | | ● | ● |
| | | | ○ | ○ |
| ○ | ○ | ○ | | |
| | | | | |
| | | | | |

● Recommended, ○ Suitable















Tool Selection Guide

Internal application by diameter

| Internal diameter (mm) | TOP <i>MICRO</i> | MINI <i>RUSH</i> | TOP <i>CAP</i> | T- <i>CLAMP</i> <small>PARTING & CHAMFERING</small> | QUAD <i>RUSH</i> | T- <i>CLAMP</i> <small>PARTING & CHAMFERING</small> |
|------------------------|------------------|------------------|----------------|--|------------------|--|
| | MIN | TMIHN | TCAP | TTSIR/L | TQHIR/L | TTIR/L |
| 0 | | | | | | |
| 0.6 | ✓ | | | | | |
| 1 | ✓ | | | | | |
| 2 | ✓ | | | | | |
| 3 | ✓ | | | | | |
| 4 | ✓ | | | | | |
| 5 | ✓ | | | | | |
| 6 | ✓ | | | | | |
| 7 | ✓ | | | | | |
| 8 | ✓ | | | | | |
| 9 | ✓ | | | | | |
| 10 | ✓ | ✓ | | | | |
| 11 | ✓ | ✓ | | | | |
| 12 | ✓ | ✓ | ✓ | | | |
| 12.5 | ✓ | ✓ | ✓ | ✓ | | |
| 13 | ✓ | ✓ | ✓ | ✓ | | |
| 14 | ✓ | ✓ | ✓ | ✓ | | |
| 15 | ✓ | ✓ | ✓ | ✓ | | |
| 16 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 17 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 18 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 19 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 20 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 21 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 22 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 23 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 24 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 25 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 26 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Tool Selection Guide















Parting and grooving inserts

| | | | CUTSPEED | | | | T-CLAMP <small>PARTING & GROOVING</small> | | | | | | | | | | | | | | | | |
|-------------|-----------|----------|---|---|---|---|---|---|--|---|------|---|---|---|------|---|---|---|---|---|---|---|---|
| | | | SFC | | SFJ | | TDC | | TSC | | | | | | | | | | | | | | |
| Series | | |  | |  | |  | |  | | | | | | | | | | | | | | |
| Material | | | P | M | K | N | S | P | M | N | S | P | M | K | N | S | P | M | K | N | S | | |
| Pages | | | B108 | | | | B108 | | | | B109 | | | | B110 | | | | | | | | |
| Application | External | Parting |  | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | | Grooving |  | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | | Turning |  | | | | | | | | | | | | | | | | | | | | |
| | Facing | Grooving |  | | | | | | ○ | | | | | | | | | | | | | ○ | |
| | | Turning |  | | | | | | | | | | | | | | | | | | | | |
| | Internal | Grooving |  | | | | | | | | | | | | | | | | | | | | ○ |
| | | Turning |  | | | | | | | | | | | | | | | | | | | | |
| | Profiling | |  | | | | | | | | | | | | | | | | | | | | |
| | Threading | |  | | | | | | | | | | | | | | | | | | | | |
| | Undercut | |  | | | | | | | | | | | | | | | | | | | | |

● Recommended, ○ Suitable







Tool Selection Guide

Parting and grooving inserts

| | | | T-CLAMP <small>PARTING & GROOVING</small> | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TDJ | | | | TSJ | | | | TDF | | | | TDV | | | | | | | | | | | | | |
| Series | | |  | | | |  | | | |  | | | |  | | | | | | | | | | | | | |
| Material | | | P | | M | | N | | S | | P | | M | | N | | S | | P | | M | | N | | S | | | |
| Pages | | | B111 | | | | B112 | | | | B113 | | | | B113 | | | | | | | | | | | | | |
| Application | External | Parting |  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | | Grooving |  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | Turning |  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Facing | Grooving |  | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | | Turning |  | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Internal | Grooving |  | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | | Turning |  | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Profiling |  | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Threading |  | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Undercut |  | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Tool Selection Guide















Parting and grooving inserts

| T-CLAMP <small>PARTING & GROOVING</small> | | | | | |
|--|---|---|---|---|--|
| <u>TDXU</u> | <u>TDXT</u> | <u>TDXY</u> | <u>TDT</u> | <u>TDT</u> (Round Type) | <u>TDT - RU</u> (Round Type) |
|  |  |  |  |  |  |
| P M K N S | P M K N S | P M K S | P M K N S | P M K N S | P M K S |
| B114 | B114 | B115 | B116-B117 | B118 | B118 |
| ○ | ○ | ○ | ○ | | |
| ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ○ | | |
| ● | ● | ● | ○ | | |
| ● | ● | ● | ○ | | |
| ● | ● | ● | ○ | | |
| | | | | ● | ● |
| | | | | | |
| | | | | ● | ● |

● Recommended, ○ Suitable








Tool Selection Guide

Parting and grooving inserts

| Series | | | T-CLAMP <small>PARTING & GROOVING</small> | | | | |
|--------------------|-----------|---|---|---|---|--|---|
| | | | TDFT | TDIT | TDIM | TDIP | |
| | | |  |  |  |  | |
| Material | | | P M K N S | P M K N S | P M K N | P M K N S | |
| Pages | | | B119 | B119-B120 | B120 | B121 | |
| Application | External | Parting |  | | | | |
| | | Grooving |  | | | ● | ● |
| | | Turning |  | | | ○ | ○ |
| | Facing | Grooving |  | ● | | ○ | ○ |
| | | Turning |  | ● | | | |
| | Internal | Grooving |  | | ● | ● | ● |
| | | Turning |  | | ● | ● | ● |
| | Profiling |  | | | | | ○ |
| | Threading |  | | | | | |
| | Undercut |  | | | ○ | | |

Tool Selection Guide

Parting and grooving inserts

| T-CLAMP <small>PARTING & GROOVING</small> | | | FACE RUSH | | | TGROOVE | TOP MICRO |
|--|---|---|---|---|---|--|-----------|
| TDA | TSA (PCD) | TSG-HF (CBN) | TDFX | TDGX | TGUX | MIN. | |
|  |  |  |  |  |  |  | |
| N | N | | H P M K N S | P M N S | P M K N | P M N S | |
| B122 | B122 | B122 | B123 | B123 | B124 | B128-B137 | |
| ○ | | ○ | ○ | | ● | | |
| ● | | ● | ○ | | | | |
| | | | ● | | | | |
| | | | ● | | | | |
| | | | | | | ● | |
| | | | | | | ● | |
| ● | ● | | | | | ● | |
| | | | | ● | | ● | |
| ○ | | | | | | | |

● Recommended, ○ Suitable









Tool Selection Guide

Parting and grooving inserts

| Series | | | TOPCUT | QUADRUSH | | | |
|-------------|-----------|----------|-----------|----------|-----------|-----------|--|
| | | | TV.. | TQJ 20 | TQS 20 | TQS 20-MT | |
| Material | | | P M N S | P M N S | P M K N S | P M N S | |
| Pages | | | B139-B141 | B143 | B143 | B144 | |
| Application | External | Parting | ● | ● | ● | | |
| | | Grooving | ● | ● | ● | | |
| | | Turning | ● | ● | ● | | |
| | Facing | Grooving | | | | | |
| | | Turning | | | | | |
| | Internal | Grooving | | | | | |
| | | Turning | | | | | |
| | Profiling | | | ○ | | | |
| | Threading | ● | | | ● | | |
| | Undercut | | | | | | |

Tool Selection Guide

Parting and grooving inserts

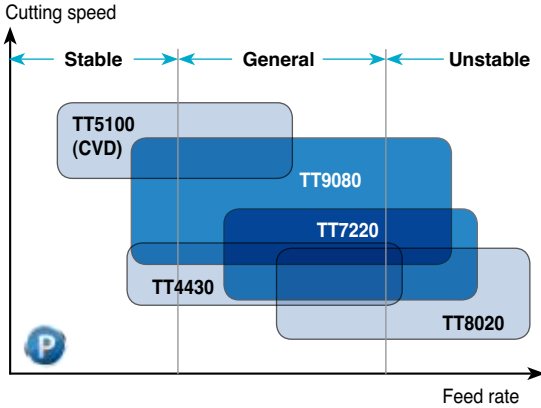
| QUAD RUSH | | | | | QUAD RUSH | MINI RUSH | |
|--|---|---|---|---|---|---|--|
| TQJ 27 | TQC 27 | TQS 27 | TQS 27-MT TQS 27-WT | TQS 27-ISO TQS 27-UN TQS 27-W | TQC 34 | TQIS 14 | TMIS 8 |
|  |  |  |  |  |  |  |  |
| P M N S | P M K N S | P M K N S | P M N S | P M N S | P M K N S | P M K N S | P M K N S |
| B145-B147 | B148-B149 | B150 | B151 | B152-B153 | B153-B154 | B155 | B155 |
| ● | ● | ● | | | ● | | |
| ● | ● | ● | | | ● | | |
| ● | ● | ● | | | ● | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | ● | ● |
| | | | | | | ○ | ○ |
| ○ | ○ | ○ | | | ○ | | |
| | | | ● | ● | | | |
| | | | | | | | |

● Recommended, ○ Suitable

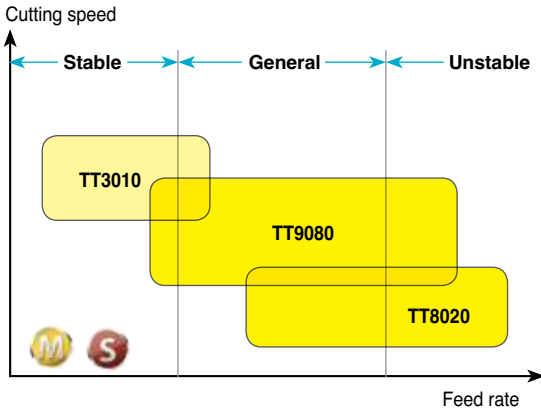
Grades

Selection guide for parting and grooving grades

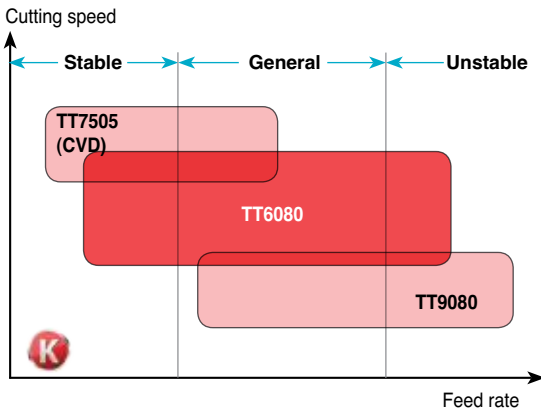
For steel (PVD & CVD coated)



For stainless steel & super alloy (PVD coated)



For cast iron (PVD & CVD coated)




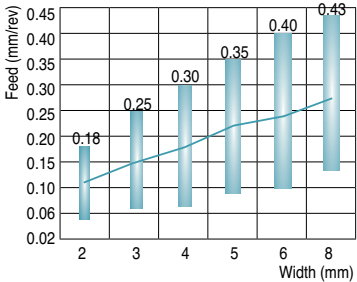

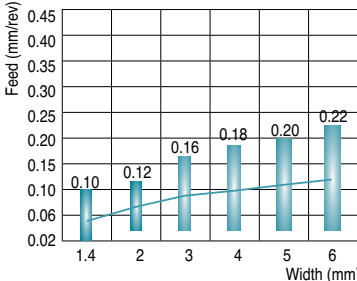

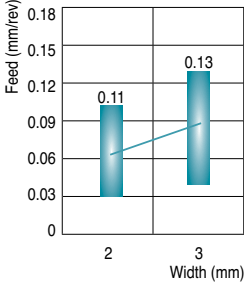

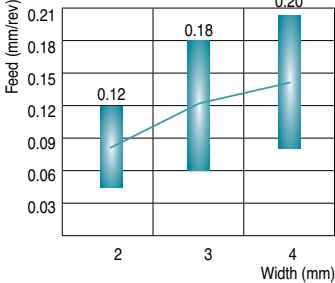
Grades

Parting and grooving grades

| Grades | ISO | Characteristics & applications |
|-----------------------------|---|---|
| TT7505 CVD coated | K05 – K15 | <ul style="list-style-type: none"> High speed grooving and turning of gray and ductile cast iron |
| TT6080 PVD coated | K05 – K25 H05 – H25 | <ul style="list-style-type: none"> General machining of gray and ductile cast iron for grooving and turning Finish and medium machining of hardened steel |
| TT3010 PVD coated | S05 – S20 | <ul style="list-style-type: none"> High speed grooving and turning of heat-resistant super alloy |
| TT5100 CVD coated | P20 – P35 M20 – M35 | <ul style="list-style-type: none"> Medium grooving and turning of mild steel, low carbon steel and low carbon alloy steel Low to medium speed machining of stainless steel |
| TT9080 PVD coated | P20 – P40 M20 – M40 S20 – S40 | <ul style="list-style-type: none"> General machining of steel, stainless steel and heat-resistant super alloy for parting, grooving and turning Continuous cut and medium cutting speed |
| TT4430 PVD coated | P20 – P40 M20 – M40 S20 – S40 | <ul style="list-style-type: none"> General machining of steel, stainless steel and heat-resistant super alloy for small parts Grooving, turning and parting |
| TT7220 PVD coated | P25 – P45 M25 – M45 | <ul style="list-style-type: none"> Rough machining of steel and stainless steel for parting, grooving and turning |
| TT8020 PVD coated | P30 – P50 M30 – M50 S30 – S50 | <ul style="list-style-type: none"> Low speed or rough and interrupted machining of steel, stainless steel and heat-resistant super alloy for parting, grooving and turning |
| CT3000 Cermet | P10 – P20 M10 – M20 K10 – K20 | <ul style="list-style-type: none"> Good surface finish turning of steel, stainless steel and cast iron |
| K10 Carbide | K05 – K15 N05 – N15 S05 – S15 | <ul style="list-style-type: none"> General machining of cast iron, aluminum alloys, non-ferrous materials and titanium alloys |
| TB2015 CBN | H10 – H20 | <ul style="list-style-type: none"> Continuous and light interrupted machining of hardened steel |
| KP300 PCD | N10 – N25 | <ul style="list-style-type: none"> General machining of aluminum alloys |


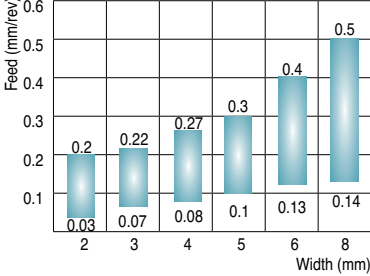
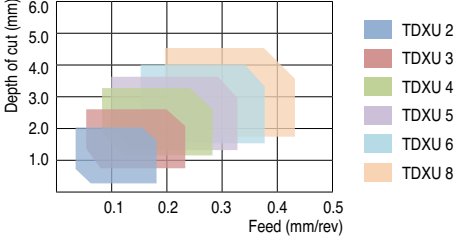

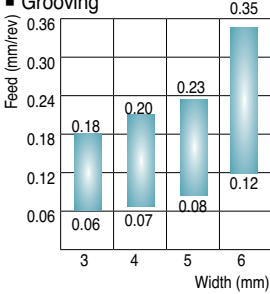
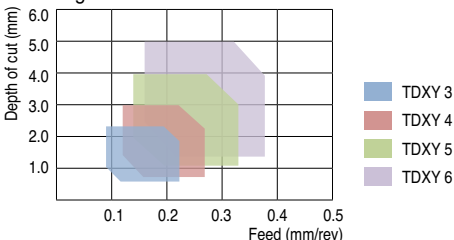
Chip Breakers

Parting and grooving

| Chip breakers | Applications and features |
|---|---|
| <p>C-Type</p>  |  <ul style="list-style-type: none"> • 1st choice for general use in parting and deep grooving • Stable cutting edge & interrupted cut • Medium-to-high feed • For carbon steel, alloy steel and cast iron • For hard materials |
| <p>J-Type</p>  |  <ul style="list-style-type: none"> • 1st choice for soft materials in parting and deep grooving • Sharp cutting edge & low cutting force • Low-to-medium feed • Tubes, small diameter and thin-wall parts • For stainless steel & low carbon steel • For heat resistant super alloy |
| <p>UF-Type</p>  |  <ul style="list-style-type: none"> • Narrow chip breaker • Good chip control in low feed of ductile materials and low carbon steel • For Cr-Ni alloy steel and bearing steel |
| <p>V-Type</p>  |  <ul style="list-style-type: none"> • Sharp cutting edge and wide groove with minimized burrs • For tubes of small size workpieces • For stainless steel and mild steel |

Chip Breakers

Groove-Turn

| Chip breakers | Applications and features |
|---|---|
| <p>XU-Type</p>  | <p>■ Grooving</p>  <p>■ Turning</p>  <ul style="list-style-type: none"> • 1st choice for general use in groove-turn • Multi functional chip breaker for external, internal and face machining • Low cutting force and good chip control • Low-to-medium feed • Steel, stainless steel and heat resistant alloy |
| <p>XY-Type</p>  | <p>■ Grooving</p>  <p>■ Turning</p>  <ul style="list-style-type: none"> • Suitable for side turning with wide groove • Especially for face grooving and face turning • Stable cutting edge and interrupted cut • Flat bottom of workpiece in grooving • Medium-to-high feed • Steel, stainless steel and cast iron • Available for heat resistant alloy |

Chip Breakers

Groove-Turn

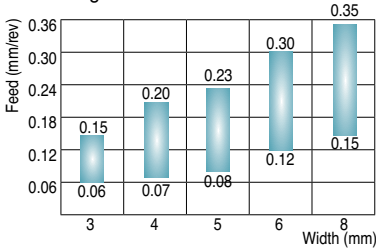
Chip breakers

Applications and features

T-Type

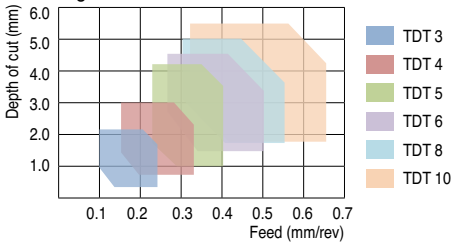


■ Grooving



- 1st choice for side turning of cast iron
- Turning and grooving with various geometry
- Steel and cast iron
- High feed rate

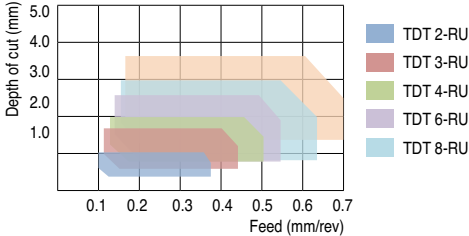
■ Turning



RU-Type



■ Turning



- Profiling in steel and cast iron
- Tough cutting edge
- Good chip control even in low depth
- Good surface finish
- High feed rate and low depth of cut

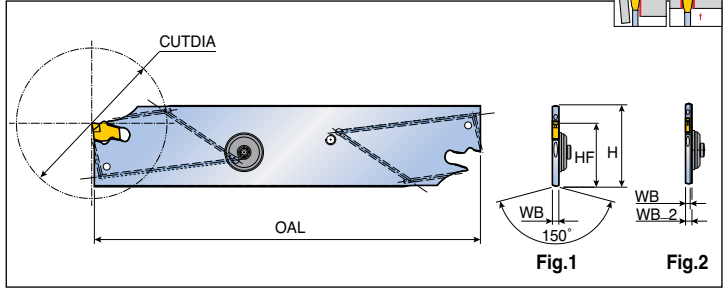
Parting & Grooving Toolholders



SFGB-TB



Blades for parting and deep grooving with high pressure coolant



| Designation | Insert seat size | Dimension (mm) | | | | | | Fig. | Block | Insert |
|---------------------|------------------|----------------|------|-----|-----|------|--------|------|-------------------|--------------------|
| | | H | HF | OAL | WB | WB_2 | CUTDIA | | | |
| SFGB 32-2-TB | 2 | 32 | 24.8 | 150 | 1.8 | 2.5 | 50 | 2 | TTBU...-TB B46 | SFC SFJ B108 |
| 32-3-TB | 3 | 32 | 24.8 | 150 | 2.5 | - | 100 | 1 | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|---------------------|--------------------------|---------------------------|---------------------------|
| SFGB 32-2-TB | 10-12 | 12-14 | 15-17 |
| 32-3-TB | 19-21 | 23-25 | 27-29 |
| | | | |
| | | | |
| | | | |
| | | | |

Spare parts

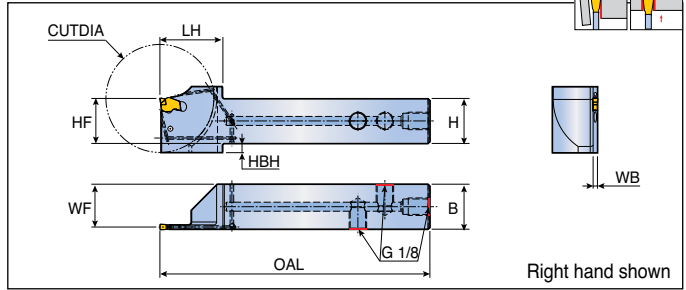
| Designation | Sealing screw set | Extractor | | |
|-------------|-------------------|-----------|---------|--|
| | SFGB -TB | SGC 340 | ETG 3-4 | |
| | | | | |
| | | | | |

• Extractor should be ordered separately

SFER/L-TB



Holders for parting and deep grooving with high pressure coolant



| Designation | Insert seat size | Dimension (mm) | | | | | | | | | | Insert |
|--------------------------------|------------------|----------------|----|----|-----|----|------|-----|-----|--------|------|--------|
| | | H | HF | B | OAL | LH | WF | WB | HBH | CUTDIA | | |
| SFER/L 2525-2T25-D50-TB | 2 | 25 | 25 | 25 | 150 | 32 | 24.1 | 1.8 | - | 50 | SFC | |
| 2525-3T30-D60-TB | 3 | 25 | 25 | 25 | 150 | 35 | 23.8 | 2.4 | 5 | 60 | SFJ | |
| | | | | | | | | | | | B108 | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|--------------------------------|--------------------------|---------------------------|---------------------------|
| SFER/L 2525-2T25-D50-TB | 10-12 | 12-14 | 15-17 |
| 2525-3T30-D60-TB | 14-16 | 17-19 | 21-23 |
| | | | |
| | | | |
| | | | |

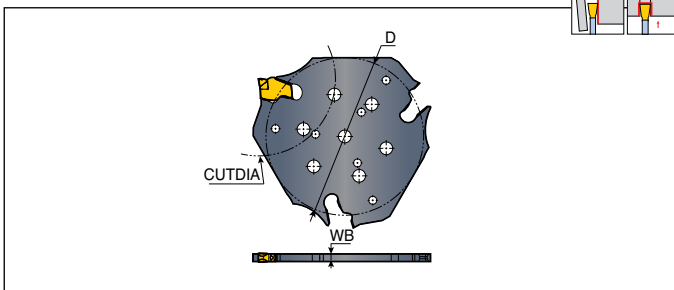
• Please refer to B102 page for COOL-BURST accessories

Spare parts

| Designation | Plug | Wrench | Extractor | |
|------------------|---------------|--------|-----------|--|
| | | | | |
| SFER/L-TB | PLG G1/8-L6.5 | L-W 5 | ETG 3-4 | |
| | | | | |
| | | | | |

• Extractor should be ordered separately

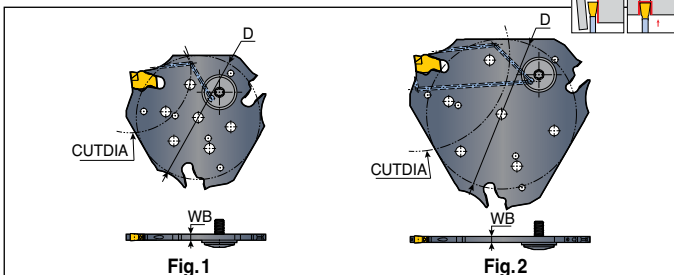
Triangular blades for parting and deep grooving



| Designation | Insert seat size | Dimension (mm) | | | Holder | Insert |
|-------------------|------------------|----------------|-----|--------|-------------------|--------------------|
| | | D | WB | CUTDIA | | |
| SFTB D52-2 | 2 | 53.2 | 1.8 | 52 | THTBR/L-TB B35 | SFC SFJ B108 |
| D52-3 | 3 | 53.2 | 2.5 | 52 | | |
| D82-2 | 2 | 64.3 | 1.8 | 82 | | |
| D82-3 | 3 | 64.3 | 2.5 | 82 | | |
| D120-2 | 2 | 85.5 | 1.8 | 120 | | |
| D120-3 | 3 | 85.5 | 2.5 | 120 | | |

SFTB-TB

Triangular blades for parting and deep grooving with high pressure coolant



| Designation | Insert seat size | Dimension (mm) | | | Fig. | Holder | Insert |
|----------------------|------------------|----------------|-----|--------|-----------------------|-------------------|--------------------|
| | | D | WB | CUTDIA | | | |
| SFTB D52-2-TB | 2 | 53.2 | 1.8 | 52 | 1 2 2 2 2 | THTBR/L-TB B35 | SFC SFJ B108 |
| D52-3-TB | 3 | 53.2 | 2.5 | 52 | | | |
| D82-2-TB | 2 | 64.3 | 1.8 | 82 | | | |
| D82-3-TB | 3 | 64.3 | 2.5 | 82 | | | |
| D120-2-TB | 2 | 85.5 | 1.8 | 120 | | | |
| D120-3-TB | 3 | 85.5 | 2.5 | 120 | | | |

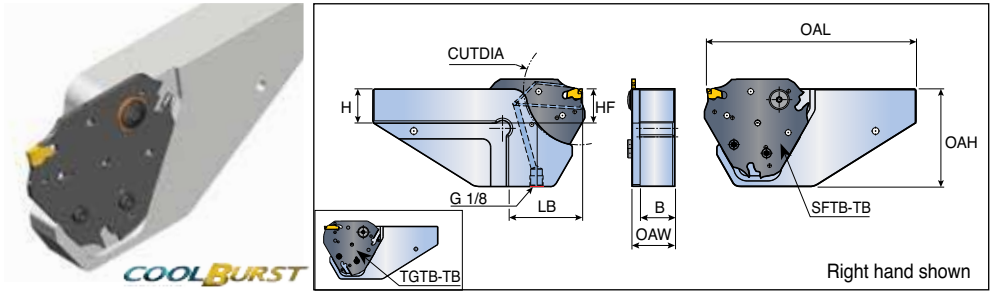
Spare parts

| Designation | Sealing screw set | Extractor | | |
|----------------|-------------------|-----------|---------|--|
| | SFTB | - | ETG 3-4 | |
| SFTB-TB | SGC 340-Q | ETG 3-4 | | |

• Extractor should be ordered separately

THTBR/L-TB

Holders for triangular blade with high pressure coolant



| Designation | Dimension (mm) | | | | | | | | Blade |
|--------------------------|----------------|----|------|-----|-----|------|------|--------|---|
| | H | HF | B | OAL | OAH | OAW | LB | CUTDIA | |
| THTBR/L 20-D52-TB | 20 | 20 | 17.5 | 125 | 52 | 23.5 | 40 | 52 | SFTB/SFTB-TB TGTB/TGTB-TB B34,B38 |
| 25-D52-TB | 25 | 25 | 22.5 | 135 | 52 | 28.5 | 40 | 52 | |
| 20-D82-TB | 20 | 20 | 17.5 | 140 | 72 | 23.5 | 51.5 | 82 | |
| 25-D82-TB | 25 | 25 | 22.5 | 150 | 72 | 28.5 | 51.5 | 82 | |
| 25-D120-TB | 25 | 25 | 22.5 | 165 | 95 | 28.5 | 67 | 120 | |
| 32-D120-TB | 32 | 32 | 29.0 | 165 | 95 | 35.0 | 67 | 120 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

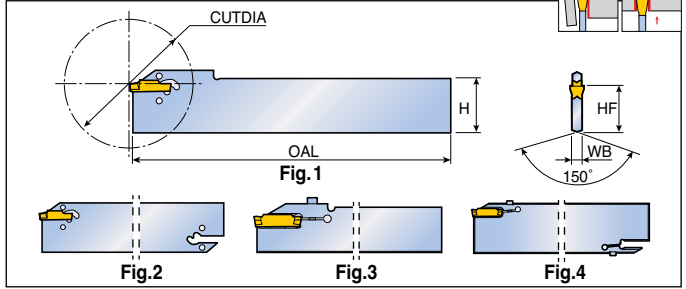
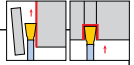
• Please refer to B102 page for COOL-BURST accessories

| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|---------------------------|--------------------------|---------------------------|---------------------------|
| SFTB/TGTB D52-2-TB | 4-6 | 5-7 | 6-8 |
| D52-3-TB | 7-9 | 9-11 | 10-12 |
| D82-2-TB | 9-11 | 11-13 | 13-15 |
| D82-3-TB | 15-17 | 18-20 | 21-23 |
| SFTB D120-2-TB | 9-11 | 11-13 | 13-15 |
| D120-3-TB | 15-17 | 18-20 | 21-23 |

Spare parts

| Designation | Screw | O-Ring | Wrench | |
|-------------------|-----------------|---------------|--------|--|
| THTBR/L-TB | SH M4X0.7X10-TX | O-RING ID10X2 | T 20 | |
| | | | | |
| | | | | |

Blades for parting and deep grooving



| Designation | Insert seat size | Dimension (mm) | | | | | Fig. | Block | Insert |
|----------------------------------|------------------|----------------|------|-----|--------------------|--------|------|------------------------|---|
| | | H | HF | OAL | WB | CUTDIA | | | |
| TGB 26-1.4S⁽¹⁾ | 1 * | 26 | 21.4 | 150 | 1.0 ⁽²⁾ | 26 | 1 | TTBN/U...26 | TDC / J / T TDXU / XT / XY TSC / J TDUF/TDV B109-B118 |
| 26-2S⁽¹⁾ | 2 | 26 | 21.4 | 150 | 1.8 ⁽²⁾ | 40 | 1 | TTBN/U...26 | |
| 26-3S⁽¹⁾ | 3 | 26 | 21.4 | 150 | 2.4 | 50 | 1 | TTBN/U...26 | |
| 26-4S⁽¹⁾ | 4 | 26 | 21.4 | 150 | 3.2 | 80 | 1 | TTBN/U...26 | |
| 32-1.4 | 1 * | 32 | 24.9 | 150 | 1.0 ⁽²⁾ | 26 | 2 | TTBN/U...32 | |
| 32-2 | 2 | 32 | 24.9 | 150 | 1.8 ⁽²⁾ | 50 | 2 | TTBN/U...32 | |
| 32-3 | 3 | 32 | 24.9 | 150 | 2.4 | 100 | 2 | TTBN/U...32 | |
| 32-4 | 4 | 32 | 24.9 | 150 | 3.2 | 100 | 2 | TTBN/U...32 | |
| 32-5 | 5 | 32 | 24.9 | 150 | 4.0 | 120 | 2 | TTBN/U...32 | |
| 32-6 | 6 | 32 | 24.9 | 150 | 5.2 | 120 | 2 | TTBN/U...32 | |
| 45-4 | 4 | 45 | 38.1 | 150 | 3.2 | 120 | 2 | TTBN/U...45 | |
| 32-8S-CL⁽¹⁾ | 8 | 32 | 24.9 | 150 | 6.2 | 80 | 3 | TTBN/U...32 | |
| 52-8-CL | 8 | 52 | 45.2 | 250 | 7.4 | 200 | 4 | TTBN/U...52 B44-B45 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

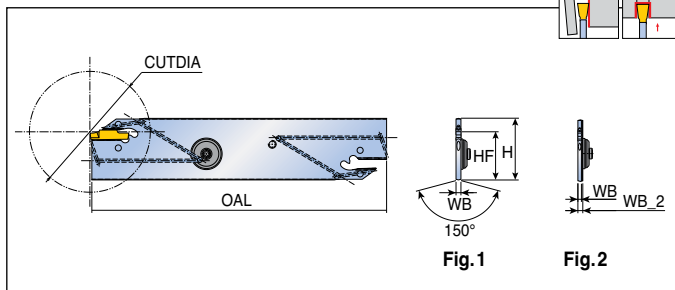
- ⁽¹⁾ Single ended blade
- ⁽²⁾ Thickness at DOC area only. Overall thickness is 2.4mm
- * TDJ 1.4 insert only

Spare parts

| Designation | Extractor | Screw | Wrench | |
|-----------------------------|-----------|-----------------|--------|--|
| | | | | |
| TGB 26-1.4S / 32-1.4 | EDG 23B | - | - | |
| TGB 26 / 32 / 45 | EDG 33B | - | - | |
| TGB 32-8S-CL | - | SH M4x0.7x20-MO | L-W 3 | |
| TGB 52-8-CL | - | SH M4x0.7x20-MO | L-W 3 | |

• Extractor should be ordered separately

Blades for parting and deep grooving with high pressure coolant



| Designation | Insert seat size | Dimension (mm) | | | | | | Fig. | Block | Insert |
|--------------------|------------------|----------------|------|-----|-----|------|--------|------|------------|----------------|
| | | H | HF | OAL | WB | WB_2 | CUTDIA | | | |
| TGB 32-2-TB | 2 | 32 | 24.9 | 150 | 1.8 | 2.5 | 50 | 2 | TTBU...-TB | TDC / J / T |
| 32-3-TB | 3 | 32 | 24.9 | 150 | 2.5 | - | 100 | 1 | B46 | TDXU / XT / XY |
| 32-4-TB | 4 | 32 | 24.9 | 150 | 3.2 | - | 100 | 1 | | TSC / J |
| 32-5-TB | 5 | 32 | 24.9 | 150 | 4.0 | - | 120 | 1 | | TDFU/TDV |
| 32-6-TB | 6 | 32 | 24.9 | 150 | 5.2 | - | 120 | 1 | | B109-B118 |
| | | | | | | | | | | |
| | | | | | | | | | | |

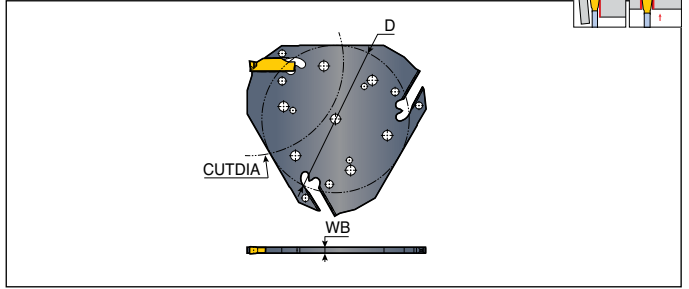
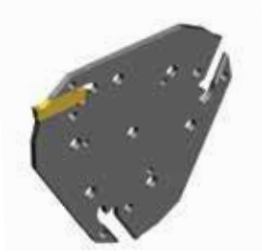
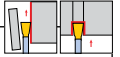
| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|--------------------|--------------------------|---------------------------|---------------------------|
| TGB 32-2-TB | 10-12 | 12-14 | 15-17 |
| 32-3-TB | 19-21 | 23-25 | 27-29 |
| 32-4-TB | 24-26 | 29-31 | 35-37 |
| 32-5-TB | 24-26 | 29-31 | 35-37 |
| 32-6-TB | 24-26 | 29-31 | 35-37 |
| | | | |
| | | | |

Spare parts

| Designation | Sealing screw set | Extractor | | |
|---------------|-------------------|-----------|--|--|
| | | | | |
| TGB-TB | SGC 340 | EDG 33B | | |
| | | | | |
| | | | | |

• Extractor should be ordered separately

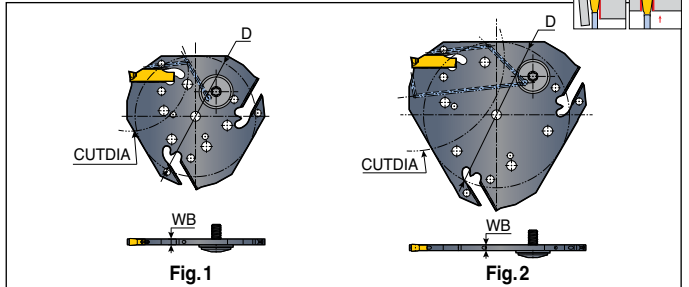
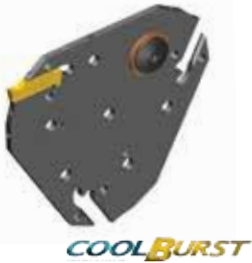
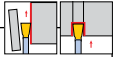
Triangular blades for parting and deep grooving



| Designation | Insert seat size | Dimension (mm) | | | Holder | Insert |
|-------------------|------------------|----------------|-----|--------|-------------------|----------------------|
| | | D | WB | CUTDIA | | |
| TGTB D52-2 | 2 | 53.2 | 1.8 | 52 | THTBR/L-TB B35 | TDC / J / T |
| D52-3 | 3 | 53.2 | 2.5 | 52 | | TDXU / XT / XY |
| D82-2 | 2 | 64.3 | 1.8 | 82 | | TSC / J / TDUF / TDV |
| D82-3 | 3 | 64.3 | 2.5 | 82 | | B109-B118 |

TGTB-TB

Triangular blades for parting and deep grooving with high pressure coolant



| Designation | Insert seat size | Dimension (mm) | | | Fig. | Holder | Insert |
|----------------------|------------------|----------------|-----|--------|----------|----------------------|--------|
| | | D | WB | CUTDIA | | | |
| TGTB D52-2-TB | 2 | 53.2 | 1.8 | 52 | 1 B35 | TDC / J / T | |
| D52-3-TB | 3 | 53.2 | 2.5 | 52 | | TDXU / XT / XY | |
| D82-2-TB | 2 | 64.3 | 1.8 | 82 | | TSC / J / TDUF / TDV | |
| D82-3-TB | 3 | 64.3 | 2.5 | 82 | | B109-B118 | |

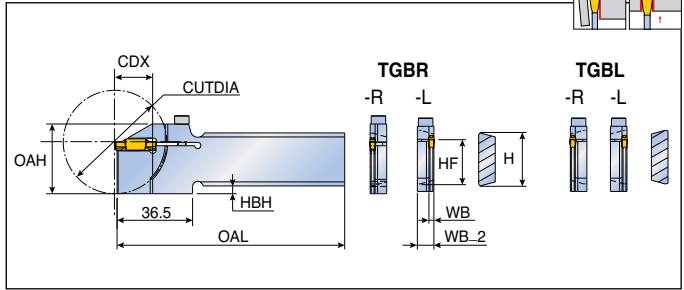
Spare parts

| Designation | Sealing screw set | Extractor | | |
|----------------|-------------------|-----------|---------|--|
| | TGTB | - | EDG 33B | |
| TGTB-TB | SGC 340-Q | EDG 33B | | |

• Extractor should be ordered separately

TGBR/L -D..R/L

Reinforced blades for parting and deep grooving with screw clamping



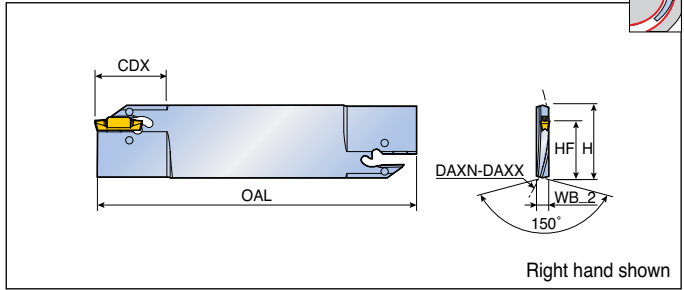
| Designation | Insert seat size | Dimension (mm) | | | | | | | | | Block | Insert |
|--------------------------------------|------------------|----------------|------|-----|------|-----|------|-----|-----|--------|-------------|----------------|
| | | H | HF | OAL | OAH | WB | WB_2 | HBH | CDX | CUTDIA | | |
| TGBR 26-2-D50R ⁽¹⁾ | 2 | 26 | 21.4 | 110 | 33.7 | 1.8 | 8 | 3.6 | 18 | 50 | TTBN/U...26 | TDC / J / T |
| 26-2-D50L ⁽²⁾ | 2 | 26 | 21.4 | 110 | 33.7 | 1.8 | 8 | 3.6 | 18 | 50 | TTBN/U...26 | TDXU / XT / XY |
| TGBL 26-2-D50R ⁽²⁾ | 2 | 26 | 21.4 | 110 | 33.7 | 1.8 | 8 | 3.6 | 18 | 50 | TTBN/U...26 | TSC / J |
| 26-2-D50L ⁽¹⁾ | 2 | 26 | 21.4 | 110 | 33.7 | 1.8 | 8 | 3.6 | 18 | 50 | TTBN/U...26 | TDUF / TDV |
| TGBR 26-3-D50R ⁽¹⁾ | 3 | 26 | 21.4 | 110 | 33.7 | 2.4 | 8 | 3.6 | 18 | 50 | TTBN/U...26 | B109-B118 |
| 26-3-D50L ⁽²⁾ | 3 | 26 | 21.4 | 110 | 33.7 | 2.4 | 8 | 3.6 | 18 | 50 | TTBN/U...26 | |
| TGBL 26-3-D50R ⁽²⁾ | 3 | 26 | 21.4 | 110 | 33.7 | 2.4 | 8 | 3.6 | 18 | 50 | TTBN/U...26 | |
| 26-3-D50L ⁽¹⁾ | 3 | 26 | 21.4 | 110 | 33.7 | 2.4 | 8 | 3.6 | 18 | 50 | TTBN/U...26 | |
| TGBR 32-2-D50R ⁽³⁾ | 2 | 32 | 24.9 | 120 | 33.7 | 1.8 | 8 | - | 18 | 50 | TTBN/U...32 | |
| 32-2-D50L ⁽²⁾ | 2 | 32 | 24.9 | 120 | 33.7 | 1.8 | 8 | - | 18 | 50 | TTBN/U...32 | |
| TGBL 32-2-D50R ⁽²⁾ | 2 | 32 | 24.9 | 120 | 33.7 | 1.8 | 8 | - | 18 | 50 | TTBN/U...32 | |
| 32-2-D50L ⁽³⁾ | 2 | 32 | 24.9 | 120 | 33.7 | 1.8 | 8 | - | 18 | 50 | TTBN/U...32 | |
| TGBR 32-3-D50R ⁽³⁾ | 3 | 32 | 24.9 | 120 | 33.7 | 2.4 | 8 | - | 18 | 50 | TTBN/U...32 | |
| 32-3-D50L ⁽²⁾ | 3 | 32 | 24.9 | 120 | 33.7 | 2.4 | 8 | - | 18 | 50 | TTBN/U...32 | |
| TGBL 32-3-D50R ⁽²⁾ | 3 | 32 | 24.9 | 120 | 33.7 | 2.4 | 8 | - | 18 | 50 | TTBN/U...32 | |
| 32-3-D50L ⁽³⁾ | 3 | 32 | 24.9 | 120 | 33.7 | 2.4 | 8 | - | 18 | 50 | TTBN/U...32 | B44-B45 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

- ⁽¹⁾ for Traub machines, model TNC 30, TNM 28, TNS 26/30/42/112, TNA 300, TNK 260
- ⁽²⁾ for Tornos Bechler, model Emco 2000/20, 2000/26
- ⁽³⁾ for Traub machines, model TNC 42/65, TNM 42/65, TNS 42/60/65, TNA 300/400

Spare parts

| Designation | Screw | Wrench | | |
|-------------|---------------------|--------------|-------|--|
| | TGBR/L -DR/L | SH M4x0.7x16 | L-W 3 | |
| | | | | |
| | | | | |

Blades for face grooving



| Designation | Insert seat size | Dimension (mm) | | | | | | | | Block | Insert |
|-------------------------------|------------------|----------------|------|-----|------|-----|------|------|------------------------|----------------|--------|
| | | H | HF | OAL | WB_2 | CDX | DAXN | DAXX | | | |
| TGBFR/L 32T 20-40-60-3 | 3 | 32 | 24.9 | 150 | 5.2 | 20 | 40 | 60 | TTBN/U...32 B44-B45 | TDC / J / T | |
| 32T 20-54-80-3 | 3 | 32 | 24.9 | 150 | 5.2 | 20 | 54 | 80 | | TDXU / XT / XY | |
| 32T25-74-120-3 | 3 | 32 | 24.9 | 150 | 5.2 | 25 | 74 | 120 | | TDFT | |
| 32T25-114-180-3 | 3 | 32 | 24.9 | 150 | 5.2 | 25 | 114 | 180 | | TSC / J | |
| 32T25-40-60-4 | 4 | 32 | 24.9 | 150 | 5.2 | 25 | 40 | 60 | | TDUF / TDV | |
| 32T25-50-80-4 | 4 | 32 | 24.9 | 150 | 5.2 | 25 | 50 | 80 | | B109-B119 | |
| 32T30-70-130-4 | 4 | 32 | 24.9 | 150 | 5.2 | 30 | 70 | 130 | | | |
| 32T30-120-200-4 | 4 | 32 | 24.9 | 150 | 5.2 | 30 | 120 | 200 | | | |
| 32T30-200-4 | 4 | 32 | 24.9 | 150 | 5.2 | 30 | 200 | ∞ | | | |
| 32T32-60-95-5 | 5 | 32 | 24.9 | 150 | 5.2 | 32 | 60 | 95 | | | |
| 32T35-85-140-5 | 5 | 32 | 24.9 | 150 | 5.2 | 35 | 85 | 140 | | | |
| 32T35-130-250-5 | 5 | 32 | 24.9 | 150 | 5.2 | 35 | 130 | 250 | | | |
| 32T35-250-5 | 5 | 32 | 24.9 | 150 | 5.2 | 35 | 250 | ∞ | | | |
| 32T32-80-180-6 | 6 | 32 | 24.9 | 150 | 5.2 | 32 | 80 | 180 | | | |
| 32T38-168-300-6 | 6 | 32 | 24.9 | 150 | 5.2 | 38 | 168 | 300 | | | |
| 32T38-300-6 | 6 | 32 | 24.9 | 150 | 5.2 | 38 | 300 | ∞ | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

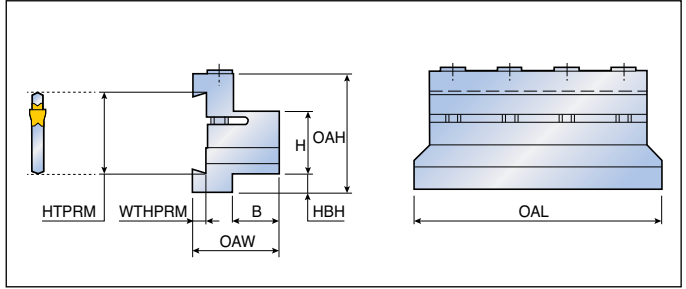
• Please check insert min. dia for face grooving B70 page

Spare parts

| Designation | Extractor | | | |
|----------------|-----------|--|--|--|
| | | | | |
| TGBFR/L | EDG 33B | | | |
| | | | | |
| | | | | |

• Extractor should be ordered separately

Blocks for blades



| Designation | Dimension (mm) | | | | | | | |
|-------------------|----------------|----|-----|-----|--------|-----|----|-----|
| | HTPRM | H | HBH | OAH | WTHPRM | OAL | B | OAW |
| TTBN 16-26 | 26 | 16 | 12 | 38 | 4.0 | 87 | 15 | 29 |
| 20-26 | 26 | 20 | 8 | 38 | 4.0 | 87 | 19 | 33 |
| 25-26 | 26 | 25 | 3 | 38 | 4.0 | 110 | 20 | 34 |
| 20-32 | 32 | 20 | 13 | 48 | 5.5 | 100 | 19 | 35 |
| 25-32 | 32 | 25 | 8 | 48 | 5.5 | 110 | 20 | 36 |
| 32-32 | 32 | 32 | 3 | 48 | 5.5 | 120 | 28 | 44 |
| 25-45 | 45 | 25 | 25 | 66 | 5.5 | 110 | 22 | 40 |
| 32-45 | 45 | 32 | 18 | 66 | 5.5 | 120 | 28 | 45 |
| 40-52 | 52 | 40 | 21 | 82 | 8.0 | 160 | 40 | 65 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

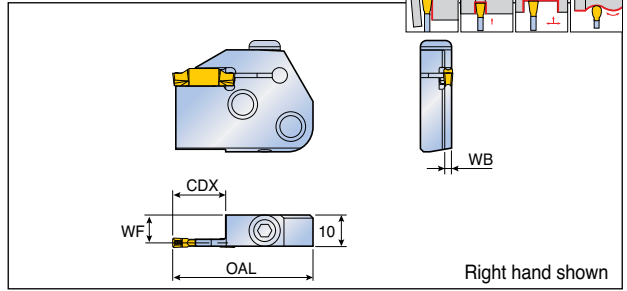
Spare parts

| Designation | Screw | Wrench | | |
|------------------|---------------|--------|--|--|
| | | | | |
| TTBN...26 | SH M6x1x25 | L-W 5 | | |
| TTBN...32 | SH M6x1x30 | L-W 5 | | |
| TTBN...45 | SH M6x1x40 | L-W 5 | | |
| TTBN...52 | SH M8x1.25x45 | L-W 6 | | |



TCER/L

Cartridges for external grooving



| Designation | Insert seat size | Dimension (mm) | | | | Holder | Insert |
|----------------------|------------------|----------------|-----|-----|-----|----------|----------------|
| | | OAL | WF | WB | CDX | | |
| TCER/L 1.4T12 | 1 * | 41 | 9.5 | 1.0 | 12 | TCHR/L | TDJ 1.4 |
| 2T16 | 2 | 45 | 9.1 | 1.8 | 16 | TCHPL/R | TDC / J / T |
| 2T22 | 2 | 51 | 9.1 | 1.8 | 22 | C..TCHN | TDXU / XT / XY |
| 3T16 | 3 | 45 | 8.8 | 2.4 | 16 | C..TCHPN | TSC / J |
| 3T22 | 3 | 51 | 8.8 | 2.4 | 22 | B52-B55 | TDUF / TDV |
| 4T16 | 4 | 45 | 8.5 | 3.0 | 16 | | B109-B118 |
| 4T22 | 4 | 51 | 8.5 | 3.0 | 22 | | |
| 5T20 | 5 | 49 | 8.0 | 4.0 | 20 | | |
| 5T25 | 5 | 54 | 8.0 | 4.0 | 25 | | |
| 6T20 | 6 | 49 | 7.5 | 5.0 | 20 | | |
| 6T25 | 6 | 54 | 7.5 | 5.0 | 25 | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

• * TDJ 1.4 insert only

Spare parts

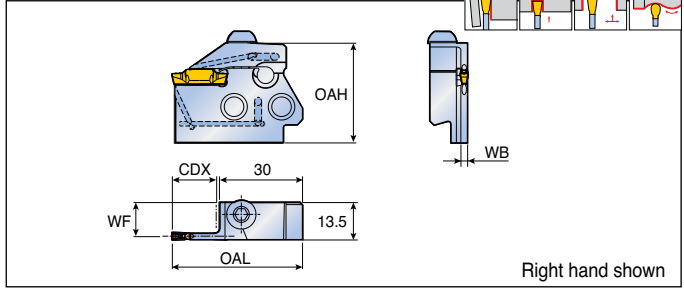
| Designation | Screw | Wrench | | |
|---------------|------------|--------|--|--|
| | | | | |
| TCER/L | BH M6x1x20 | L-W 4 | | |
| | | | | |
| | | | | |

TCAER/L-TB

Cartridges for external grooving with high pressure coolant



COOLBURST



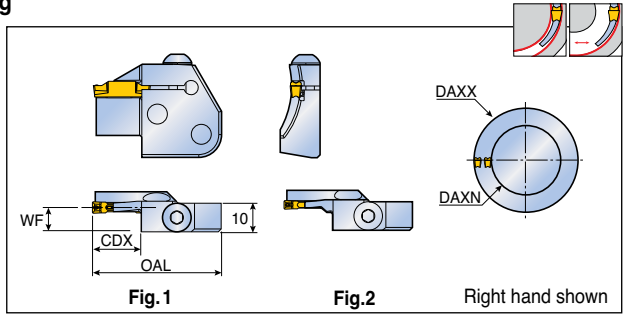
| Designation | Insert seat size | Dimension (mm) | | | | | Holder | Insert |
|------------------------|------------------|----------------|------|-----|-----|-----|---|---|
| | | OAL | WF | WB | OAH | CDX | | |
| TCAER/L 2T16-TB | 2 | 47 | 12.6 | 1.8 | 36 | 16 | TCAHR/L-TB TCAHPL/R-TB C...TCAHN-TB C...TCAHPN-TB B52-B55 | TDC / J / T TDXU / XT / XY TSC / J TDUF / TDV B109-B118 |
| 3T16-TB | 3 | 47 | 12.3 | 2.4 | 36 | 16 | | |
| 4T16-TB | 4 | 47 | 12.0 | 3.0 | 36 | 16 | | |
| 5T20-TB | 5 | 51 | 11.5 | 4.0 | 36 | 20 | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|------------------------|--------------------------|---------------------------|---------------------------|
| TCAER/L 2T16-TB | 12-14 | 15-17 | 18-20 |
| 3T16-TB | 19-21 | 23-25 | 27-29 |
| 4T16-TB | 24-26 | 29-31 | 35-37 |
| 5T20-TB | 30-35 | 36-38 | 43-45 |
| | | | |
| | | | |

Spare parts

| Designation | Screw | Wrench | | |
|-------------------|------------|--------|--|--|
| | | | | |
| TCAER/L-TB | BH M6X1X16 | L-W 4 | | |
| | | | | |
| | | | | |

Cartridges for external face grooving



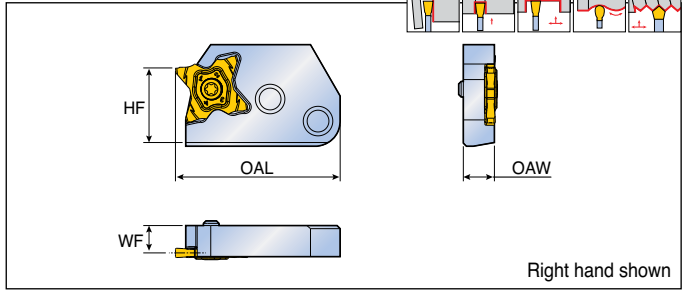
| Designation | Insert seat size | Dimension (mm) | | | | | Fig. | Holder | Insert |
|-----------------------------|------------------|----------------|-----|-----|------|------|------|-----------|----------------|
| | | OAL | WF | CDX | DAXN | DAXX | | | |
| TCFR/L 3T12-40-55 RN | 3 | 45 | 8.9 | 12 | 40 | 55 | 2 | TCHL/R | TDC / J / T |
| 3T12-55-75 RN | 3 | 45 | 8.9 | 12 | 55 | 75 | 2 | TCHPR/L | TDXU / XT / XY |
| 3T12-75-100 RN | 3 | 45 | 8.9 | 12 | 75 | 100 | 2 | C..-TCHN | TDFT |
| 3T12-100-140 RN | 3 | 45 | 8.9 | 12 | 100 | 140 | 2 | C..-TCHPN | TSC / J |
| 3T12-140-200 RN | 3 | 45 | 8.9 | 12 | 140 | 200 | 2 | B52-B55 | TDUF / TDV |
| 4T16-50-70 RN | 4 | 45 | 8.5 | 16 | 50 | 70 | 1 | | B109-B119 |
| 4T16-70-100 RN | 4 | 45 | 8.5 | 16 | 70 | 100 | 1 | | |
| 4T16-100-150 RN | 4 | 45 | 8.5 | 16 | 100 | 150 | 1 | | |
| 4T16-150-250 RN | 4 | 45 | 8.5 | 16 | 150 | 250 | 1 | | |
| 4T16-250 RN | 4 | 45 | 8.5 | 16 | 250 | ∞ | 1 | | |
| 5T20-55-80 RN | 5 | 49 | 8.0 | 20 | 55 | 80 | 1 | | |
| 5T20-80-120 RN | 5 | 49 | 8.0 | 20 | 80 | 120 | 1 | | |
| 5T20-120-180 RN | 5 | 49 | 8.0 | 20 | 120 | 180 | 1 | | |
| 5T20-180-300 RN | 5 | 49 | 8.0 | 20 | 180 | 300 | 1 | | |
| 5T20-300 RN | 5 | 49 | 8.0 | 20 | 300 | ∞ | 1 | | |
| 6T25-60-90 RN | 6 | 55 | 7.5 | 25 | 60 | 90 | 1 | | |
| 6T25-90-150 RN | 6 | 55 | 7.5 | 25 | 90 | 150 | 1 | | |
| 6T25-150-250 RN | 6 | 55 | 7.5 | 25 | 150 | 250 | 1 | | |
| 6T25-250-400 RN | 6 | 55 | 7.5 | 25 | 250 | 400 | 1 | | |
| 6T25-400 RN | 6 | 55 | 7.5 | 25 | 400 | ∞ | 1 | | |

• Please check insert min. dia for face grooving [B70](#) page

Spare parts

| Designation | Screw | Wrench | | |
|---------------|------------|--------|--|--|
| | | | | |
| TCFR/L | BH M6x1x20 | L-W 4 | | |
| | | | | |
| | | | | |

Cartridges for external grooving



| Designation | Dimension (mm) | | | | | Holder | Insert |
|----------------|----------------|-----|----|-------------------|---------------------|---|------------------------|
| | OAL | OAW | HF | WF ⁽¹⁾ | CW _{range} | | |
| TQCR 27 | 53 | 10 | 24 | 8.8 | 0.5 ≤ CW < 5.3 | TCHR/L TCHPL/R C...TCHN C...TCHPN B52-B55 | TQ..27... B145-B153 |
| TQCL 27 | 53 | 10 | 24 | 8.8 | 0.5 ≤ CW < 5.3 | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

• ⁽¹⁾ "WF" value is based on TQ.. 27 standard insert

Spare parts

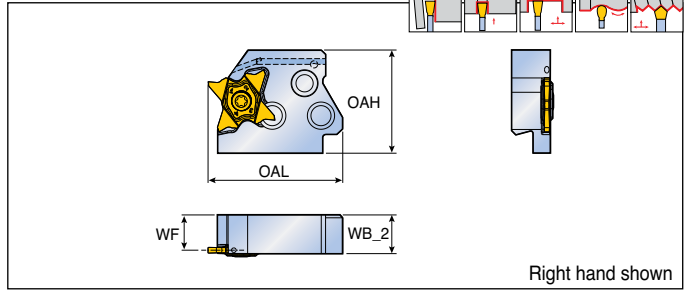
| Designation | Screw | Wrench | | |
|----------------|------------|-----------|--|--|
| | | | | |
| TQCR 27 | TS 50125iL | T 10 / 20 | | |
| TQCL 27 | TS 50125i | T 10 / 20 | | |
| | | | | |
| | | | | |

TCAQR/L 27-TB

Cartridges for external grooving with high pressure coolant



COOLBURST



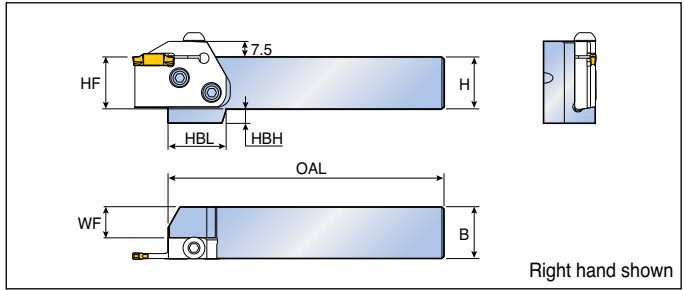
| Designation | Dimension (mm) | | | | Holder | Insert |
|----------------------|----------------|------|------|-----|---|----------------------|
| | OAL | WF | WB_2 | OAH | | |
| TCAQR/L 27-TB | 47 | 12.3 | 13.5 | 36 | TCAHR/L-TB TCAHPL/R-TB C...TCAHN-TB C...TCAHPN-TB B52-B53 | TQ...27 B145-B153 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|----------------------|--------------------------|---------------------------|---------------------------|
| TCAQR/L 27-TB | 9-11 | 11-13 | 13-15 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Spare parts

| Designation | Screw | Wrench | | |
|--------------------|------------|---------|--|--|
| | | | | |
| TCAQR 27-TB | TS 50125IL | T 10/20 | | |
| TCAQL 27-TB | TS 50125I | T 10/20 | | |
| | | | | |
| | | | | |

Parallel type holders for cartridge

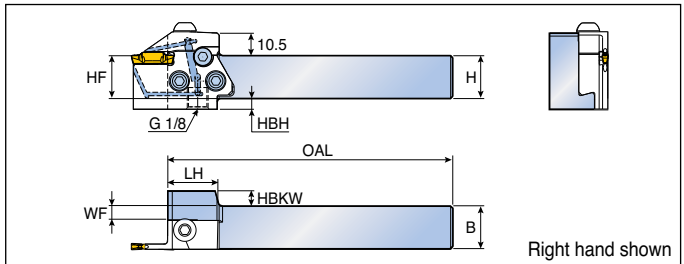


| Designation | Dimension (mm) | | | | | | | Cartridge |
|--------------------|----------------|----|----|-----|----|-----|-----|--|
| | H | HF | B | OAL | WF | HBL | HBH | |
| TCHR/L 2020 | 20 | 20 | 20 | 133 | 10 | 35 | 12 | TCER/L / TCFL/R TQCR/L B47, B49, B50 |
| 2525 | 25 | 25 | 25 | 133 | 15 | 28 | 7 | |
| 3232 | 32 | 32 | 32 | 153 | 22 | 28 | - | |

• Cartridge should be ordered separately

TCAHR/L-TB

Parallel type holders for cartridge with high pressure coolant



| Designation | Dimension (mm) | | | | | | | | Cartridge |
|------------------------|----------------|----|----|-----|------|-----|------|----|--------------------------------------|
| | H | HF | B | OAL | WF | HBH | HBKW | LH | |
| TCAHR/L 2020-TB | 20 | 20 | 20 | 133 | 6.5 | 5 | 7 | 24 | TCAER/L-TB TCAQR/L-TB B48, B51 |
| 2525-TB | 25 | 25 | 25 | 133 | 11.5 | - | 2 | 24 | |
| | | | | | | | | | |

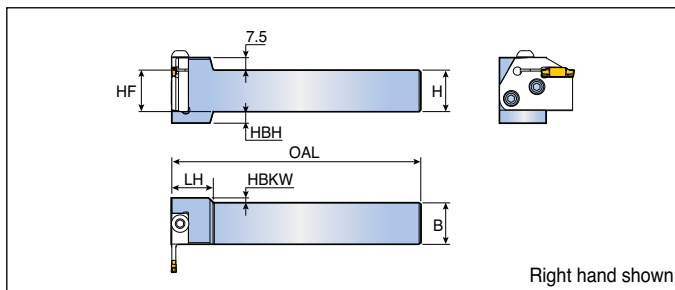
- Cartridge should be ordered separately
- Please refer to B102 page for COOL-BURST accessories

Spare parts

| Designation | Screw | Security Screw | Sealing Screw | O-Ring | Wrench | |
|-------------------|-----------|----------------|----------------|---------------|--------|-------|
| TCHR/L | TS 60190I | - | - | - | L-W 4 | - |
| TCAHR/L-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | L-W 4 | L-W 2 |
| | | | | | | |

TCHPR/L

Perpendicular type holders for cartridge

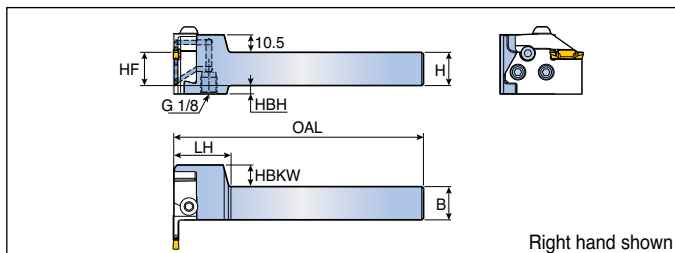


| Designation | Dimension (mm) | | | | | | | Cartridge |
|---------------------|----------------|----|----|-----|-----|------|----|-----------------|
| | H | HF | B | OAL | HBH | HBKW | LH | |
| TCHPR/L 2020 | 20 | 20 | 20 | 150 | 12 | 8 | 25 | TCEL/R / TCFR/L |
| 2525 | 25 | 25 | 25 | 150 | 7 | 3 | 25 | TQCL/R |
| 3232 | 32 | 32 | 32 | 170 | - | - | 25 | B47, B49, B50 |

• Cartridge should be ordered separately

TCAHPR/L-TB

Perpendicular type holders for cartridge with high pressure coolant



| Designation | Dimension (mm) | | | | | | | Cartridge |
|-------------------------|----------------|----|----|-----|-----|------|----|------------|
| | H | HF | B | OAL | HBH | HBKW | LH | |
| TCAHPR/L 2020-TB | 20 | 20 | 20 | 150 | 5 | 13 | 33 | TCAEL/R-TB |
| 2525-TB | 25 | 25 | 25 | 150 | - | 8 | 33 | TCAQL/R-TB |
| | | | | | | | | B48, B51 |

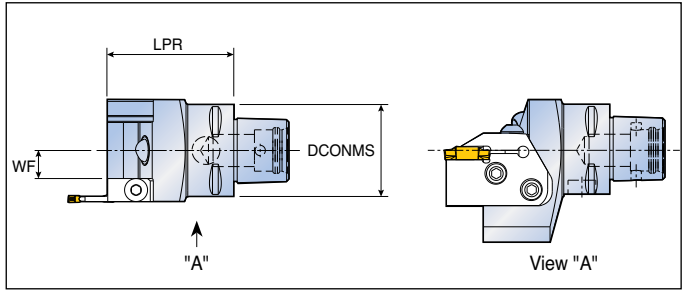
- Cartridge should be ordered separately
- Please refer to B102 page for COOL-BURST accessories

Spare parts

| Designation | Screw | Security Screw | Sealing Screw | O-Ring | Wrench | |
|--------------------|-----------|----------------|----------------|---------------|--------|-------|
| | | | | | | |
| TCHPR/L | TS 60190I | - | - | - | L-W 4 | - |
| TCAHPR/L-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | L-W 4 | L-W 2 |
| | | | | | | |

C-TCHN

Parallel type C-Adapters

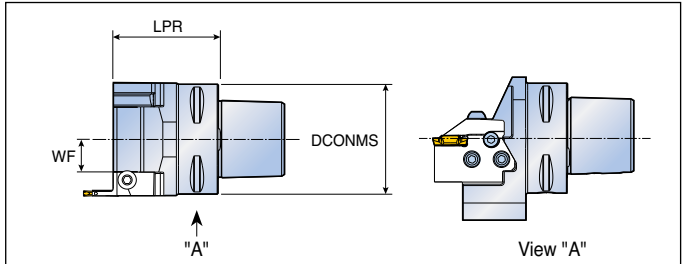


| Designation | Dimension (mm) | | | Cartridge |
|----------------|----------------|-----|------|-----------------|
| | DCONMS | LPR | WF | |
| C4-TCHN | 40 | 55 | 12.2 | TCER/L / TCFR/L |
| C5-TCHN | 50 | 58 | 17.2 | TQCR/L |
| C6-TCHN | 63 | 60 | 22.2 | B47, B49, B50 |

• Cartridge should be ordered separately

C-TCAHN-TB

Parallel type C-Adapters with high pressure coolant



| Designation | Dimension (mm) | | | Cartridge |
|--------------------|----------------|-----|------|------------|
| | DCONMS | LPR | WF | |
| C4-TCAHN-TB | 40 | 55 | 11.5 | TCAER/L-TB |
| C5-TCAHN-TB | 50 | 58 | 13.7 | TCAQR/L-TB |
| C6-TCAHN-TB | 63 | 60 | 18.7 | B48, B51 |

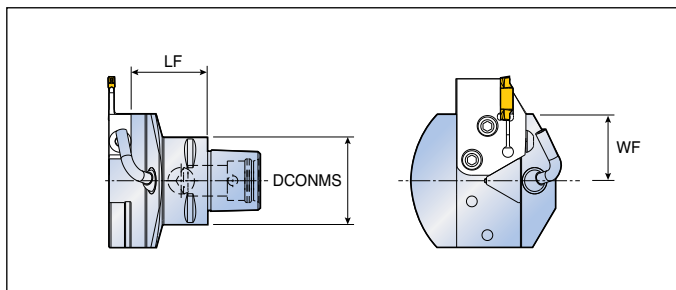
• Cartridge should be ordered separately

Spare parts

| Designation | Screw | Security Screw | Sealing Screw | Nozzle | O-Ring | Wrench |
|-------------------|-----------|----------------|----------------|--------|---------------|---------------|
| C-TCHN | TS 60190I | - | - | NZ 125 | - | L-W 4 |
| C-TCAHN-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | - | O-RING ID5X1T | L-W 4 / L-W 2 |
| | | | | | | |

C-TCHPN

Perpendicular type C-Adapters

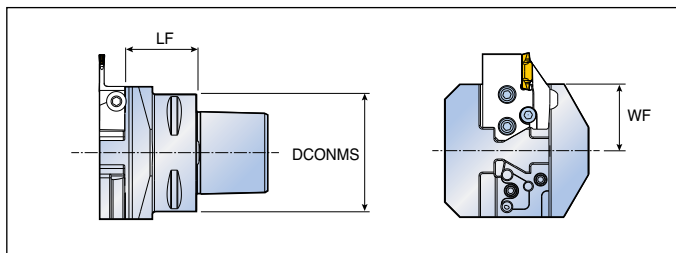


| Designation | Dimension (mm) | | | Cartridge |
|-----------------|----------------|----|------|-----------------|
| | DCONMS | LF | WF | |
| C4-TCHPN | 40 | 35 | 30.5 | TCER/L / TCFR/L |
| C5-TCHPN | 50 | 40 | 35.5 | TQCR/L |
| C6-TCHPN | 63 | 42 | 35.5 | B47, B49, B51 |

• Cartridge should be ordered separately

C-TCAHPN-TB

Perpendicular type C-Adapters with high pressure coolant



| Designation | Dimension (mm) | | | Cartridge |
|---------------------|----------------|------|------|------------|
| | DCONMS | LF | WF | |
| C4-TCAHPN-TB | 40 | 36.5 | 34 | TCAER/L-TB |
| C5-TCAHPN-TB | 50 | 36.5 | 35 | TCAQR/L-TB |
| C6-TCAHPN-TB | 63 | 38.5 | 35.5 | B48, B51 |

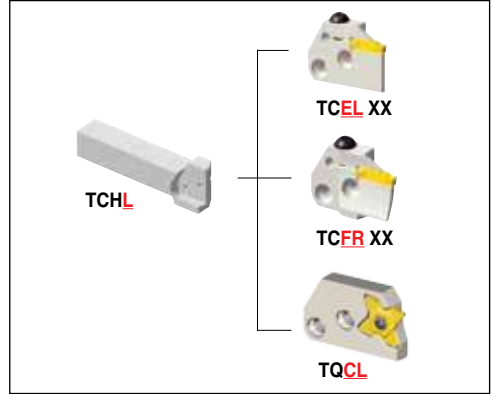
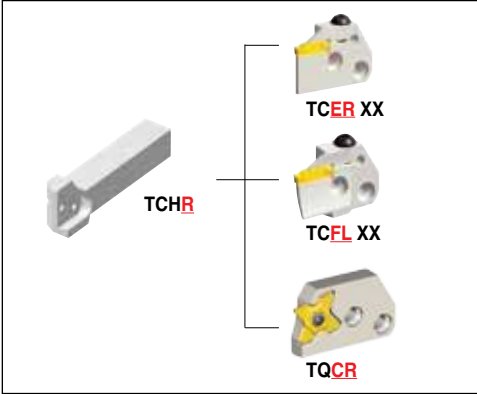
• Cartridge should be ordered separately

Spare parts

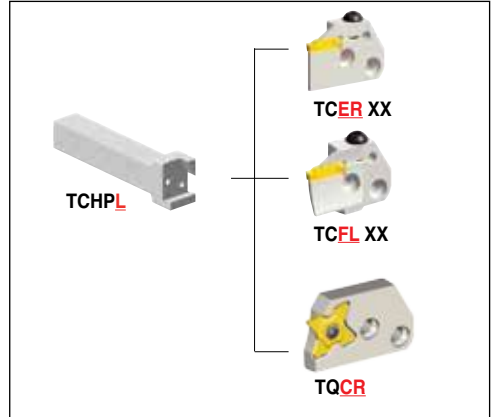
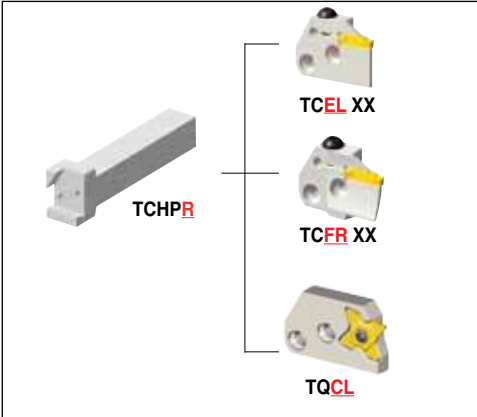
| Designation | Screw | Security Screw | Sealing Screw | Nozzle | O-Ring | Pipe | Wrench |
|--------------------|----------------|----------------|----------------|--------|---------------|------|---------------|
| | C-TCHPN | TS 60190I | - | - | NZ 125 | - | NZP 5 |
| C-TCAHPN-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | - | O-RING ID5X1T | - | L-W 4 / L-W 2 |
| | | | | | | | |

Cartridge and Holder Selection

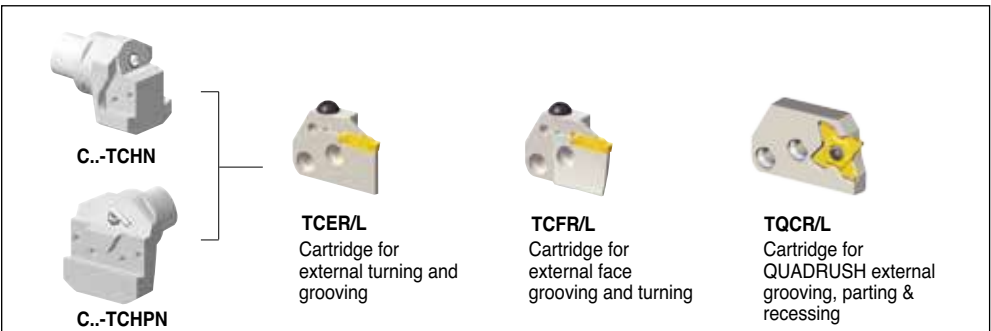
Parallel type



Perpendicular type

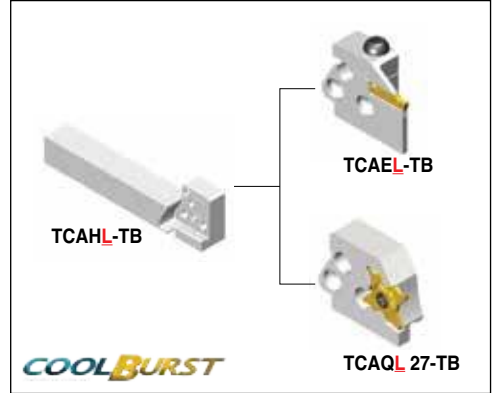
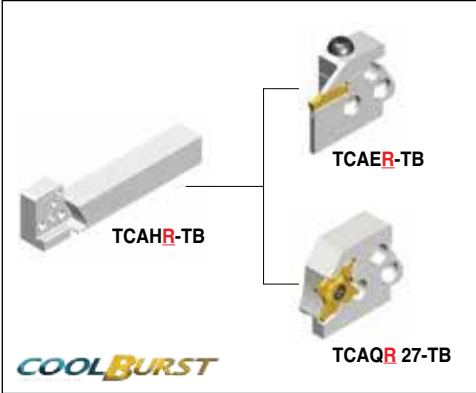


C-ADAPTER

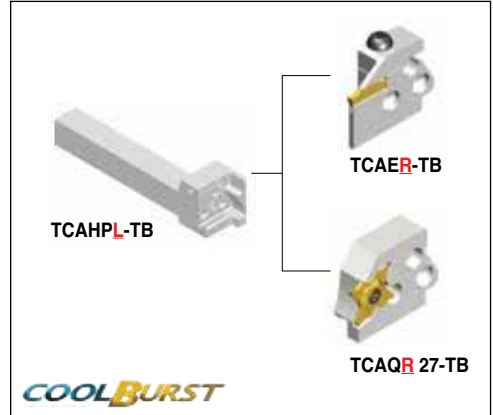
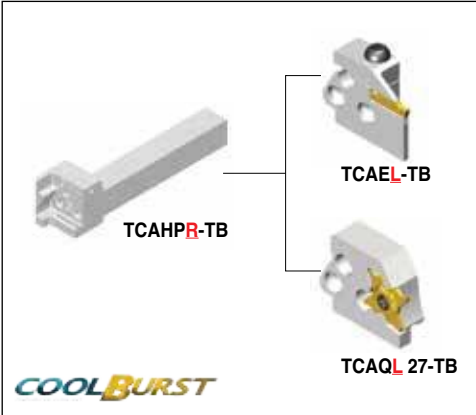


Cartridge and Holder Selection

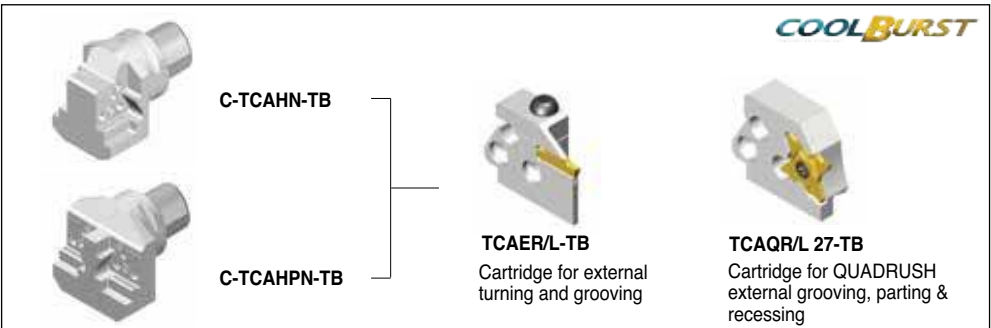
Parallel type with high pressure coolant



Perpendicular type with high pressure coolant

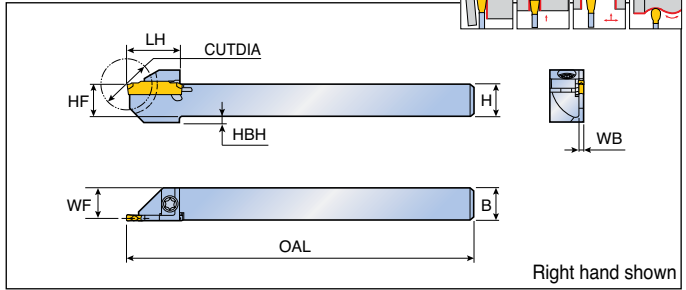
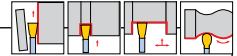


C-ADAPTER with high pressure coolant



TTER/L-SH

Parting and grooving holders for Swiss automatic lathes



| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|---------------------------|------------------|----------------|----|-----|------|------|-----|-----|--------|----------------|
| | | H(HF) | B | OAL | LH | WF | WB | HBH | CUTDIA | |
| TTER/L 10-20-1.4SH | 1 * | 10 | 10 | 125 | 18 | 9.5 | 1.0 | - | 20 | TDC / J / T |
| 12-24-1.4SH | 1 * | 12 | 12 | 125 | 19.5 | 11.5 | 1.0 | - | 24 | TDXU / XT / XY |
| 14-24-1.4SH | 1 * | 14 | 14 | 125 | 19.5 | 13.5 | 1.0 | - | 24 | TSC / J |
| 16-32-1.4SH | 1 * | 16 | 16 | 125 | 24 | 15.5 | 1.0 | - | 32 | TDUF / TDV |
| 10-20-2SH | 2 | 10 | 10 | 125 | 19 | 9.1 | 1.8 | 2 | 20 | B109-B118 |
| 12-24-2SH | 2 | 12 | 12 | 125 | 19 | 11.1 | 1.8 | 2 | 24 | |
| 14-24-2SH | 2 | 14 | 14 | 125 | 19 | 13.1 | 1.8 | - | 24 | |
| 16-32-2SH | 2 | 16 | 16 | 125 | 24 | 15.1 | 1.8 | - | 32 | |
| 12-24-3SH | 3 | 12 | 12 | 125 | 19 | 10.8 | 2.4 | 2 | 24 | |
| 16-32-3SH | 3 | 16 | 16 | 125 | 24 | 14.8 | 2.4 | - | 32 | |
| 16-38-3SH | 3 | 16 | 16 | 125 | 27 | 14.8 | 2.4 | - | 38 | |
| 20-45-3SH | 3 | 20 | 20 | 125 | 30.5 | 18.8 | 2.4 | - | 45 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

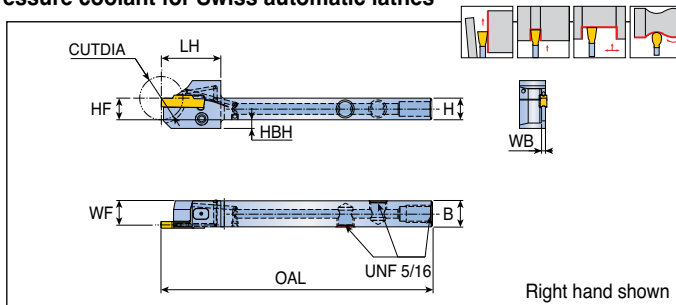
• * TDJ 1.4 insert only

Spare parts

| Designation | Screw | Wrench | | |
|-------------------|------------|--------|--|--|
| | | | | |
| TTER/L- SH | TS 40A115I | T 15 | | |
| | | | | |
| | | | | |

TTER/L-SH-TB

Side lock holders with high pressure coolant for Swiss automatic lathes



| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|----------------------------|------------------|----------------|----|-----|------|------|-----|-----|--------|-----------------|
| | | H(HF) | B | OAL | LH | WF | WB | HBH | CUTDIA | |
| TTER/L 12-24-2SH-TB | 2 | 12 | 12 | 125 | 27.5 | 11.1 | 1.8 | 2 | 24 | TDC / J / T / A |
| 16-32-2SH-TB | 2 | 16 | 16 | 125 | 31.5 | 15.1 | 1.8 | - | 32 | TDXU / XT / XY |
| 12-24-3SH-TB | 3 | 12 | 12 | 125 | 27.5 | 10.8 | 2.4 | 2 | 24 | TSC / J |
| 16-32-3SH-TB | 3 | 16 | 16 | 125 | 31.5 | 14.8 | 2.4 | - | 32 | TDUF / TDV |
| 16-38-3SH-TB | 3 | 16 | 16 | 125 | 34.5 | 14.8 | 2.4 | - | 38 | B109-B118 |
| 20-45-3SH-TB | 3 | 20 | 20 | 125 | 38 | 18.8 | 2.4 | - | 45 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

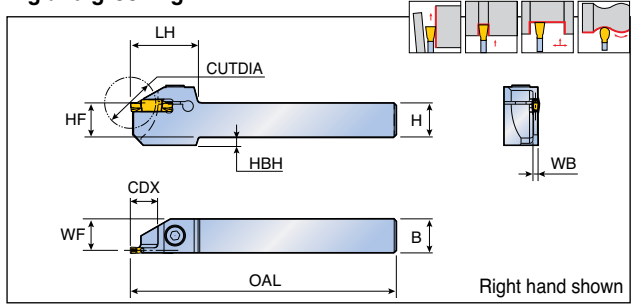
| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|----------------------|--------------------------|---------------------------|---------------------------|
| TTER/L 2SH-TB | 5-7 | 7-9 | 8-10 |
| 3SH-TB | 5-7 | 7-9 | 8-10 |
| | | | |
| | | | |
| | | | |

• Please refer to B102 page for COOL-BURST accessories

Spare parts

| Designation | Pin | Clamping screw | Pin plug | Inlet plug | Wrench | |
|-----------------------|---------------|----------------|----------------------|--------------|----------|----------|
| TTER/L...SH-TB | PIN-SH-TB-L21 | SS M5-24145 | SS M5x3.5 ULTEM 2300 | PLG 5/16 UNF | L-W 2.5F | L-W 5/32 |
| | | | | | | |
| | | | | | | |

Reinforced holders for external turning and grooving



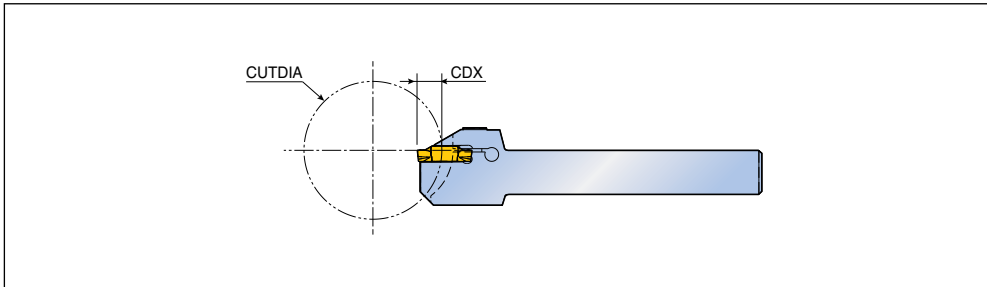
| Designation | Insert seat size | Dimension (mm) | | | | | | | | | Insert |
|-------------------------------|------------------|----------------|----|-----|----|------|-----|-----|-----|--------|----------------|
| | | H(HF) | B | OAL | LH | WF | WB | HBH | CDX | CUTDIA | |
| TTER/L 1010-1.4T15-D40 | 1 * | 10 | 10 | 125 | 32 | 9.5 | 1.0 | 6 | 15 | 40 | TDC / J / T |
| 1212-1.4T15-D40 | 1 * | 12 | 12 | 125 | 32 | 11.5 | 1.0 | 4 | 15 | 40 | TDXU / XT / XY |
| 1616-1.4T20-D45 | 1 * | 16 | 16 | 125 | 38 | 15.5 | 1.0 | 4 | 20 | 45 | TSC / J |
| 2020-1.4T20-D45 | 1 * | 20 | 20 | 125 | 38 | 19.5 | 1.0 | - | 20 | 45 | TDUF / TDV |
| 1010-2T15-D40 | 2 | 10 | 10 | 125 | 32 | 9.1 | 1.8 | 6 | 15 | 40 | B109-B118 |
| 1212-2T15-D40 | 2 | 12 | 12 | 125 | 32 | 11.1 | 1.8 | 4 | 15 | 40 | |
| 1616-2T20-D45 | 2 | 16 | 16 | 125 | 38 | 15.1 | 1.8 | 4 | 20 | 45 | |
| 2020-2T20-D45 | 2 | 20 | 20 | 125 | 38 | 19.1 | 1.8 | - | 20 | 45 | |
| 2525-2T20-D45 | 2 | 25 | 25 | 150 | 38 | 24.1 | 1.8 | - | 20 | 45 | |
| 1212-3T15-D40 | 3 | 12 | 12 | 125 | 32 | 10.8 | 2.4 | 4 | 15 | 40 | |
| 1616-3T20-D45 | 3 | 16 | 16 | 125 | 38 | 14.8 | 2.4 | 4 | 20 | 45 | |
| 2020-3T20-D45 | 3 | 20 | 20 | 125 | 38 | 18.8 | 2.4 | - | 20 | 45 | |
| 2525-3T20-D45 | 3 | 25 | 25 | 150 | 38 | 23.8 | 2.4 | - | 20 | 45 | |
| 2525-3T25-D60 | 3 | 25 | 25 | 150 | 43 | 23.8 | 2.4 | - | 25 | 60 | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

• * TDJ 1.4 insert only

Spare parts

| Designation | Screw | Wrench | | |
|-----------------|--------------|--------|--|--|
| | | | | |
| TTER/L-D | SH M5x0.8x16 | L-W 4 | | |
| | | | | |
| | | | | |

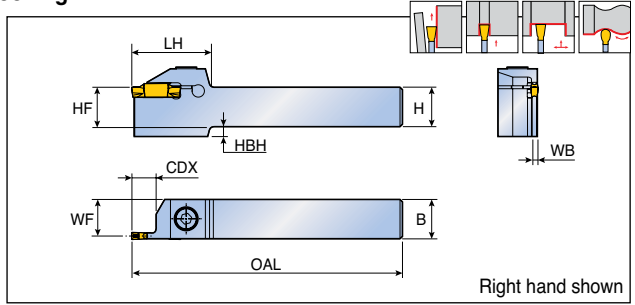
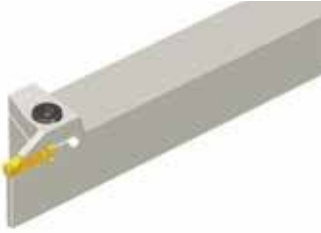
Machining depth for diameter of workpiece



| Designation | | CDX | | | | | | | | | | | | | |
|-------------------------------|--------|-----|---|---|---|---|---|---|---|---|------|-----|-----|-----|-----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | |
| TTER/L 1010-1.4T15-D40 | CUTDIA | | | | | ∞ | | | | | | 269 | 120 | 79 | |
| 1212-1.4T15-D40 | | | | | | ∞ | | | | | | 269 | 120 | 79 | |
| 1616-1.4T20-D45 | | | | | | ∞ | | | | | | | | | 432 |
| 2020-1.4T20-D45 | | | | | | ∞ | | | | | | | | | 432 |
| 1010-2T15-D40 | | | | | | ∞ | | | | | | 269 | 120 | 79 | |
| 1212-2T15-D40 | | | | | | ∞ | | | | | | 269 | 120 | 79 | |
| 1616-2T20-D45 | | | | | | ∞ | | | | | | | | | 432 |
| 2020-2T20-D45 | | | | | | ∞ | | | | | | | | | 432 |
| 2525-2T20-D45 | | | | | | ∞ | | | | | 1468 | 339 | 193 | 136 | 106 |
| 1212-3T15-D40 | | | | | | ∞ | | | | | | 269 | 120 | 79 | |
| 1616-3T20-D45 | | | | | | ∞ | | | | | | | | | 432 |
| 2020-3T20-D45 | | | | | | ∞ | | | | | | | | | 432 |
| 2525-3T20-D45 | | | | | | ∞ | | | | | 1468 | 339 | 193 | 136 | 106 |
| 2525-3T25-D60 | | | | | | ∞ | | | | | | | | | |

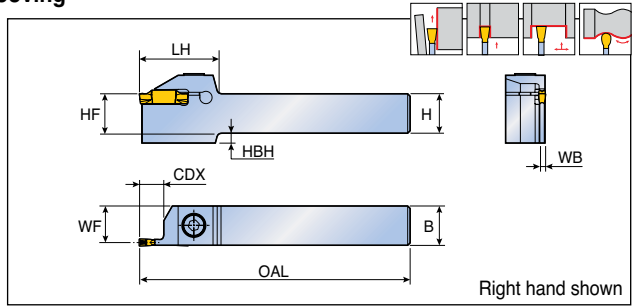
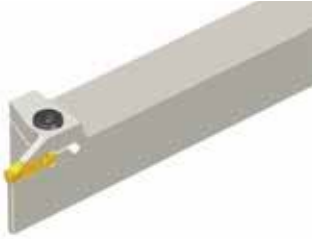
| Designation | | CDX | | | | | | | | | | | | | |
|-------------------------------|--------|-----|-----|----|------|-----|-----|-----|-----|-----|----|----|----|----|--|
| | | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | | |
| TTER/L 1010-1.4T15-D40 | CUTDIA | 59 | 40 | | | | | | | | | | | | |
| 1212-1.4T15-D40 | | 59 | 40 | | | | | | | | | | | | |
| 1616-1.4T20-D45 | | 193 | 125 | 94 | 76 | 64 | 57 | 45 | | | | | | | |
| 2020-1.4T20-D45 | | 193 | 125 | 94 | 76 | 64 | 57 | 45 | | | | | | | |
| 1010-2T15-D40 | | 59 | 40 | | | | | | | | | | | | |
| 1212-2T15-D40 | | 59 | 40 | | | | | | | | | | | | |
| 1616-2T20-D45 | | 193 | 125 | 94 | 76 | 64 | 57 | 45 | | | | | | | |
| 2020-2T20-D45 | | 193 | 125 | 94 | 76 | 64 | 57 | 45 | | | | | | | |
| 2525-2T20-D45 | | 87 | 75 | 67 | 60 | 56 | 52 | 45 | | | | | | | |
| 1212-3T15-D40 | | 59 | 40 | | | | | | | | | | | | |
| 1616-3T20-D45 | | 193 | 125 | 94 | 76 | 64 | 57 | 45 | | | | | | | |
| 2020-3T20-D45 | | 193 | 125 | 94 | 76 | 64 | 57 | 45 | | | | | | | |
| 2525-3T20-D45 | | 87 | 75 | 67 | 60 | 56 | 52 | 45 | | | | | | | |
| 2525-3T25-D60 | | | | | 1810 | 418 | 237 | 167 | 130 | 107 | 91 | 81 | 73 | 60 | |

HOLDERS for external turning and grooving



| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|-------------------------|------------------|----------------|----|-----|------|------|-----|-----|-----|-----------------|
| | | H(HF) | B | OAL | LH | WF | WB | HBH | CDX | |
| TTER/L 1616-2T08 | 2 | 16 | 16 | 110 | 33.0 | 15.1 | 1.8 | 4 | 8 | TDC / J / T / A |
| 2020-2T08 | 2 | 20 | 20 | 125 | 33.0 | 19.1 | 1.8 | - | 8 | TDXU / XT / XY |
| 2525-2T08 | 2 | 25 | 25 | 150 | 33.0 | 24.1 | 1.8 | - | 8 | TSC / J / A |
| 1616-2 | 2 | 16 | 16 | 110 | 32.0 | 15.1 | 1.8 | 4 | 12 | TDUF / TDV |
| 2020-2 | 2 | 20 | 20 | 125 | 32.0 | 19.1 | 1.8 | - | 12 | |
| 2525-2 | 2 | 25 | 25 | 150 | 32.0 | 24.1 | 1.8 | - | 12 | B109-B118, B122 |
| 1616-2T17 | 2 | 16 | 16 | 110 | 37.0 | 15.1 | 1.8 | 4 | 17 | |
| 2020-2T17 | 2 | 20 | 20 | 125 | 37.0 | 19.1 | 1.8 | - | 17 | |
| 2525-2T17 | 2 | 25 | 25 | 150 | 37.0 | 24.1 | 1.8 | - | 17 | |
| TTER/L 1616-3T09 | 3 | 16 | 16 | 110 | 32.0 | 14.8 | 2.4 | 4 | 9 | |
| 2020-3T09 | 3 | 20 | 20 | 125 | 32.0 | 18.8 | 2.4 | - | 9 | |
| 2525-3T09 | 3 | 25 | 25 | 150 | 32.0 | 23.8 | 2.4 | - | 9 | |
| 1616-3 | 3 | 16 | 16 | 110 | 32.0 | 14.8 | 2.4 | 4 | 12 | |
| 2020-3 | 3 | 20 | 20 | 125 | 32.0 | 18.8 | 2.4 | - | 12 | |
| 2525-3 | 3 | 25 | 25 | 150 | 32.0 | 23.8 | 2.4 | - | 12 | |
| 1616-3T20 | 3 | 16 | 16 | 110 | 38.5 | 14.8 | 2.4 | - | 20 | |
| 2020-3T20 | 3 | 20 | 20 | 125 | 38.5 | 18.8 | 2.4 | - | 20 | |
| 2525-3T20 | 3 | 25 | 25 | 150 | 38.5 | 23.8 | 2.4 | - | 20 | |
| 2525-3T25 | 3 | 25 | 25 | 150 | 44.5 | 23.8 | 2.4 | - | 25 | |
| 3232-3T20 | 3 | 32 | 32 | 170 | 38.5 | 30.8 | 2.4 | - | 20 | |
| TTER/L 1616-4T10 | 4 | 16 | 16 | 110 | 32.0 | 14.5 | 3.0 | 4 | 10 | |
| 2020-4T10 | 4 | 20 | 20 | 125 | 32.0 | 18.5 | 3.0 | - | 10 | |
| 2525-4T10 | 4 | 25 | 25 | 150 | 32.0 | 23.5 | 3.0 | - | 10 | |
| 1616-4 | 4 | 16 | 16 | 110 | 33.0 | 14.5 | 3.0 | 4 | 15 | |
| 2020-4 | 4 | 20 | 20 | 125 | 33.0 | 18.5 | 3.0 | - | 15 | |
| 2525-4 | 4 | 25 | 25 | 150 | 33.0 | 23.5 | 3.0 | - | 15 | |
| 1616-4T25 | 4 | 16 | 16 | 110 | 45.0 | 14.5 | 3.0 | - | 25 | |
| 2020-4T25 | 4 | 20 | 20 | 125 | 45.0 | 18.5 | 3.0 | - | 25 | |
| 2525-4T25 | 4 | 25 | 25 | 150 | 45.0 | 23.5 | 3.0 | - | 25 | |
| 2525-4T30 | 4 | 25 | 25 | 150 | 51.0 | 23.5 | 3.0 | - | 30 | |
| 3232-4T25 | 4 | 32 | 32 | 170 | 45.0 | 30.5 | 3.0 | - | 25 | |
| TTER/L 2020-5T12 | 5 | 20 | 20 | 125 | 37.0 | 18.1 | 4.0 | - | 12 | |
| 2525-5T12 | 5 | 25 | 25 | 150 | 37.0 | 23.1 | 4.0 | - | 12 | |
| 2020-5 | 5 | 20 | 20 | 125 | 37.0 | 18.1 | 4.0 | - | 20 | |
| 2525-5 | 5 | 25 | 25 | 150 | 37.0 | 23.1 | 4.0 | - | 20 | |
| 2525-5T32 | 5 | 25 | 25 | 150 | 56.0 | 23.0 | 4.0 | - | 32 | |
| 3232-5T20 | 5 | 32 | 32 | 170 | 39.0 | 30.0 | 4.0 | - | 20 | |
| 3232-5T32 | 5 | 32 | 32 | 170 | 56.0 | 30.0 | 4.0 | - | 32 | |

Holders for external turning and grooving

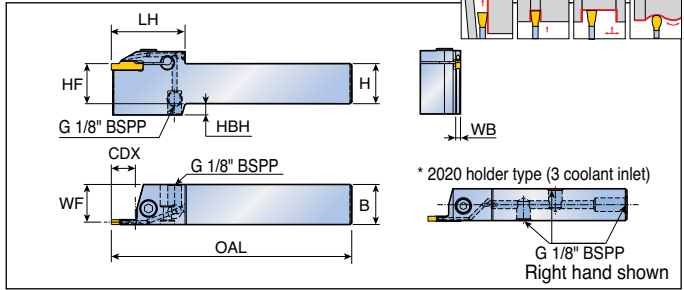


| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|--------------------------|------------------|----------------|----|-----|----|------|------|-----|-----|-----------------|
| | | H(HF) | B | OAL | LH | WF | WB | HBH | CDX | |
| TTER/L 2020-6T12 | 6 | 20 | 20 | 125 | 37 | 17.6 | 5.0 | - | 12 | TDC / J / T / A |
| 2525-6T12 | 6 | 25 | 25 | 150 | 37 | 22.6 | 5.0 | 7 | 12 | TDXU / XT / XY |
| 2020-6 | 6 | 20 | 20 | 125 | 41 | 17.6 | 5.0 | - | 20 | TSC / J / A |
| 2525-6 | 6 | 25 | 25 | 150 | 41 | 22.6 | 5.0 | 7 | 20 | TDUF / TDV |
| 2525-6T32 | 6 | 25 | 25 | 150 | 56 | 22.5 | 5.0 | 7 | 32 | |
| 3232-6T20 | 6 | 32 | 32 | 170 | 41 | 29.5 | 5.0 | - | 20 | B109-B118,B122 |
| 3232-6T25 | 6 | 32 | 32 | 170 | 46 | 29.5 | 5.0 | - | 25 | |
| 3232-6T32 | 6 | 32 | 32 | 170 | 56 | 29.5 | 5.0 | - | 32 | |
| TTER/L 2525-8T16 | 8 | 25 | 25 | 150 | 47 | 22.1 | 6.0 | 7 | 16 | |
| 2525-8 | 8 | 25 | 25 | 150 | 47 | 22.1 | 6.0 | 7 | 25 | |
| 3232-8 | 8 | 32 | 32 | 170 | 47 | 29.1 | 6.0 | - | 25 | |
| 2525-8T36 | 8 | 25 | 25 | 150 | 60 | 22.1 | 6.0 | 7 | 36 | |
| 3232-8T36 | 8 | 32 | 32 | 170 | 60 | 29.1 | 6.0 | - | 36 | |
| TTER/L 2525-10T25 | 10 | 25 | 25 | 150 | 50 | 21.1 | 7.85 | 7 | 25 | |
| 3232-10T25 | 10 | 32 | 32 | 170 | 50 | 28.1 | 7.85 | - | 25 | |
| 4040-10T25 | 10 | 40 | 40 | 200 | 50 | 36.1 | 7.85 | - | 25 | |

Spare parts

| Designation | Screw | Wrench | | |
|---------------------------|---------------|--------|--|--|
| | | | | |
| TTER/L 1616-2/3 | SH M5x0.8x16 | L-W 4 | | |
| TTER/L 2020-2/3 | SH M5x0.8x20 | L-W 4 | | |
| TTER/L 2525-2/3 | SH M5x0.8x25 | L-W 4 | | |
| TTER/L 3232-3 | SH M5x0.8x25 | L-W 4 | | |
| TTER/L 1616-4/5 | SH M6x1x16 | L-W 5 | | |
| TTER/L 2020-4/5 | SH M6x1x20 | L-W 5 | | |
| TTER/L 2525-4/5 | SH M6x1x25 | L-W 5 | | |
| TTER/L 3232-4/5 | SH M6x1x25 | L-W 5 | | |
| TTER/L 2020-6 | SH M8x1.25x20 | L-W 6 | | |
| TTER/L 2525-6/8 | SH M8x1.25x25 | L-W 6 | | |
| TTER/L 3232-6/8/10 | SH M8x1.25x25 | L-W 6 | | |
| TTER/L 4040-10 | SH M8x1.25x25 | L-W 6 | | |

Holders for turning and grooving with high pressure coolant



| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert | |
|----------------------------|------------------|----------------|----|-----|----|------|-----|-----|-----|---------------------|--|
| | | H(HF) | B | OAL | LH | WF | WB | HBH | CDX | | |
| TTER/L 2020-2T12-TB | 2 | 20 | 20 | 125 | 43 | 19.1 | 1.8 | - | 12 | TDC / J / T / A | |
| 2525-2T12-TB | 2 | 25 | 25 | 150 | 43 | 24.1 | 1.8 | - | 12 | TDXU / XT / XY | |
| 2020-3-TB | 3 | 20 | 20 | 125 | 43 | 18.8 | 2.4 | - | 12 | TSC / J / A | |
| 2020-4-TB | 4 | 20 | 20 | 125 | 46 | 18.5 | 3.0 | - | 15 | TDUF / TDV | |
| 2525-3-TB | 3 | 25 | 25 | 150 | 43 | 23.8 | 2.4 | - | 12 | B109-B118, B122 | |
| 2525-4-TB | 4 | 25 | 25 | 150 | 46 | 23.5 | 3.0 | - | 15 | | |
| 2525-5-TB | 5 | 25 | 25 | 150 | 49 | 23.1 | 4.0 | - | 20 | | |
| 2525-6-TB | 6 | 25 | 25 | 150 | 52 | 22.6 | 5.0 | 7 | 20 | | |
| 2525-8-TB | 8 | 25 | 25 | 150 | 58 | 22.1 | 6.0 | 7 | 25 | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

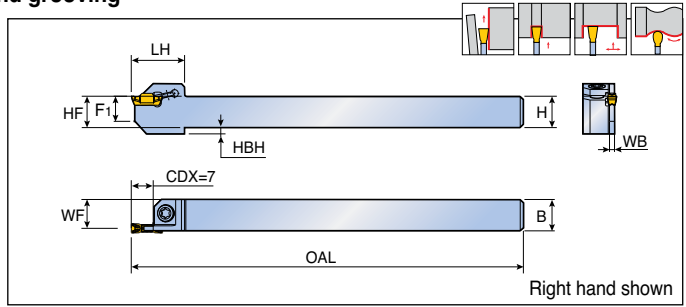
| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|----------------------------|--------------------------|---------------------------|---------------------------|
| TTER/L 2020-2T12-TB | 5-7 | 7-9 | 8-10 |
| 2525-2T12-TB | 5-7 | 7-9 | 8-10 |
| 2020-3-TB | 5-7 | 7-9 | 9-11 |
| 2020-4-TB | 6-8 | 10-12 | 12-14 |
| 2525-3-TB | 6-8 | 8-10 | 10-12 |
| 2525-4-TB | 10-12 | 14-16 | 16-18 |
| 2525-5-TB | 13-16 | 19-21 | 22-24 |
| 2525-6-TB | 13-16 | 19-21 | 22-24 |
| 2525-8-TB | 13-16 | 19-21 | 22-24 |

• Please refer to B102 page for COOL-BURST accessories

Spare parts

| Designation | Screw | Plug | | Wrench |
|-----------------------------|---------------|---------------|---------------------|--------------|
| | | | | |
| TTER/L 2020-2T12-TB | SH M5x0.8x20 | PLG G1/8-L6.5 | - | L-W 4, L-W 5 |
| TTER/L 2525-2T12-TB | SH M5x0.8x20 | - | PLG G1/8-T8.0-L12.3 | L-W 4, L-W 5 |
| TTER/L 2020-3-TB | SH M5x0.8x20 | PLG G1/8-L6.5 | - | L-W 4, L-W 5 |
| TTER/L 2020-4-TB | SH M6x1.0x20 | PLG G1/8-L6.5 | - | L-W 5 |
| TTER/L 2525-3-TB | SH M5x0.8x20 | - | PLG G1/8-T8.0-L12.3 | L-W 4, L-W 5 |
| TTER/L 2525-4 / 5-TB | SH M6x1.0x20 | - | PLG G1/8-T8.0-L12.3 | L-W 5 |
| TTER/L 2525-6 / 7-TB | SH M8x1.25x20 | - | PLG G1/8-T8.0-L12.3 | L-W 5, L-W 6 |

Holders for external turning and grooving

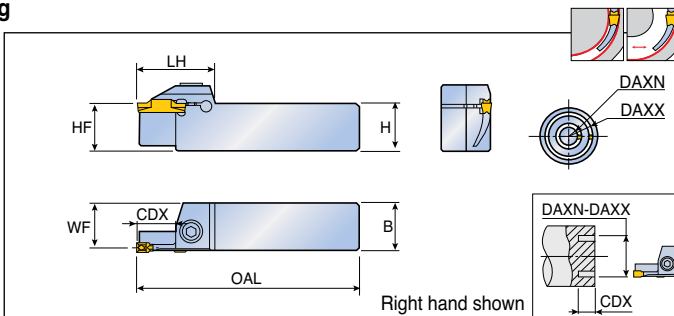


| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|-------------------------|------------------|----------------|----|-----|----|------|-----|----|-----|--------------------------|
| | | H(HF) | B | OAL | LH | WF | WB | F1 | HBH | |
| TTSER/L 1010-2T7 | 2 | 10 | 10 | 125 | 17 | 9.2 | 1.6 | 8 | 2 | TDIM / TDIP B120-B121 |
| 1212-2T7 | 2 | 12 | 12 | 125 | 17 | 11.2 | 1.6 | 8 | - | |
| 1616-2T7 | 2 | 16 | 16 | 125 | 20 | 15.2 | 1.6 | 11 | - | |
| 2020-2T7 | 2 | 20 | 20 | 125 | 20 | 19.2 | 1.6 | 14 | - | |
| 2525-2T7 | 2 | 25 | 25 | 125 | 20 | 24.2 | 1.6 | 18 | - | |
| 1010-3T7 | 3 | 10 | 10 | 125 | 17 | 8.8 | 2.4 | 8 | 2 | |
| 1212-3T7 | 3 | 12 | 12 | 125 | 17 | 10.8 | 2.4 | 8 | - | |
| 1616-3T7 | 3 | 16 | 16 | 125 | 20 | 14.8 | 2.4 | 11 | - | |
| 2020-3T7 | 3 | 20 | 20 | 125 | 20 | 18.8 | 2.4 | 14 | - | |
| 2525-3T7 | 3 | 25 | 25 | 125 | 20 | 23.8 | 2.4 | 18 | - | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Spare parts

| Designation | Screw | Wrench | | |
|----------------|-----------|--------|--|--|
| | | | | |
| TTSER/L | TS 400971 | T 15 | | |
| | | | | |
| | | | | |

Holders for deep face grooving



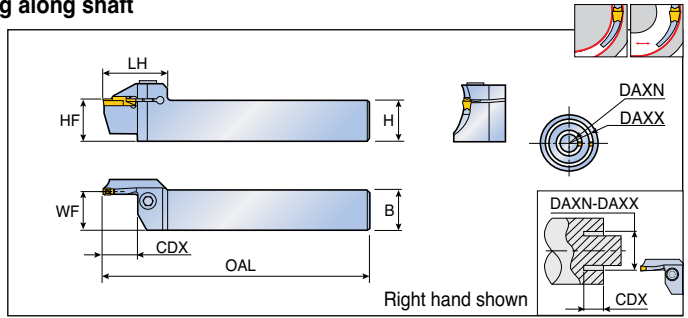
| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|-----------------------|------------------|----------------|----|-----|----|------|-----|------|------|--|
| | | H(HF) | B | OAL | LH | WF | CDX | DAXN | DAXX | |
| TTFR/L 25-30-3 | 3 | 25 | 25 | 150 | 32 | 24.0 | 10 | 24 | 35 | TDC / J / T TDXU / XT / XY / FT TSC / J TDUF / TDV B109-B119 |
| 25-35-3 | 3 | 25 | 25 | 150 | 32 | 24.0 | 10 | 29 | 40 | |
| 25-40-3 | 3 | 25 | 25 | 150 | 32 | 24.0 | 10 | 34 | 50 | |
| 25-50-3 | 3 | 25 | 25 | 150 | 32 | 24.0 | 15 | 44 | 60 | |
| 25-60-3 | 3 | 25 | 25 | 150 | 32 | 24.0 | 15 | 54 | 85 | |
| 25-30-4 | 4 | 25 | 25 | 150 | 33 | 23.6 | 12 | 22 | 40 | |
| 25-40-4 | 4 | 25 | 25 | 150 | 33 | 23.6 | 15 | 32 | 50 | |
| 25-50-4 | 4 | 25 | 25 | 150 | 33 | 23.6 | 15 | 42 | 60 | |
| 25-60-4 | 4 | 25 | 25 | 150 | 33 | 23.6 | 15 | 52 | 85 | |
| 25-60-5 | 5 | 25 | 25 | 150 | 41 | 23.1 | 20 | 50 | 80 | |
| 25-80-5 | 5 | 25 | 25 | 150 | 41 | 23.1 | 20 | 70 | 110 | |
| 25-110-5 | 5 | 25 | 25 | 150 | 41 | 23.1 | 20 | 110 | 150 | |
| 25-150-5 | 5 | 25 | 25 | 150 | 41 | 23.1 | 20 | 140 | 200 | |
| 25-60-6 | 6 | 25 | 25 | 150 | 41 | 22.6 | 20 | 48 | 85 | |
| 25-85-6 | 6 | 25 | 25 | 150 | 41 | 22.6 | 20 | 73 | 150 | |
| 25-150-6 | 6 | 25 | 25 | 150 | 41 | 22.6 | 20 | 138 | 250 | |
| 25-250-6 | 6 | 25 | 25 | 150 | 41 | 22.6 | 20 | 250 | ∞ | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

• Please check insert min. dia for face grooving [B70](#) page

Spare parts

| Designation | Screw | Wrench | | |
|--------------------|---------------|--------|--|--|
| | | | | |
| TTFR/L...-3 | SH M5x0.8x25 | L-W 4 | | |
| TTFR/L...-4 | SH M6x1x25 | L-W 5 | | |
| TTFR/L...-5 | SH M8X1.25X25 | L-W 5 | | |
| TTFR/L...-6 | SH M8X1.25X25 | L-W 5 | | |

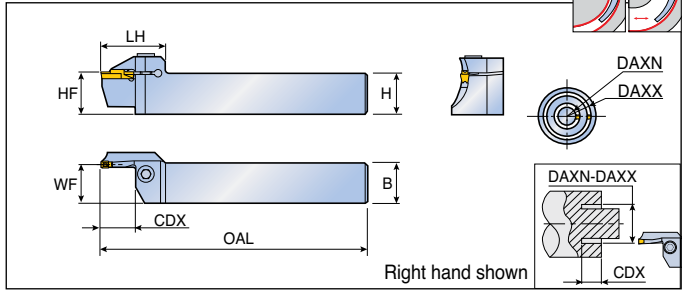
Holders for deep face grooving along shaft



| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|--------------------------------|------------------|----------------|----|-----|----|------|-----|------|------|---|
| | | H(HF) | B | OAL | LH | WF | CDX | DAXN | DAXX | |
| TTFR/L 20-21-30-3T10 RN | 3 | 20 | 20 | 140 | 31 | 19.0 | 10 | 21 | 30 | TDC / J / T TDXU / XT / XY TDFT TSC / J TDFU / TDV B109-B119 |
| 20-24-35-3T10 RN | 3 | 20 | 20 | 140 | 31 | 19.0 | 10 | 24 | 35 | |
| 20-29-40-3T10 RN | 3 | 20 | 20 | 140 | 31 | 19.0 | 10 | 29 | 40 | |
| 20-34-50-3T10 RN | 3 | 20 | 20 | 140 | 31 | 19.0 | 10 | 34 | 50 | |
| 20-44-70-3T15 RN | 3 | 20 | 20 | 140 | 35 | 19.0 | 15 | 44 | 70 | |
| 20-64-100-3T15 RN | 3 | 20 | 20 | 140 | 35 | 19.0 | 15 | 64 | 100 | |
| 25-30-3 RN | 3 | 25 | 25 | 150 | 38 | 24.0 | 10 | 24 | 35 | |
| 25-35-3 RN | 3 | 25 | 25 | 150 | 38 | 24.0 | 10 | 29 | 40 | |
| 25-40-3 RN | 3 | 25 | 25 | 150 | 38 | 24.0 | 10 | 34 | 50 | |
| 25-50-3 RN | 3 | 25 | 25 | 150 | 38 | 24.0 | 15 | 44 | 70 | |
| 25-70-3 RN | 3 | 25 | 25 | 150 | 38 | 24.0 | 15 | 64 | 100 | |
| 20-19-30-4T10 RN | 4 | 20 | 20 | 140 | 31 | 18.6 | 10 | 19 | 30 | |
| 20-22-36-4T10 RN | 4 | 20 | 20 | 140 | 31 | 18.6 | 10 | 22 | 36 | |
| 20-28-42-4T16 RN | 4 | 20 | 20 | 140 | 36 | 18.6 | 16 | 28 | 42 | |
| 20-34-50-4T16 RN | 4 | 20 | 20 | 140 | 36 | 18.6 | 16 | 34 | 50 | |
| 20-42-70-4T16 RN | 4 | 20 | 20 | 140 | 36 | 18.6 | 16 | 42 | 70 | |
| 20-62-120-4T16 RN | 4 | 20 | 20 | 140 | 36 | 18.6 | 16 | 62 | 120 | |
| 20-112-200-4T16 RN | 4 | 20 | 20 | 140 | 36 | 18.6 | 16 | 112 | 200 | |
| 25-30-4 RN | 4 | 25 | 25 | 150 | 39 | 23.6 | 10 | 22 | 36 | |
| 25-36-4 RN | 4 | 25 | 25 | 150 | 39 | 23.6 | 20 | 28 | 42 | |
| 25-42-4 RN | 4 | 25 | 25 | 150 | 39 | 23.6 | 20 | 34 | 50 | |
| 25-50-4 RN | 4 | 25 | 25 | 150 | 39 | 23.6 | 20 | 42 | 70 | |
| 25-70-4 RN | 4 | 25 | 25 | 150 | 39 | 23.6 | 20 | 62 | 120 | |
| 25-120-4 RN | 4 | 25 | 25 | 150 | 39 | 23.6 | 20 | 112 | 200 | |
| 25-200-4 RN | 4 | 25 | 25 | 150 | 39 | 23.6 | 20 | 200 | ∞ | |
| 25-60-5T15 RN | 5 | 25 | 25 | 150 | 41 | 23.1 | 15 | 50 | 80 | |
| 25-60-5 RN | 5 | 25 | 25 | 150 | 49 | 23.1 | 25 | 50 | 80 | |
| 25-80-5T15 RN | 5 | 25 | 25 | 150 | 41 | 23.1 | 15 | 70 | 110 | |
| 25-80-5 RN | 5 | 25 | 25 | 150 | 49 | 23.1 | 25 | 70 | 110 | |
| 25-110-5 RN | 5 | 25 | 25 | 150 | 49 | 23.1 | 25 | 100 | 150 | |
| 25-150-5 RN | 5 | 25 | 25 | 150 | 49 | 23.1 | 25 | 140 | 200 | |
| 25-200-5 RN | 5 | 25 | 25 | 150 | 49 | 23.1 | 25 | 200 | ∞ | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

• Please check insert min. dia for face grooving [B70](#) page

Holders for deep face grooving along shaft



| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|--------------------------|------------------|----------------|----|-----|----|------|-----|------|------|---------------------|
| | | H(HF) | B | OAL | LH | WF | CDX | DAXN | DAXX | |
| TTFR/L 25-60-6 RN | 6 | 25 | 25 | 150 | 49 | 22.6 | 25 | 48 | 70 | TDC / J / T |
| 25-70-6 RN | 6 | 25 | 25 | 150 | 49 | 22.6 | 25 | 58 | 100 | TDXU / XT / XY / FT |
| 25-100-6 RN | 6 | 25 | 25 | 150 | 49 | 22.6 | 25 | 88 | 180 | TSC / J |
| 25-180-6 RN | 6 | 25 | 25 | 150 | 49 | 22.6 | 25 | 168 | 400 | TDUF / TDV |
| 25-400-6 RN | 6 | 25 | 25 | 150 | 49 | 22.6 | 25 | 400 | ∞ | B109-B119 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

• Please check insert min. dia for face grooving [B70](#) page

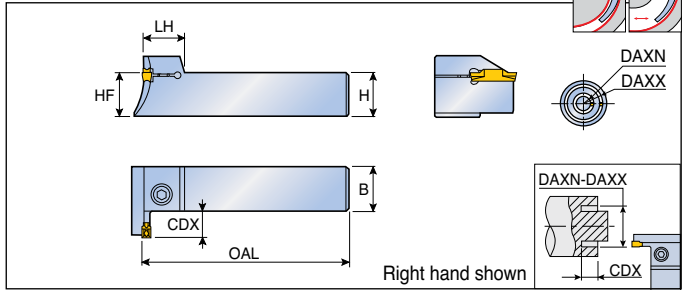
Insert initial min. Dia (Dmin) for face grooving

| Machining | Insert | Size (mm) | Min. dia. (mm) | Insert | Size (mm) | Min. dia. (mm) |
|---|-----------------------------------|-----------|----------------|--|-----------|----------------|
| Facing Min. dia. of face machining | TDJ/C TDUF / TDV | 3 | 54 | TDT RU | 3 | 41 |
| | | 4 | 34 | | 4 | 36 |
| | | 5 | 49 | | 5 | 54 |
| | | 6 | 46 | | 6 | 54 |
| | TDT | 3 | 44 | TDXU TDXT TDXY TDFT | 3 | 18 |
| | | 4 | 42 | | 4 | 18 |
| 5 | | 50 | 5 | | 20 | |
| 6 | | 48 | 6 | | 18 | |

Spare parts

| Designation | Screw | Wrench | | |
|---------------------------|---------------|--------|--|--|
| | | | | |
| TTFR/L 20...RN | SH M6x1x20 | L-W 5 | | |
| TTFR/L 25...3/4 RN | SH M6x1x25 | L-W 5 | | |
| TTFR/L 25...5/6 RN | SH M8x1.25x25 | L-W 6 | | |

Perpendicular type holders for deep face grooving



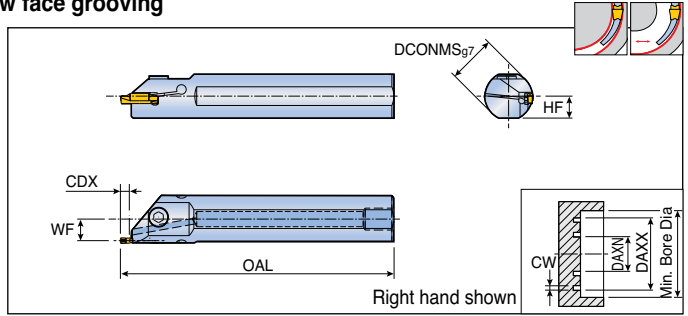
| Designation | Insert seat size | Dimension (mm) | | | | | | | Insert |
|------------------------|------------------|----------------|----|-----|------|-----|------|------|--|
| | | H(HF) | B | OAL | LH | CDX | DAXN | DAXX | |
| TTFPR/L 25-30-3 | 3 | 25 | 25 | 150 | 18.0 | 10 | 24 | 35 | TDC / J / T TDXU / XT / XY / FT TSC / J TDUF / TDV B109-B119 |
| 25-35-3 | 3 | 25 | 25 | 150 | 18.0 | 10 | 29 | 40 | |
| 25-40-3 | 3 | 25 | 25 | 150 | 18.0 | 10 | 34 | 50 | |
| 25-50-3 | 3 | 25 | 25 | 150 | 18.0 | 15 | 44 | 60 | |
| 25-60-3 | 3 | 25 | 25 | 150 | 18.0 | 15 | 54 | 85 | |
| 25-30-4 | 4 | 25 | 25 | 150 | 18.5 | 12 | 22 | 40 | |
| 25-40-4 | 4 | 25 | 25 | 150 | 18.5 | 15 | 32 | 50 | |
| 25-50-4 | 4 | 25 | 25 | 150 | 18.5 | 15 | 42 | 60 | |
| 25-60-4 | 4 | 25 | 25 | 150 | 18.5 | 15 | 52 | 85 | |
| 25-60-5 | 5 | 25 | 25 | 150 | 22.0 | 20 | 50 | 80 | |
| 25-80-5 | 5 | 25 | 25 | 150 | 22.0 | 20 | 70 | 110 | |
| 25-110-5 | 5 | 25 | 25 | 150 | 22.0 | 20 | 100 | 150 | |
| 25-150-5 | 5 | 25 | 25 | 150 | 22.0 | 20 | 140 | 200 | |
| 25-200-5 | 5 | 25 | 25 | 150 | 22.0 | 20 | 200 | ∞ | |
| 25-60-6 | 6 | 25 | 25 | 150 | 22.0 | 20 | 48 | 85 | |
| 25-85-6 | 6 | 25 | 25 | 150 | 22.0 | 20 | 73 | 150 | |
| 25-150-6 | 6 | 25 | 25 | 150 | 22.0 | 20 | 138 | 250 | |
| 25-250-6 | 6 | 25 | 25 | 150 | 22.0 | 20 | 250 | ∞ | |
| | | | | | | | | | |
| | | | | | | | | | |

• Please check insert min. dia for face grooving [B70](#) page

Spare parts

| Designation | Screw | Wrench | | |
|---------------------|---------------|--------|--|--|
| | | | | |
| TTFPR/L...-3 | SH M5x0.8x25 | L-W 4 | | |
| TTFPR/L...-4 | SH M6x1x25 | L-W 5 | | |
| TTFPR/L...-5 | SH M8x1.25x25 | L-W 6 | | |
| TTFPR/L...-6 | SH M8x1.25x25 | L-W 6 | | |

Internal boring bars for shallow face grooving

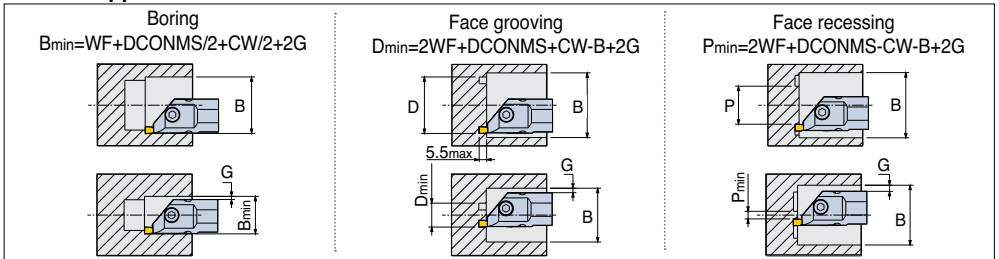


| Designation | Insert seat size | Dimension (mm) | | | | | Insert |
|---------------------------|------------------|----------------|-----|------|------|-----|---------------------|
| | | DCONMS | OAL | WF | HF | CDX | |
| TGIFR/L 25-4C-T5.5 | 3, 4 | 25 | 200 | 11.3 | 11.5 | 5.5 | TDC / J / T |
| 32-4C-T5.5 | 3, 4 | 32 | 250 | 14.8 | 15.0 | 5.5 | TDXU / XT / XY / FT |
| 25-6C-T5.5 | 5, 6 | 25 | 200 | 10.3 | 11.5 | 5.5 | TSC / J |
| 32-6C-T5.5 | 5, 6 | 32 | 250 | 13.8 | 15.0 | 5.5 | TDUF / TDV |
| | | | | | | | B109-B119 |

• Please check insert min. dia for face grooving [B70](#) page

| CW | Min. bore dia | | DAXN | | | | DAXX |
|----------|---------------|------|-----------|--------------------|-----|--------|------|
| | d=25 | d=32 | TDC / TDJ | TDFT / TDXU / TDXT | TDT | TDT-RU | |
| 3 | 26.3 | 33.3 | 54 | 18 | 44 | 41 | ∞ |
| 4 | 26.8 | 33.8 | 34 | 18 | 42 | 36 | |
| 5 | 26.3 | 33.3 | 49 | 20 | 50 | 54 | |
| 6 | 26.8 | 33.8 | 46 | 18 | 48 | 54 | |

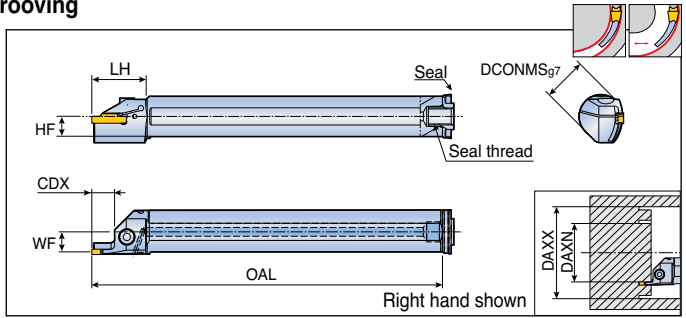
TGIFR/L Application



Spare parts

| Designation | Screw | Wrench | Seal | |
|-------------------|------------|--------|---------------|--|
| TGIFR/L 25 | SH M6x1x16 | L-W 5 | PL 25 (R1/8") | |
| TGIFR/L 32 | SH M6x1x16 | L-W 5 | PL 32 (R1/8") | |
| | | | | |

Internal boring bars for face grooving



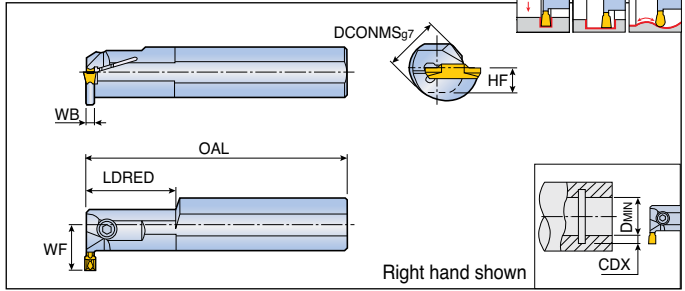
| Designation | Insert seat size | Dimension (mm) | | | | | | | | | Insert |
|------------------------------|------------------|----------------|-----|----|------|------|-----|------|------|----------------|--------|
| | | DCONMS | OAL | LH | WF | HF | CDX | DAXN | DAXX | | |
| TTFIR/L 25-3T12 20-33 | 3 | 25 | 200 | 31 | 11.5 | 11.5 | 12 | 20 | 33 | TDC / J / T | |
| 25-3T12 26-39 | 3 | 25 | 200 | 31 | 11.5 | 11.5 | 12 | 26 | 39 | TDXU / XT / XY | |
| 25-3T12 33-48 | 3 | 25 | 200 | 31 | 11.5 | 11.5 | 12 | 33 | 48 | TDF | |
| 25-3T12 42-60 | 3 | 25 | 200 | 31 | 11.5 | 11.5 | 12 | 42 | 60 | TSC / J | |
| 25-3T12 54-85 | 3 | 25 | 200 | 31 | 11.5 | 11.5 | 12 | 54 | 85 | TDUF / TDV | |
| 25-3T12 79-150 | 3 | 25 | 200 | 31 | 11.5 | 11.5 | 12 | 79 | 150 | B109-B119 | |
| 25-4T12 18-34 | 4 | 25 | 200 | 31 | 11.0 | 11.5 | 12 | 18 | 34 | | |
| 25-4T12 26-42 | 4 | 25 | 200 | 31 | 11.0 | 11.5 | 12 | 26 | 42 | | |
| 25-4T12 34-55 | 4 | 25 | 200 | 31 | 11.0 | 11.5 | 12 | 34 | 55 | | |
| 32-4T12 47-70 | 4 | 32 | 250 | 31 | 14.5 | 15.0 | 12 | 47 | 70 | | |
| 32-4T12 62-100 | 4 | 32 | 250 | 31 | 14.5 | 15.0 | 12 | 62 | 100 | | |
| 32-4T12 92-180 | 4 | 32 | 250 | 31 | 14.5 | 15.0 | 12 | 92 | 180 | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

• Please check insert min. dia for face grooving B70 page

Spare parts

| Designation | Screw | Wrench | Seal | |
|-------------------|--------------|--------|---------------|--|
| TTFIR/L 25 | SH M5x0.8x16 | L-W 4 | PL 25 (R1/8") | |
| TTFIR/L 32 | SH M5x0.8x16 | L-W 4 | PL 32 (R1/8") | |
| | | | | |
| | | | | |

Internal boring bars for turning and grooving



| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|--------------------|------------------|----------------|-----|-------|------|------|-----|-----|------|--|
| | | DCONMS | OAL | LDRED | WF | HF | WB | CDX | DMIN | |
| TTIR/L 16-2 | 2 | 16 | 125 | - | 16.5 | 7.5 | 1.8 | 8.5 | 25 | TDC / J / T TDXU / XT / XY / IT TSC / J TDUF / TDV B109-B120 |
| 20-2 | 2 | 20 | 160 | 40 | 15.8 | 9.0 | 1.6 | 6.0 | 25 | |
| 25-2 | 2 | 25 | 200 | 40 | 17.5 | 11.5 | 1.6 | 5.0 | 25 | |
| 32-2 | 2 | 32 | 250 | 60 | 20.8 | 14.0 | 1.5 | 4.7 | 31 | |
| 20-3 | 3 | 20 | 160 | 40 | 15.8 | 9.0 | 2.1 | 6.0 | 25 | |
| 25-3 | 3 | 25 | 200 | 40 | 17.5 | 11.5 | 2.1 | 5.1 | 25 | |
| 32-3 | 3 | 32 | 250 | 60 | 20.8 | 14.0 | 2.1 | 4.7 | 31 | |
| 20-4 | 4 | 20 | 160 | 40 | 15.8 | 9.0 | 2.9 | 6.0 | 25 | |
| 25-4 | 4 | 25 | 200 | 40 | 17.5 | 11.5 | 2.9 | 5.2 | 25 | |
| 32-4 | 4 | 32 | 250 | 60 | 20.8 | 14.0 | 2.9 | 4.7 | 31 | |

- Without "C" on the description: non-coolant hole type
- Please check insert min. dia for internal grooving [B76](#) page

| Machining | TDJ/C/UF/V | | TDT | | TDT RU | | TDXU / TDIT / TDXT / TDXY | |
|--|------------|----------------|-----------|----------------|-----------|----------------|---------------------------|----------------|
| | Size (mm) | Min. dia. (mm) | Size (mm) | Min. dia. (mm) | Size (mm) | Min. dia. (mm) | Size (mm) | Min. dia. (mm) |
| Internal grooving Min. dia. of internal machining | 2 | 40 | 3 | 40 | 2 | 41 | 2 | 24 |
| | 3 | 50 | 4 | 40 | 3 | 38 | 3 | 24 |
| | 4 | 50 | 5 | 50 | 4 | 38 | 4 | 21 |
| | 5 | 60 | 6 | 50 | 5 | 43 | 5 | 30 |
| | 6 | 60 | 8 | 62 | 6 | 46 | 6 | 31 |
| | 8 | 70 | | | 8 | 56 | 8 | 33 |

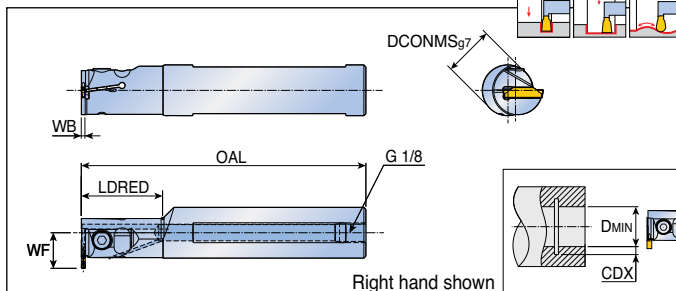
Spare parts

| Designation | Screw | Wrench | Seal * |
|-------------------------|--------------|------------|---------------|
| TTIR/L 16-2 | SH M5x0.8x10 | L-W 4 | PL 16 (M6) |
| TTIR/L 20-2/3/4 | SH M5x0.8x12 | L-W 4 | PL 20 (M6) |
| TTIR/L 25-2/3/4 | SH M5x0.8x16 | L-W 4 | PL 25 (R1/8") |
| TTIR/L 32-2/3/4 | SH M5x0.8x16 | L-W 4 | PL 32 (R1/8") |
| TTIR/L 40-3/4 | SH M5x0.8x16 | L-W 4 | PL 40 (R1/8") |
| TTIR/L 50-4 | SH M5x0.8x20 | L-W 4 | PL 40 (R1/8") |
| TTIR/L 25-5/6 | SH M6x1x16 | L-W 5 | PL 25 (R1/8") |
| TTIR/L 32-5/6 | SH M6x1x20 | L-W 5 | PL 32 (R1/8") |
| TTIR/L 40/50-5/6 | SH M6x1x25 | L-W 5 | PL 40 (R1/8") |

* For through coolant type only

TTIR/L-TB

Internal boring bars for turning and grooving with high pressure coolant



| Designation | Insert seat size | Dimension (mm) | | | | | | | Insert |
|--------------------------|------------------|----------------|-----|-------|------|-----|-----|------|----------------|
| | | DCONMS | OAL | LDRED | WF | WB | CDX | DMIN | |
| TTIR/L 20-2T06-TB | 2 | 20 | 120 | 40 | 17 | 1.8 | 6 | 27 | TDC / J / T |
| 25-2T06-TB | 2 | 25 | 150 | 40 | 19.5 | 1.8 | 6 | 29 | TDXU / XT / XY |
| 20-3T06-TB | 3 | 20 | 120 | 40 | 17 | 2.4 | 6 | 27 | TSC / J |
| 25-3T06-TB | 3 | 25 | 150 | 40 | 19.5 | 2.4 | 6 | 29 | TDUF / TDV |
| 32-3T10-TB | 3 | 32 | 150 | 60 | 27 | 2.4 | 10 | 40 | B109-B118 |
| TTIR 20-4T06-TB | 4 | 20 | 120 | 40 | 17 | 3 | 6 | 27 | |
| 25-4T06-TB | 4 | 25 | 150 | 40 | 19.5 | 3 | 6 | 29 | |
| 32-4T10-TB | 4 | 32 | 150 | 60 | 27 | 3 | 10 | 40 | |

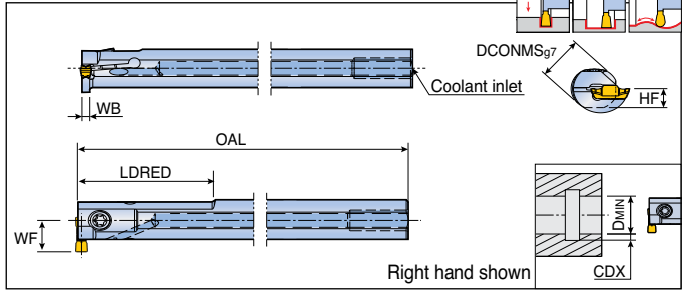
| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|--------------------------|--------------------------|---------------------------|---------------------------|
| TTIR/L 20-2T06-TB | 12-14 | 15-17 | 18-20 |
| 25-2T06-TB | 12-14 | 15-17 | 18-20 |
| 20-3T06-TB | 14-16 | 17-19 | 21-23 |
| 25-3T06-TB | 14-16 | 17-19 | 21-23 |
| 32-3T10-TB | 14-16 | 17-19 | 21-23 |
| TTIR 20-4T06-TB | 24-26 | 29-31 | 35-37 |
| 25-4T06-TB | 24-26 | 29-31 | 35-37 |
| 32-4T10-TB | 24-26 | 29-31 | 35-37 |

- Please refer to B102 page for COOL-BURST accessories
- Please check insert min. dia for internal grooving B76 page

Spare parts

| Designation | Screw | Wrench | | |
|------------------------|--------------|--------|--|--|
| | | | | |
| TTIR/L-20-TB | SH M5X0.8X12 | L-W 4 | | |
| TTIR/L-25/32-TB | SH M5X0.8X16 | L-W 4 | | |
| | | | | |

Internal boring bars for turning and grooving on small diameter

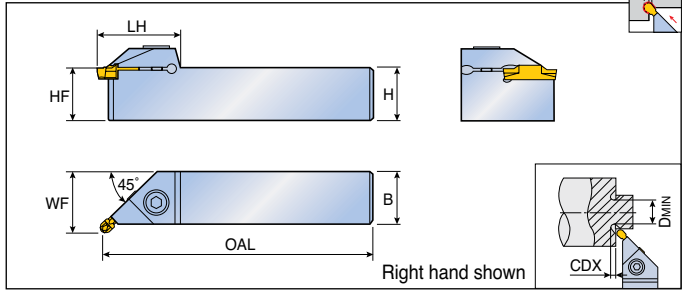


| Designation | Insert seat size | Dimension (mm) | | | | | | | | Coolant inlet | Insert |
|--------------------------|------------------|----------------|-----|-------|------|-----|-----|-----|------|---------------|-------------|
| | | DCONMS | OAL | LDRED | WF | HF | WB | CDX | DMIN | | |
| TTSIR/L 10-12.5-2 | 2 | 10 | 125 | 25 | 7.5 | 4.5 | 1.6 | 2.4 | 12.5 | Ø4 | TDIM / TDIP |
| 12-14-2 | 2 | 12 | 125 | 35 | 9.1 | 5.5 | 1.6 | 2.6 | 14.0 | Ø6 | B120-B121 |
| 16-12.5-2 | 2 | 16 | 150 | 20 | 10.5 | 7.5 | 1.6 | 2.4 | 12.5 | - | |
| 16-14-2 | 2 | 16 | 150 | 25 | 11.0 | 7.5 | 1.6 | 2.6 | 14.0 | - | |
| 16-16-2 | 2 | 16 | 150 | 40 | 11.0 | 7.5 | 1.6 | 3.0 | 16.0 | - | |
| 12-14-3 | 3 | 12 | 125 | 35 | 9.1 | 5.5 | 2.0 | 2.6 | 14.0 | Ø6 | |
| 16-12.5-3 | 3 | 16 | 150 | 20 | 10.5 | 7.5 | 2.0 | 2.4 | 12.5 | - | |
| 16-14-3 | 3 | 16 | 150 | 25 | 11.0 | 7.5 | 2.0 | 2.6 | 14.0 | - | |
| 16-16-3 | 3 | 16 | 150 | 40 | 11.0 | 7.5 | 2.0 | 3.0 | 16.0 | - | |
| 20-20-3 | 3 | 20 | 150 | 40 | 14.0 | 9.0 | 2.0 | 4.0 | 20.0 | - | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Spare parts

| Designation | Screw | Wrench | Seal | |
|-------------------------|-----------|--------|------------|--|
| TTSIR/L 10/12 | TS 40093I | T 15 | - | |
| TTSIR/L 16-12/14 | TS 40093I | T 15 | PL 16 (M6) | |
| TTSIR/L 16-16 | TS 50125I | T 20 | PL 16 (M6) | |
| TTSIR/L 20 | TS 50125I | T 20 | PL 20 (M6) | |

Holders for external undercutting



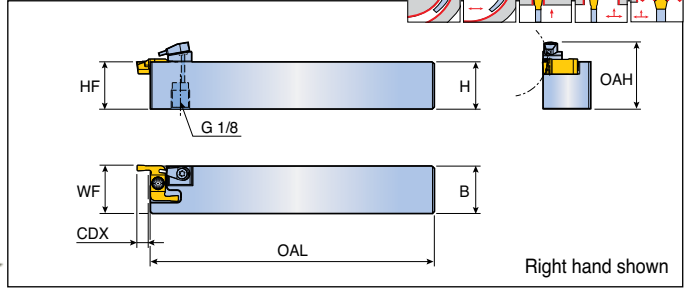
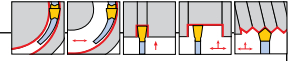
| Designation | Insert seat size | Dimension (mm) | | | | | | | | Insert |
|-----------------------|------------------|----------------|----|----|-----|----|------|-----|------|----------------|
| | | H | HF | B | OAL | LH | WF | CDX | DMIN | |
| TGEUR/L 1616-3 | 3 | 16 | 16 | 16 | 110 | 30 | 19.3 | 2.8 | 32 | TDT(Full R) |
| 2020-3 | 3 | 20 | 20 | 20 | 125 | 30 | 23.3 | 2.8 | 32 | TDIT(Full R) |
| 2525-3 | 3 | 25 | 25 | 25 | 150 | 30 | 28.3 | 2.8 | 32 | TDT-RU |
| 1616-4 | 4 | 16 | 16 | 16 | 110 | 31 | 19.5 | 2.8 | 32 | B118, B120 |
| 2020-4 | 4 | 20 | 20 | 20 | 125 | 31 | 23.5 | 2.8 | 32 | |
| 2525-4 | 4 | 25 | 25 | 25 | 150 | 31 | 28.5 | 2.8 | 32 | |
| 2525-6 | 5, 6 | 25 | 25 | 25 | 150 | 35 | 28.9 | 3.4 | 34 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Spare parts

| Designation | Screw | Wrench | | |
|-------------------------|--------------|--------|--|--|
| | | | | |
| TGEUR/L 1616-3 | SH M5x0.8x16 | L-W 4 | | |
| TGEUR/L 2020-3 | SH M5x0.8x20 | L-W 4 | | |
| TGEUR/L 2525-3 | SH M5x0.8x25 | L-W 4 | | |
| TGEUR/L 1616-4 | SH M6x1x16 | L-W 5 | | |
| TGEUR/L 2020-4 | SH M6x1x20 | L-W 5 | | |
| TGEUR/L 2525-4/6 | SH M6x1x25 | L-W 5 | | |

TXFR/L-TB

Holders for shallow face grooving and turning with high pressure coolant



| Designation | Dimension (mm) | | | | | | | Insert |
|---------------------|----------------|----|----|-----|------|------|-----|----------------------|
| | H | HF | B | OAL | OAH | WF | CDX | |
| TXFR 2525-TB | 25 | 25 | 25 | 150 | 35.5 | 25.5 | 6 | TDF(G)X ...R |
| TXFL 2525-TB | 25 | 25 | 25 | 150 | 35.5 | 25.5 | 6 | TDF(G)X ...L B123 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|---------------------|--------------------------|---------------------------|---------------------------|
| TXFL 2525-TB | 5-7 | 7-9 | 8-10 |
| TXFR 2525-TB | 5-7 | 7-9 | 8-10 |
| | | | |
| | | | |
| | | | |
| | | | |

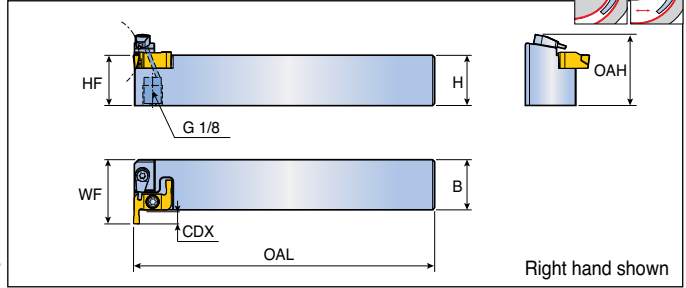
• Please refer to B102 page for COOL-BURST accessories

Spare parts

| Designation | Screw | Wrench | Cooling unit | |
|----------------|------------|--------|--------------|--|
| | | | | |
| TXFR-TB | TS 35110I | T 15 | S-CU-TB | |
| TXFL-TB | TS 35110IL | T 15 | S-CU-TB | |
| | | | | |
| | | | | |

TXFPR/L-TB

Perpendicular holders for shallow face grooving and turning with high pressure coolant



| Designation | Dimension (mm) | | | | | | | Insert |
|----------------------|----------------|----|----|-----|------|----|-----|-------------------|
| | H | HF | B | OAL | OAH | WF | CDX | |
| TXFPR 2525-TB | 25 | 25 | 25 | 150 | 35.5 | 32 | 6 | TDFX ...R |
| TXFPL 2525-TB | 25 | 25 | 25 | 150 | 35.5 | 32 | 6 | TDFX ...L B123 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

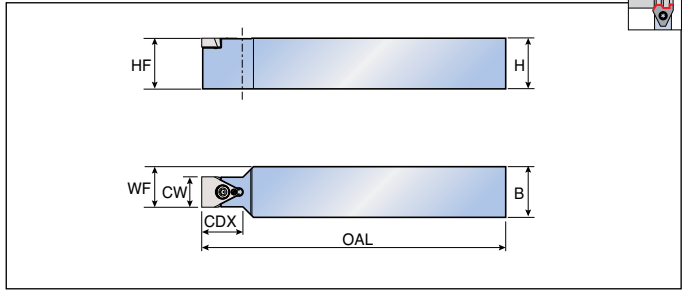
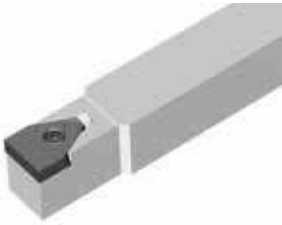
| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|----------------------|--------------------------|---------------------------|---------------------------|
| TXFPR 2525-TB | 5-7 | 7-9 | 8-10 |
| TXFPL 2525-TB | 5-7 | 7-9 | 8-10 |
| | | | |
| | | | |
| | | | |

• Please refer to B102 page for COOL-BURST accessories

Spare parts

| Designation | Screw | Wrench | Cooling unit | |
|-----------------|------------|------------|------------------|--|
| TXFPR-TB | TS 35110I | T 15 | S-CU-TB | |
| TXFPL-TB | TS 35110IL | T 15 | S-CU-TB | |
| | | | | |
| | | | | |

Holders for external wide grooving and profiling



| Designation | Dimension (mm) | | | | | | | Insert ⁽¹⁾ |
|-----------------------|----------------|----|----|-----|------|-----|----|-----------------------|
| | H | HF | B | OAL | WF | CDX | CW | |
| TTLEN 1212 K10 | 12 | 12 | 12 | 125 | 11.0 | 20 | 10 | TGUX B124 |
| 1616 K10 | 16 | 16 | 16 | 125 | 13.0 | 20 | 10 | |
| 2020 M10 | 20 | 20 | 20 | 150 | 15.0 | 20 | 10 | |
| 2525 M10 | 25 | 25 | 25 | 150 | 17.5 | 20 | 10 | |
| 1616 K15 | 16 | 16 | 16 | 125 | 15.5 | 20 | 15 | |
| 2020 M15 | 20 | 20 | 20 | 150 | 17.5 | 20 | 15 | |
| 2525 M15 | 25 | 25 | 25 | 150 | 20.0 | 20 | 15 | |
| 2020 K20 | 20 | 20 | 20 | 125 | 20.0 | 35 | 20 | |
| 2525 M20 | 25 | 25 | 25 | 150 | 22.5 | 35 | 20 | |
| 3232 P20 | 32 | 32 | 32 | 170 | 26.0 | 35 | 20 | |
| 2020 K25 | 20 | 20 | 20 | 125 | 22.5 | 35 | 25 | |
| 2525 M25 | 25 | 25 | 25 | 150 | 25.0 | 35 | 25 | |
| 3232 P25 | 32 | 32 | 32 | 170 | 28.5 | 35 | 25 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

• ⁽¹⁾ Designation of final insert will be different to the semi finished blank

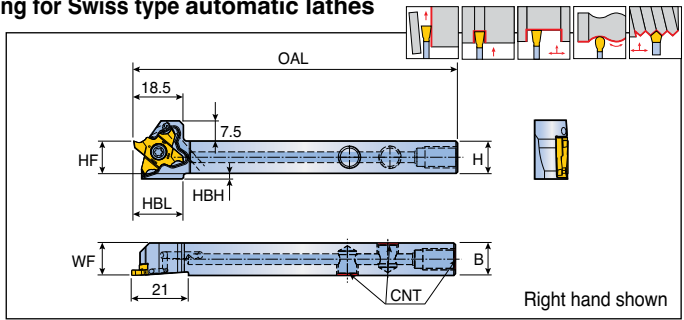
Spare parts

| Designation | Screw | Wrench | | |
|---------------------------------|------------|--------|--|--|
| | | | | |
| TTLEN ...K10/K15/M10/M15 | TS 40B100I | T 15 | | |
| TTLEN ...K20/M20/P20 | TS 45120I | T 20 | | |
| TTLEN ...K25/M25/P25 | TS 45120I | T 20 | | |
| | | | | |

TQHR/L-20-TB



Holders for parting and grooving for Swiss type automatic lathes with high pressure coolant



| Designation | Dimension (mm) | | | | | | | CNT | Insert |
|------------------------|----------------|----|----|----|-----|------|-----|----------|-------------------------------|
| | H | HF | B | WF | OAL | HBL | HBH | | |
| TQHR/L 12-20-TB | 12 | 12 | 12 | 12 | 120 | 18.5 | 2 | UNF 5/16 | TQS 20 TQJ 20 B143-B144 |
| 16-20-TB | 16 | 16 | 16 | 16 | 120 | - | - | UNF 5/16 | |
| 20-20-TB | 20 | 20 | 20 | 20 | 120 | - | - | G 1/8 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|-------------------|--------------------------|---------------------------|---------------------------|
| TQHR/L- TB | 9-11 | 11-13 | 12-14 |
| | | | |
| | | | |
| | | | |
| | | | |

• Please refer to B102 page for COOL-BURST accessories

Spare parts

| Designation | Screw | Plug | Wrench | |
|---------------------------|---------------------------|---------------|----------|----------|
| | | | | |
| TQHR/L 12/16-20-TB | TS 40A100L ⁽¹⁾ | PLG 5/16 UNF | T-1508/5 | L-W 5/32 |
| TQHR/L 20-20-TB | TS 40A100 ⁽²⁾ | PLG G1/8-L6.5 | T-1508/5 | L-W 5 |
| | | | | |
| | | | | |

• ⁽¹⁾ For TQHR • ⁽²⁾ For TQHL

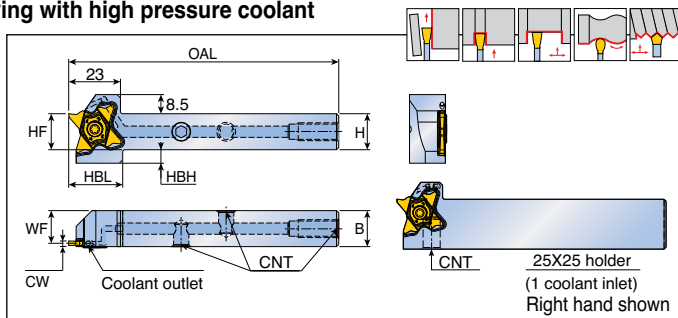
TQHR/L-27-TB



Holders for parting and grooving with high pressure coolant



COOLBURST



| Designation | Dimension (mm) | | | | | | | CNT | Insert |
|------------------------|----------------|----|-----|------|-----|-----|----------------|-----------|-----------|
| | H(HF) | B | OAL | WF | HBL | HBH | CW range | | |
| TQHR/L 12-27-TB | 12 | 12 | 120 | 10.5 | 24 | 8 | 0.5 ≤ CW < 5.3 | UNF 5/16 | TQ. 27 |
| 16-27-TB | 16 | 16 | 120 | 14.5 | 24 | 6 | 0.5 ≤ CW < 5.3 | UNF 5/16 | B145-B153 |
| 20-27-TB | 20 | 20 | 120 | 18.5 | 24 | 2 | 0.5 ≤ CW < 5.3 | G1/8 BSPP | |
| 25-27-TB | 25 | 25 | 135 | 23.5 | - | - | 0.5 ≤ CW < 5.3 | G1/8 BSPP | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| | 70 bar flow rate (ℓ/min) | 100 bar flow rate (ℓ/min) | 140 bar flow rate (ℓ/min) |
|-------------------|--------------------------|---------------------------|---------------------------|
| TQHR/L- TB | 9-11 | 11-13 | 12-14 |
| | | | |
| | | | |
| | | | |
| | | | |

• Please refer to B102 page for COOL-BURST accessories

Spare parts

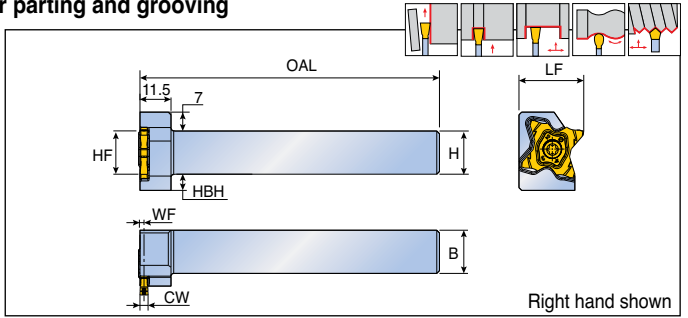
| Designation | Screw | Plug | Wrench | |
|------------------------|---|---------------|---------|----------|
| | | | | |
| TQHR/L 12-27-TB | TS 50125I ⁽¹⁾ TS 50125IL ⁽²⁾ | PLG 5/16 UNF | T 10/20 | L-W 5/32 |
| TQHR/L 16-27-TB | | PLG 5/16 UNF | T 10/20 | L-W 5/32 |
| TQHR/L 20-27-TB | | PLG G1/8-L6.5 | T 10/20 | L-W 5 |
| TQHR/L 25-27-TB | | - | T 10/20 | - |

• ⁽¹⁾ For TQHL • ⁽²⁾ For TQHR

TQHPR/L-27



Perpendicular type holders for parting and grooving



| Designation | Dimension (mm) | | | | | | | | Insert |
|------------------------------|----------------|----|----|-----|-----|----|-----|------------------------|-----------|
| | H | HF | B | WF | OAL | LF | HBH | CW range | |
| TQHPR/L 16-27 | 16 | 16 | 16 | 1.5 | 120 | 24 | 6 | $0.5 \leq CW < 5.3$ | TQ. 27 |
| 20-27 | 20 | 20 | 20 | 1.5 | 120 | 28 | 2 | $0.5 \leq CW < 5.3$ | B145-B153 |
| 25-27 | 25 | 25 | 25 | 1.5 | 135 | 33 | - | $0.5 \leq CW < 5.3$ | |
| 16-27-8⁽¹⁾ | 16 | 16 | 16 | 2.0 | 120 | 24 | 6 | $5.3 \leq CW \leq 8.2$ | TQS 27 |
| 20-27-8⁽¹⁾ | 20 | 20 | 20 | 2.0 | 120 | 28 | 2 | $5.3 \leq CW \leq 8.2$ | B150-B153 |
| 25-27-8⁽¹⁾ | 25 | 25 | 25 | 2.0 | 135 | 33 | - | $5.3 \leq CW \leq 8.2$ | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

⁽¹⁾ Only for TQS wider inserts from 5.3mm-8.2mm width

Spare parts

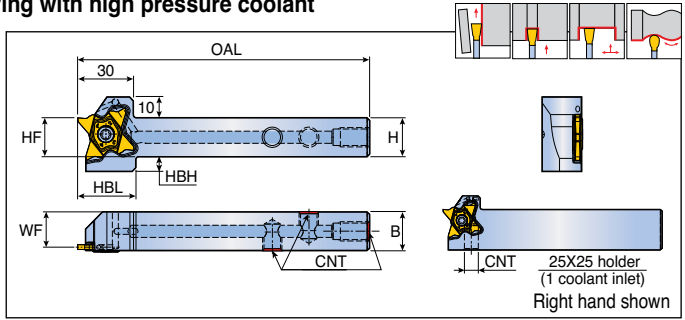
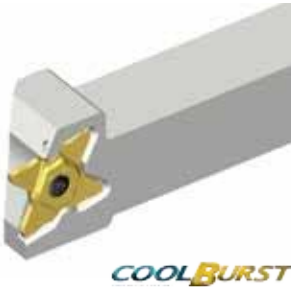
| Designation | Screw | Wrench | | |
|---------------------------|------------------------------|--------|--|--|
| | | | | |
| TQHPR/L 16/20/25 | TS 50125I ⁽¹⁾ | T 20 | | |
| | TS 50125IL ⁽²⁾ | T 20 | | |
| TQHPR/L 16/20/25-8 | TS 50170I-IC ⁽³⁾ | T 15 | | |
| | TS 50170IL-IC ⁽⁴⁾ | T 15 | | |

⁽¹⁾⁽³⁾ For right holder ⁽²⁾⁽⁴⁾ For left holder

TQHR/L-34-TB



Holders for parting and grooving with high pressure coolant



| Designation | Dimension (mm) | | | | | | | CNT | Insert |
|------------------------|----------------|----|----|------|-----|-----|-----|----------|-----------|
| | H | HF | B | WF | OAL | HBL | HBH | | |
| TQHR/L 16-34-TB | 16 | 16 | 16 | 14.2 | 135 | 32 | 12 | UNF 5/16 | TQC 34 |
| 20-34-TB | 20 | 20 | 20 | 18.2 | 135 | 32 | 8 | G 1/8 | |
| 25-34-TB | 25 | 25 | 25 | 23.2 | 135 | 32 | 3 | G 1/8 | B153-B154 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| | 70 bar flow rate (l/min) | 100 bar flow rate (l/min) | 140 bar flow rate (l/min) |
|----------------------|--------------------------|---------------------------|---------------------------|
| TQHR/L -34-TB | 9-11 | 11-13 | 12-14 |
| | | | |
| | | | |
| | | | |
| | | | |

• Please refer to B102 page for COOL-BURST accessories

Spare parts

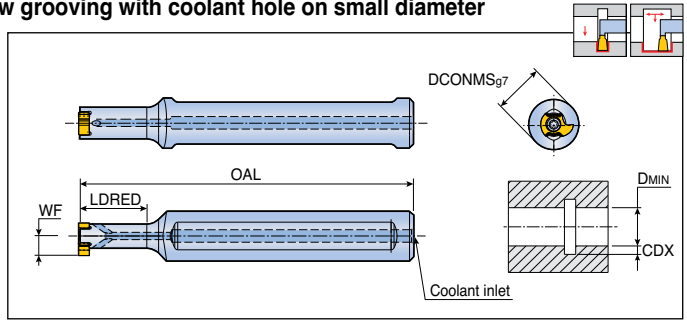
| Designation | Screw | Plug | Wrench | |
|------------------------|---|---------------|---------|----------|
| | | | | |
| TQHR/L 16-34-TB | TS 50125I ⁽¹⁾ TS 50125IL ⁽²⁾ | PLG 5/16 UNF | T 10/20 | L-W 5/32 |
| TQHR/L 20-34-TB | | PLG G1/8-L6.5 | T 10/20 | L-W 5 |
| TQHR/L 25-34-TB | | - | T 10/20 | - |

• ⁽¹⁾ For left holder, ⁽²⁾ For right holder

TMIHN



Internal boring bars for shallow grooving with coolant hole on small diameter



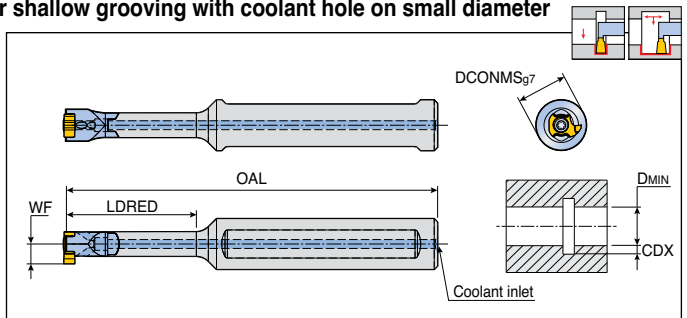
| Designation | Dimension (mm) | | | | | Coolant inlet | Insert |
|----------------------|----------------|-----|-------|-----|------|---------------|----------------|
| | DCONMS | OAL | LDRED | WF | DMIN | | |
| TMIHN 12-16-8 | 12 | 80 | 16 | 4.7 | 10 | Ø3 | TMIS 8 B155 |

• CDX: Refer to insert dimension

TMIHN-C



Internal carbide boring bars for shallow grooving with coolant hole on small diameter



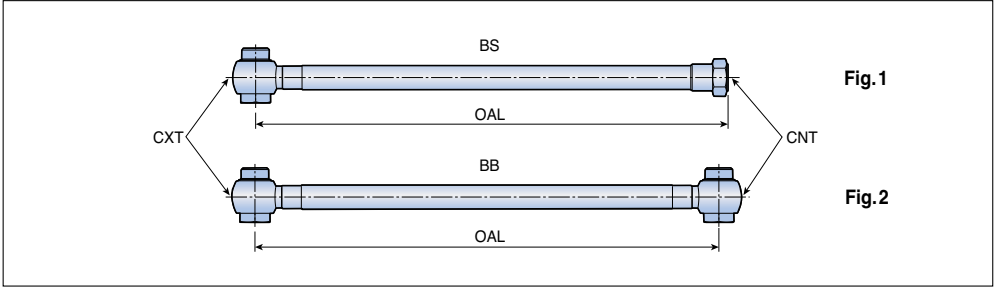
| Designation | Dimension (mm) | | | | | Coolant inlet | Insert |
|-----------------------|----------------|-----|-------|-----|------|---------------|--------|
| | DCONMS | OAL | LDRED | WF | DMIN | | |
| TMIHN 12C-24-8 | 12 | 92 | 24 | 4.7 | 10 | Ø2 | TMIS 8 |
| 12C-32-8 | 12 | 100 | 32 | 4.7 | 10 | Ø2 | B155 |

• CDX: Refer to insert dimension

Spare parts

| Designation | Screw | Wrench | | |
|-----------------|--------------|--------|--|--|
| TMIHN | TS 220521/HG | T 7 | | |
| TMIHN -C | TS 220521/HG | T 7 | | |
| | | | | |

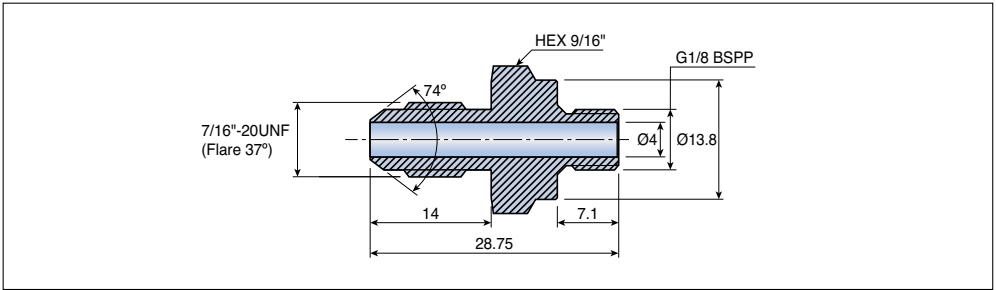
Hose



| Designation | Dimension | | | | Max.pressure (Bar) | Fig. |
|----------------------------------|-----------|---------------|--------------------------|--|--------------------|------|
| | OAL (mm) | CXT | CNT | | | |
| TB HOSE G1/8"-7/16"-200BS | 200 | G1/8"-28 BSPP | 7/16"-20 UNF (Flare 37°) | | 260 | 1 |
| G1/8"-7/16"-250BS | 250 | G1/8"-28 BSPP | 7/16"-20 UNF (Flare 37°) | | 260 | 1 |
| G1/8"-G1/8"-200BB | 200 | G1/8"-28 BSPP | G1/8"-28 BSPP | | 260 | 2 |
| G1/8"-G1/8"-250BB | 250 | G1/8"-28 BSPP | G1/8"-28 BSPP | | 260 | 2 |
| 5/16"-7/16"-200BS | 200 | 5/16"-24 UNF | 7/16"-20 UNF (Flare 37°) | | 200 | 1 |
| 5/16"-G1/8"-200BS | 200 | 5/16"-24 UNF | G1/8"-28 BSPP | | 200 | 1 |
| | | | | | | |
| | | | | | | |

• Hose is ordered separately

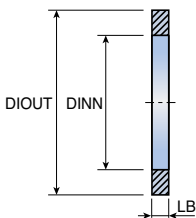
Adapter



| Designation |
|--------------------------------|
| TB NIPPLE G1/8-7/16 UNF |
| |
| |
| |
| |
| |
| |
| |
| |

• Adapter is ordered separately

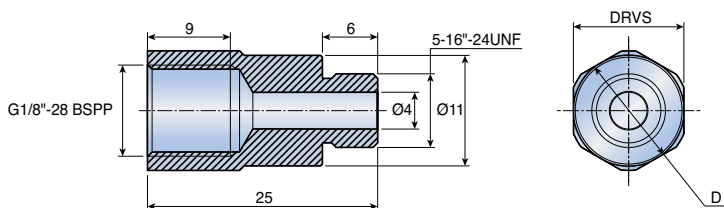
Seal washer



| Designation | Dimension (mm) | | |
|----------------------------|----------------|------|----|
| | DIOUT | DINN | LB |
| TB COPPER SEAL 1/8" | 15 | 10 | 1 |
| SEAL 5/16" | 12 | 8 | 1 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

- Seal washer is ordered separately

Connector



| Designation | Dimension (mm) | |
|--------------------------------|----------------|------|
| | D | DRVS |
| TB CONECTOR 5/16"-G1/8" | 13 | 12 |
| 5/16"-G1/8"-12 | 12 | 11 |
| | | |
| | | |
| | | |
| | | |
| | | |

- Connector is ordered separately

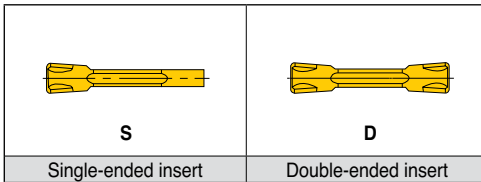
Parting & Grooving Inserts and Solid Bars



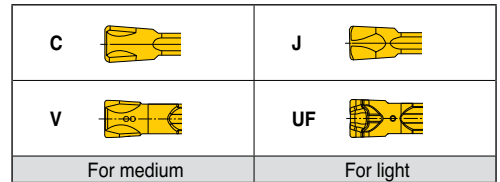


1 TaeguTec

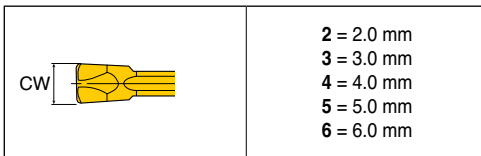
2 Cutting edge type



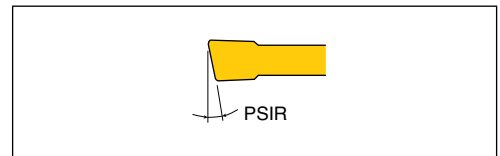
3 Chip breaker type



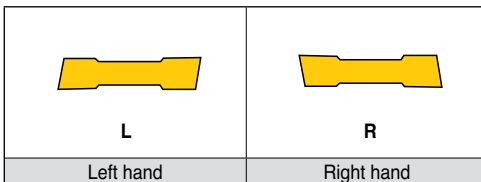
4 Width of insert



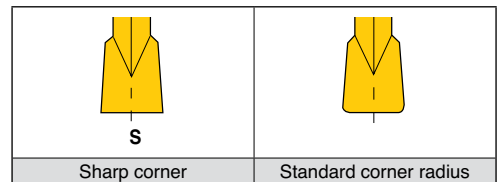
5 Lead angle



6 Hand of insert



7 Corner type



Insert Designation System



Turning, grooving and face machining

T D (F) T 3.00 E - 0.40 R

1 2 3 4 5 6 7 8

1 TaeguTec

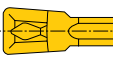
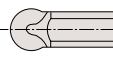
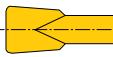
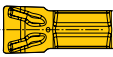
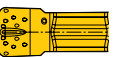
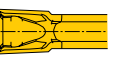
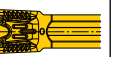
2 Cutting edge type

| | |
|--|---|
|  |  |
| S | D |
| Single-ended insert | Double-ended insert |

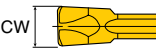
3 Application type

- F** Face turning and grooving
- I** Internal turning and grooving
- X** Universal

4 Chip breaker type

| | | | | | | |
|--|---|---|---|---|---|--|
|  |  |  |  |  |  |  |
| T | A | G | M | P | XU | XY |
| For steel, high-temp. alloy and cast iron | For aluminum | Without chip breaker | Pressed for small diameter | Ground for small diameter | Universal chip breaker (General) | Universal chip breaker (Roughing) |

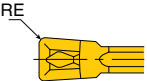
5 Width of insert (mm)

| | |
|--|---|
|  | <input type="checkbox"/> . <input type="checkbox"/> . <input type="checkbox"/> Precision insert |
| | <input type="checkbox"/> Pressed insert |



6 Application type

- E** For turning and grooving
- No designation** For precision grooving

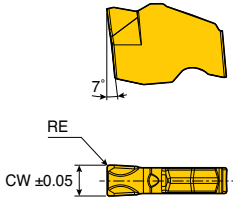
7 Corner radius (mm)

| | |
|--|--|
|  | <input type="checkbox"/> . <input type="checkbox"/> Precision insert |
| | <input type="checkbox"/> Pressed insert |

8 Hand of insert - For face machining

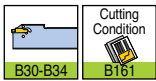
| | |
|---|---|
|  |  |
| L | R |
| Left hand insert on left hand holder | Right hand insert on right hand holder |

Single-ended inserts for parting and deep grooving with C-Type chip breaker



| Size | Dimension (mm) | | | |
|------------|----------------|-----|--|--|
| | CW | RE | | |
| 1.6 | 1.6 | 0.2 | | |
| 2 | 2.0 | 0.2 | | |
| 3 | 3.0 | 0.2 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

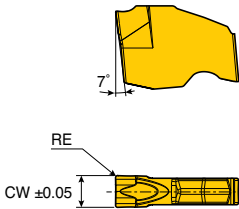
| Insert | Designation | Insert seat size | Feed (mm/rev) | Cermet | | Coated | | | | Uncoated | | |
|--------|----------------|------------------|---------------|--------|--|--------|--------|--------|--------|----------|--------|-----|
| | | | | CT3000 | | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 |
| | SFC 1.6 | 1 | 0.05-0.15 | | | | | | ● | ● | | |
| | 2 | 2 | 0.08-0.20 | | | | | | ● | ● | | |
| | 3 | 3 | 0.10-0.25 | | | | | | ● | ● | | |
| | | | | | | | | | | | | |



●: Standard items

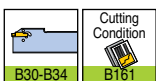
SFJ

Single-ended inserts for parting and deep grooving with J-Type chip breaker



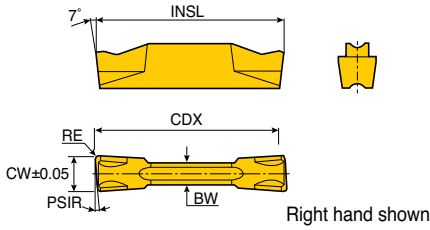
| Size | Dimension (mm) | | | |
|----------|----------------|-----|--|--|
| | CW | RE | | |
| 2 | 2.0 | 0.2 | | |
| 3 | 3.0 | 0.2 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| Insert | Designation | Insert seat size | Feed (mm/rev) | Cermet | | Coated | | | | Uncoated | | |
|--------|--------------|------------------|---------------|--------|--|--------|--------|--------|--------|----------|--------|-----|
| | | | | CT3000 | | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 |
| | SFJ 2 | 2 | 0.05-0.15 | | | | | | ● | ● | | |
| | 3 | 3 | 0.08-0.20 | | | | | | ● | ● | | |
| | | | | | | | | | | | | |



●: Standard items

Double-ended inserts for parting and grooving with C-Type chip breaker



| Size | Dimension (mm) | | | | | |
|-----------------|----------------|------|-----|------|------|-----|
| | CW | RE | BW | INSL | PSIR | CDX |
| 2 (.R/L) | 2.0 | 0.20 | 1.7 | 20.0 | 0-15 | 19 |
| 2 RS/LS | 2.0 | 0.02 | 1.7 | 19.6 | 15 | 19 |
| 3 (.R/L) | 3.0 | 0.20 | 2.4 | 20.0 | 0-15 | 19 |
| 3 RS/LS | 3.0 | 0.02 | 2.4 | 19.6 | 6-15 | 19 |
| 3.18 | 3.18 | 0.20 | 2.4 | 20.0 | - | 19 |
| 4 (.R/L) | 4.0 | 0.30 | 3.0 | 20.0 | 0-15 | 19 |
| 5 (.R/L) | 5.0 | 0.30 | 4.0 | 25.0 | 0-4 | 24 |
| 6 | 6.0 | 0.30 | 5.0 | 25.0 | - | 24 |
| 8 | 8.0 | 0.40 | 6.0 | 30.0 | - | 29 |

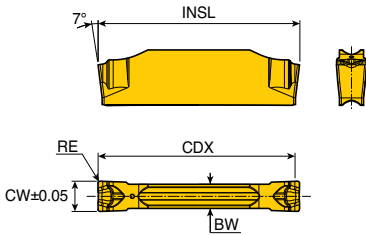
| Insert | Designation | Insert seat size | Feed (mm/rev) | Cermet | | Coated | | | | Uncoated | | |
|--------|------------------|------------------|---------------|--------|--|--------|--------|--------|--------|----------|--------|-----|
| | | | | CT3000 | | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 |
| | TDC 2 | 2 | 0.05-0.18 | ● | | | | | ● | ● | ● | ● |
| | 2-6R/L | 2 | 0.04-0.14 | | | | | | ● | ● | ● | ● |
| | 2-8R/L | 2 | 0.04-0.14 | | | | | | ● | ● | | |
| | 2-15R/L | 2 | 0.04-0.12 | | | | | | ● | ● | ● | |
| | 2-15RS/LS | 2 | 0.02-0.12 | | | | | | ● | ● | ● | |
| | 3 | 3 | 0.07-0.25 | ● | | | ● | | ● | ● | ● | ● |
| | 3-6R/L | 3 | 0.06-0.18 | | | | | | ● | ● | ● | ● |
| | 3-6RS/LS | 3 | 0.03-0.18 | | | | | | ● | ● | | |
| | 3-15R/L | 3 | 0.06-0.16 | | | | | | ● | ● | ● | |
| | 3-15RS/LS | 3 | 0.03-0.16 | | | | | | ● | ● | ● | |
| | 3.18 | 3 | 0.07-0.25 | | | | | | ● | ● | | |
| | 4 | 4 | 0.08-0.30 | ● | | | | | ● | ● | ● | ● |
| | 4-4R/L | 4 | 0.06-0.24 | | | | | | ● | ● | ● | ● |
| | 4-15R/L | 4 | 0.06-0.22 | | | | | | ● | ● | | |
| | 5 | 5 | 0.09-0.35 | | | | | | ● | ● | ● | ● |
| | 5-4R/L | 5 | 0.07-0.28 | | | | | | ● | ● | ● | ● |
| | 6 | 6 | 0.12-0.40 | | | | | | ● | ● | ● | ● |
| | 8 | 8 | 0.14-0.43 | | | | | | ● | ● | | |




●: Standard items

TDF

Double-ended inserts for parting and grooving with UF-Type chip breaker



| Size | Dimension (mm) | | | | |
|----------|----------------|-----|-----|------|-----|
| | CW | RE | BW | INSL | CDX |
| 2 | 2.0 | 0.2 | 1.5 | 20 | 19 |
| 3 | 3.0 | 0.2 | 2.4 | 20 | 19 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

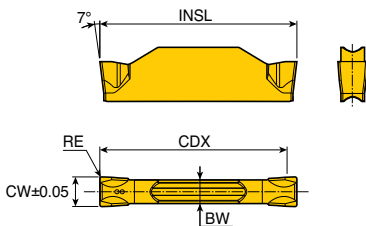
| Insert | Designation | Insert seat size | Feed (mm/rev) | Material | | | | | | | |
|--|--------------|------------------|---------------|----------|--------|--------|--------|--------|--------|----------|-----|
| | | | | Cermet | | Coated | | | | Uncoated | |
| | | | | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 |
|  | TDF 2 | 2 | 0.03-0.11 | | | | | ● | | | |
| | 3 | 3 | 0.04-0.13 | | | | | ● | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |




● Standard items

TDV

Double-ended inserts for parting and grooving with V-Type chip breaker



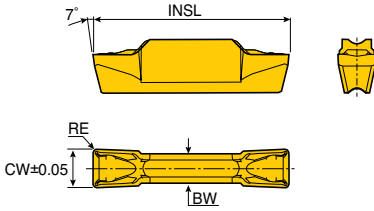
| Size | Dimension (mm) | | | | |
|----------|----------------|-----|-----|------|-----|
| | CW | RE | BW | INSL | CDX |
| 2 | 2.0 | 0.2 | 1.7 | 20 | 19 |
| 3 | 3.0 | 0.2 | 2.4 | 20 | 19 |
| 4 | 4.0 | 0.3 | 3.0 | 20 | 19 |
| | | | | | |
| | | | | | |
| | | | | | |

| Insert | Designation | Insert seat size | Feed (mm/rev) | Material | | | | | | | |
|--|--------------|------------------|---------------|----------|--------|--------|--------|--------|--------|----------|-----|
| | | | | Cermet | | Coated | | | | Uncoated | |
| | | | | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 |
|  | TDV 2 | 2 | 0.04-0.12 | | | | | ● | ● | | |
| | 3 | 3 | 0.06-0.18 | | | | | ● | ● | | |
| | 4 | 4 | 0.08-0.20 | | | | | ● | ● | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |



● Standard items

Double-ended inserts for grooving, turning, face grooving and parting



| Size | Dimension (mm) | | | |
|---------------|----------------|-----|-----|------|
| | CW | RE | BW | INSL |
| 2E-0.3 | 2.0 | 0.3 | 1.7 | 20.0 |
| 3E-0.3 | 3.0 | 0.3 | 2.2 | 20.0 |
| 4E-0.4 | 4.0 | 0.4 | 3.0 | 20.0 |
| 4E-0.8 | 4.0 | 0.8 | 3.0 | 20.0 |
| 5E-0.4 | 5.0 | 0.4 | 4.0 | 25.0 |
| 5E-0.8 | 5.0 | 0.8 | 4.0 | 25.0 |
| 6E-0.4 | 6.0 | 0.4 | 5.0 | 25.0 |
| 6E-0.8 | 6.0 | 0.8 | 5.0 | 25.0 |
| 8E-0.8 | 8.0 | 0.8 | 6.0 | 30.0 |

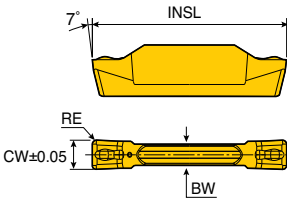
| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | | | | | | | Coated | | Uncoated |
|---------------|--------------------|------------------|-----------|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|-----|----------|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT3010 | TT5100 | TT9080 | TT7220 | TT8020 | K10 | |
| | TDXU 2E-0.3 | 2 | 0.4-1.2 | 0.12-0.18 | 0.03-0.20 | | ● | ● | | ● | ● | | ● | ● | |
| | 3E-0.3 | 3 | 0.4-1.8 | 0.15-0.19 | 0.07-0.22 | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 4E-0.4 | 4 | 0.5-2.4 | 0.18-0.24 | 0.08-0.27 | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 4E-0.8 | 4 | 1.0-2.4 | 0.18-0.24 | 0.08-0.27 | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 5E-0.4 | 5 | 0.5-3.0 | 0.20-0.30 | 0.10-0.30 | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 5E-0.8 | 5 | 1.0-3.0 | 0.23-0.35 | 0.10-0.30 | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 6E-0.4 | 6 | 0.5-3.6 | 0.22-0.36 | 0.13-0.40 | | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 6E-0.8 | 6 | 1.0-3.6 | 0.24-0.42 | 0.13-0.40 | | ● | ● | ● | ● | ● | ● | ● | ● | |
| 8E-0.8 | 8 | 1.0-4.8 | 0.30-0.56 | 0.14-0.50 | | ● | ● | | ● | ● | ● | ● | ● | | |



●: Standard items

TDXT

Double-ended inserts for grooving, turning and face grooving



| Size | Dimension (mm) | | | |
|---------------|----------------|-----|-----|------|
| | CW | RE | BW | INSL |
| 3E-0.4 | 3.0 | 0.4 | 2.2 | 20.0 |
| 4E-0.4 | 4.0 | 0.4 | 3.0 | 20.0 |
| 5E-0.4 | 5.0 | 0.4 | 4.0 | 25.0 |
| 6E-0.8 | 6.0 | 0.8 | 5.0 | 25.0 |
| 8E-0.8 | 8.0 | 0.8 | 6.0 | 30.0 |

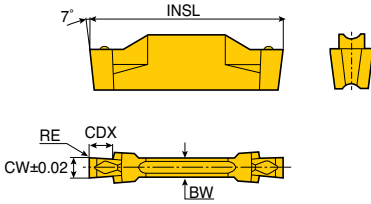
| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | | | | | | | Coated | | Uncoated |
|--------|--------------------|------------------|---------|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--|----------|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 | | |
| | TDXT 3E-0.4 | 3 | 0.5-1.8 | 0.15-0.22 | 0.06-0.15 | ● | ● | ● | ● | ● | | ● | ● | | |
| | 4E-0.4 | 4 | 0.5-2.4 | 0.18-0.30 | 0.07-0.20 | ● | ● | ● | ● | ● | | ● | ● | | |
| | 5E-0.4 | 5 | 0.5-3.0 | 0.20-0.35 | 0.08-0.23 | ● | ● | ● | ● | ● | | ● | ● | | |
| | 6E-0.8 | 6 | 1.0-3.6 | 0.24-0.42 | 0.12-0.30 | | ● | ● | ● | ● | | ● | ● | | |
| | 8E-0.8 | 8 | 1.0-4.8 | 0.30-0.56 | 0.15-0.35 | | ● | ● | ● | ● | | ● | ● | | |



● Non-standard grade production available at the customer's request

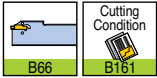
●: Standard items

Precision double-ended inserts for external grooving only



| Size | Dimension (mm) | | | | |
|-------------|----------------|------|-----|------|-----|
| | CW | RE | BW | INSL | CDX |
| 1.00 | 1.00 | 0.00 | 2.2 | 20.0 | 2.5 |
| 1.30 | 1.30 | 0.00 | 2.2 | 20.0 | 2.5 |
| 1.60 | 1.60 | 0.10 | 2.2 | 20.0 | 2.5 |
| 1.85 | 1.85 | 0.10 | 2.2 | 20.0 | 3.5 |
| 2.15 | 2.15 | 0.15 | 2.2 | 20.0 | 3.5 |
| | | | | | |
| | | | | | |
| | | | | | |

| Insert | Designation | Insert seat size | Grooving | Cermet | Coated | | | | | Uncoated |
|--------|-----------------------|------------------|---------------|--------|--------|--------|--------|--------|--------|----------|
| | | | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 |
| | TDT 1.00-0.00* | 2 | 0.02-0.04 | | | | | ● | ● | ● |
| | 1.30-0.00* | 2 | 0.02-0.05 | | | | | ● | ● | ● |
| | 1.60-0.10* | 2 | 0.03-0.07 | | | | | ● | ● | ● |
| | 1.85-0.10* | 2 | 0.03-0.09 | | | | | ● | ● | ● |
| | 2.15-0.15 | 2 | 0.03-0.10 | | | | | ● | ● | ● |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

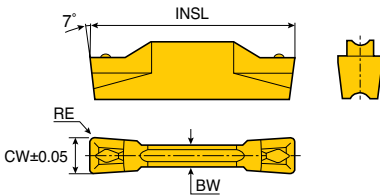


*: Only for grooving. Please use TGFR/L ...-4 holder

●: Standard items

TDT-E

Double-ended inserts for turning and grooving



| Size | Dimension (mm) | | | |
|----------|----------------|-----|-----|------|
| | CW | RE | BW | INSL |
| 3 | 3.0 | 0.4 | 2.2 | 20.0 |
| 4 | 4.0 | 0.4 | 3.0 | 20.0 |
| 6 | 6.0 | 0.8 | 5.0 | 25.0 |
| | | | | |
| | | | | |
| | | | | |

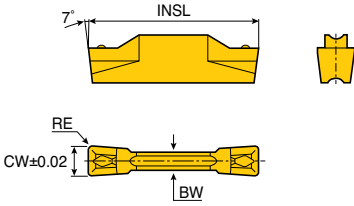
| Insert | Designation | Insert seat size | Turning | Grooving | Cermet | Ceramic | Coated | | | | | Uncoated | | |
|--------|---------------------------------|------------------|---------|---------------|---------------|---------|--------|--------|--------|--------|--------|----------|--------|-----|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | AB30 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 |
| | TDT 3E-0.4 | 3 | 0.5-1.8 | 0.15-0.22 | 0.07-0.15 | ● | | ● | ● | ● | ● | ● | ● | ● |
| | 4E-0.4 | 4 | 0.5-2.4 | 0.18-0.30 | 0.09-0.18 | ● | | ● | ● | ● | ● | ● | ● | ● |
| | 4E-0.4T CE⁽¹⁾ | 4 | 0.5-2.4 | 0.18-0.30 | 0.09-0.35 | | ● | | | | | | | |
| | 6E-0.8T CE⁽¹⁾ | 6 | 1.0-3.6 | 0.24-0.42 | 0.13-0.40 | | ● | | | | | | | |



⁽¹⁾This insert is a pressed ceramic insert

●: Standard items

Precision double-ended inserts for turning and grooving



| Size | Dimension (mm) | | | |
|---------------------------|----------------|-----------|-----|------|
| | CW | RE | BW | INSL |
| 2.65 / 3.00 / 3.15 | 2.65-3.15 | 0.15-0.40 | 2.2 | 20.0 |
| 4.00 / 4.15 | 4.00-4.15 | 0.15-0.80 | 3.0 | 20.0 |
| 4.78 / 5.00 / 5.15 | 4.78-5.15 | 0.15-0.80 | 4.0 | 25.0 |
| 6.00 | 6.00 | 0.80-1.20 | 5.0 | 25.0 |
| 8.00 | 8.00 | 0.80-1.20 | 6.0 | 30.0 |
| 10.00 | 10.00 | 0.80-2.00 | 8.0 | 30.0 |

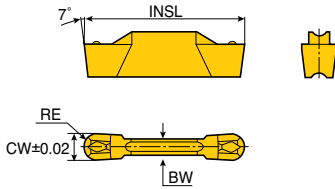
| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | | | | | | Coated | | | | | | Uncoated | |
|--------------------|-----------------------|------------------|-----------|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|-----|--|--|--|--|----------|--|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 | | | | | | |
| | TDT 2.65E-0.15 | 3 | 0.2-1.8 | 0.10-0.18 | 0.05-0.12 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 3.00E-0.20 | 3 | 0.3-2.0 | 0.12-0.20 | 0.07-0.13 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 3.00E-0.40 | 3 | 0.5-2.0 | 0.15-0.22 | 0.07-0.15 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 3.15E-0.15 | 3 | 0.2-2.0 | 0.15-0.22 | 0.07-0.15 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 4.00E-0.40 | 4 | 0.5-2.4 | 0.18-0.30 | 0.09-0.18 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 4.00E-0.80 | 4 | 1.0-2.4 | 0.18-0.30 | 0.09-0.18 | | | ● | ● | ● | ● | ● | | | | | | ● | |
| | 4.15E-0.15 | 4 | 0.5-2.4 | 0.18-0.30 | 0.09-0.18 | | | ● | ● | | | | | | | | | | |
| | 4.78E-0.55 | 5 | 0.7-2.8 | 0.20-0.35 | 0.10-0.20 | | | ● | ● | ● | | | | | | | | | |
| | 5.00E-0.40 | 5 | 0.5-2.3 | 0.20-0.35 | 0.11-0.20 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 5.00E-0.80 | 5 | 1.0-3.0 | 0.23-0.35 | 0.11-0.21 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 5.15E-0.15 | 5 | 0.2-3.0 | 0.23-0.35 | 0.11-0.21 | | | ● | ● | | | | | | | | | | |
| | 6.00E-0.80 | 6 | 1.0-3.6 | 0.24-0.42 | 0.13-0.30 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 6.00E-1.20 | 6 | 1.3-3.6 | 0.24-0.42 | 0.13-0.30 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 8.00E-0.80 | 8 | 1.0-4.8 | 0.30-0.56 | 0.15-0.40 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 8.00E-1.20 | 8 | 1.3-4.8 | 0.30-0.56 | 0.15-0.40 | | | ● | ● | ● | ● | | | | | | | ● | |
| | 10.00E-0.80 | 10 | 1.0-6.0 | 0.35-0.65 | 0.20-0.45 | | | ● | ● | | | | | | | | | | |
| 10.00E-1.20 | 10 | 1.0-6.0 | 0.40-0.80 | 0.20-0.45 | | | ● | ● | | | | | | | | | | | |
| 10.00E-2.00 | 10 | 1.0-6.0 | 0.35-0.80 | 0.20-0.45 | | | ● | ● | | | | | | | | | | | |



●: Standard items

TDT-E (Full-Radius)

Precision double-ended inserts for external turning, grooving and profiling



| Size | Dimension (mm) | | | |
|-------------|----------------|------|-----|------|
| | CW | RE | BW | INSL |
| 3 | 3.00 | 1.50 | 2.2 | 20.0 |
| 4 | 4.00 | 2.00 | 3.0 | 20.0 |
| 4.78 | 4.78 | 2.39 | 4.0 | 25.0 |
| 5 | 5.00 | 2.50 | 4.0 | 25.0 |
| 6 | 6.00 | 3.00 | 5.0 | 25.0 |
| 8 | 8.00 | 4.00 | 6.0 | 30.0 |
| 10 | 10.00 | 5.00 | 8.0 | 30.0 |

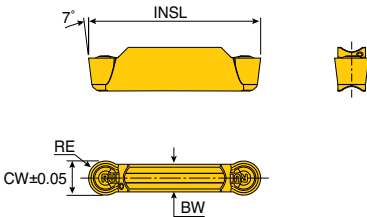
| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | | | | | | Coated | | Uncoated |
|--------|-----------------------|------------------|---------|---------------|---------------|--------|--------|--------|---------|--------|--------|--------|-----|----------|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT15100 | TT9080 | TT7220 | TT8020 | K10 | |
| | TDT 3.00E-1.50 | 3 | 0.0-1.5 | 0.15-0.28 | 0.08-0.18 | | | | ● | ● | ● | ● | ● | |
| | 4.00E-2.00 | 4 | 0.0-2.0 | 0.18-0.35 | 0.10-0.20 | | | | ● | ● | ● | ● | ● | |
| | 4.78E-2.39 | 5 | 0.0-2.4 | 0.20-0.42 | 0.12-0.23 | | | | ● | ● | ● | | | |
| | 5.00E-2.50 | 5 | 0.0-2.5 | 0.20-0.42 | 0.12-0.23 | | | | ● | ● | ● | | | |
| | 6.00E-3.00 | 6 | 0.0-3.0 | 0.25-0.54 | 0.15-0.27 | | | | ● | ● | ● | | | ● |
| | 8.00E-4.00 | 8 | 0.0-4.0 | 0.30-0.67 | 0.18-0.35 | | | | ● | ● | ● | | | |
| | 10.00E-5.00 | 10 | 0.0-5.0 | 0.35-0.80 | 0.22-0.40 | | | | ● | ● | | | | |



●: Standard items

TDT-RU (Full-Radius)

Double-ended inserts for external turning, grooving and profiling



| Size | Dimension (mm) | | | |
|----------|----------------|-----|-----|------|
| | CW | RE | BW | INSL |
| 2 | 2.0 | 1.0 | 1.7 | 20.0 |
| 3 | 3.0 | 1.5 | 2.2 | 20.0 |
| 4 | 4.0 | 2.0 | 3.0 | 20.0 |
| 5 | 5.0 | 2.5 | 4.0 | 25.0 |
| 6 | 6.0 | 3.0 | 5.0 | 25.0 |
| 8 | 8.0 | 4.0 | 6.0 | 30.0 |

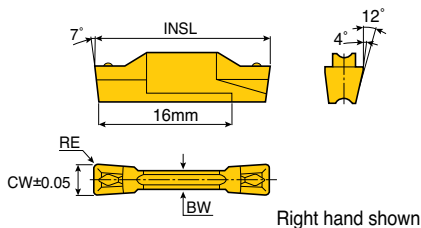
| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | | | | | | Coated | | Uncoated |
|--------|----------------------|------------------|---------|---------------|---------------|--------|--------|--------|---------|--------|--------|--------|--------|----------|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT15100 | TT3010 | TT9080 | TT7220 | TT8020 | K10 |
| | TDT 2E-1.0-RU | 2 | 0.0-1.0 | 0.10-0.25 | 0.05-0.15 | | | ● | ● | ● | ● | ● | ● | ● |
| | 3E-1.5-RU | 3 | 0.0-1.5 | 0.15-0.28 | 0.08-0.18 | ● | | ● | ● | ● | ● | ● | ● | ● |
| | 4E-2.0-RU | 4 | 0.0-2.0 | 0.18-0.35 | 0.10-0.20 | ● | | ● | ● | ● | ● | ● | ● | ● |
| | 5E-2.5-RU | 5 | 0.0-2.5 | 0.20-0.42 | 0.12-0.23 | ● | | ● | ● | ● | ● | ● | ● | ● |
| | 6E-3.0-RU | 6 | 0.0-3.0 | 0.25-0.54 | 0.15-0.27 | ● | | ● | ● | ● | ● | ● | ● | ● |
| | 8E-4.0-RU | 8 | 0.0-4.0 | 0.30-0.67 | 0.18-0.35 | | | ● | ● | ● | ● | ● | ● | ● |



●: Standard items

TDFT-E

Double-ended inserts for face grooving



| Size | Dimension (mm) | | | |
|-----------|----------------|------|-----|------|
| | CW | RE | BW | INSL |
| 3E | 3.0 | 0.40 | 2.2 | 20.0 |
| 4E | 4.0 | 0.40 | 3.0 | 20.0 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | Coated | | | | | Uncoated |
|--------|-----------------------|------------------|---------|---------------|---------------|--------|--------|--------|--------|--------|--------|----------|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | |
| | TDFT 3E-0.4R/L | 3 | 0.5-2.0 | 0.15-0.22 | 0.07-0.15 | | | | ● | ● | ● | |
| | 4E-0.4R/L | 4 | 0.5-2.4 | 0.18-0.30 | 0.09-0.18 | | | | ● | ● | ● | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

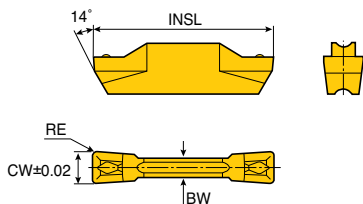


• Apply R insert on R tool and L insert on L tool

●: Standard items

TDIT-E

Precision double-ended inserts for internal turning and grooving



| Size | Dimension (mm) | | | |
|----------|----------------|-----------|-----|------|
| | CW | RE | BW | INSL |
| 3 | 3.00 | 0.40 | 2.2 | 20.0 |
| 4 | 4.00 | 0.40-0.80 | 3.0 | 20.0 |
| 5 | 5.00 | 0.40-0.80 | 4.0 | 25.0 |
| 6 | 6.00 | 0.80-1.20 | 5.0 | 25.0 |
| 8 | 8.00 | 1.20 | 6.0 | 30.0 |
| | | | | |
| | | | | |

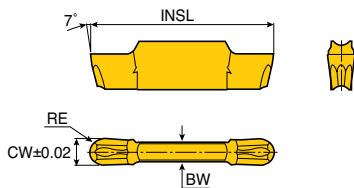
| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | Coated | | | | | Uncoated |
|--------|------------------------|------------------|---------|---------------|---------------|--------|--------|--------|--------|--------|--------|----------|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | |
| | TDIT 3.00E-0.40 | 3 | 0.5-1.8 | 0.15-0.22 | 0.07-0.15 | | | | ● | ● | ● | |
| | 4.00E-0.40 | 4 | 0.5-2.4 | 0.18-0.30 | 0.09-0.18 | | | | ● | ● | ● | |
| | 4.00E-0.80 | 4 | 1.0-2.4 | 0.18-0.30 | 0.09-0.18 | | | | ● | ● | ● | |
| | 5.00E-0.40 | 5 | 0.5-2.3 | 0.20-0.35 | 0.11-0.20 | | | | ● | ● | ● | |
| | 5.00E-0.80 | 5 | 1.0-3.0 | 0.23-0.35 | 0.11-0.21 | | | | ● | ● | ● | |
| | 6.00E-0.80 | 6 | 1.0-3.6 | 0.24-0.42 | 0.13-0.30 | | | | ● | ● | ● | |
| | 6.00E-1.20 | 6 | 1.3-3.6 | 0.24-0.42 | 0.13-0.30 | | | | ● | ● | ● | |
| | 8.00E-0.80 | 8 | 1.0-4.8 | 0.30-0.56 | 0.15-0.40 | | | | ● | ● | ● | |
| | 8.00E-1.20 | 8 | 1.3-4.8 | 0.30-0.56 | 0.15-0.40 | | | | ● | ● | ● | |



●: Standard items

TDIT-E (Full-Radius)

Precision double-ended inserts for internal turning, grooving, profiling and undercutting



| Size | Dimension (mm) | | | |
|----------|----------------|------|-----|------|
| | CW | RE | BW | INSL |
| 3 | 3.00 | 1.50 | 2.2 | 20.0 |
| 4 | 4.00 | 2.00 | 3.0 | 20.0 |
| 5 | 5.00 | 2.50 | 4.0 | 25.0 |
| 6 | 6.00 | 3.00 | 5.0 | 25.0 |
| | | | | |
| | | | | |

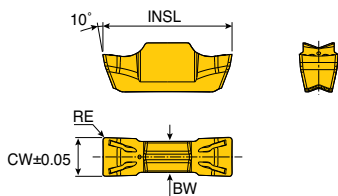
| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | | | | | Coated | | | | | Uncoated | | |
|--------|------------------------|------------------|---------|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|-----|--|--|----------|--|--|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 | | | | | |
| | TDIT 3.00E-1.50 | 3 | 0.0-1.5 | 0.15-0.28 | 0.08-0.18 | | | | | | | | | | | | | |
| | 4.00E-2.00 | 4 | 0.0-2.0 | 0.18-0.35 | 0.10-0.20 | | | | ● | ● | | | | | | | | |
| | 5.00E-2.50 | 5 | 0.0-2.5 | 0.20-0.42 | 0.12-0.23 | | | | ● | ● | | | | | | | | |
| | 6.00E-3.00 | 6 | 0.0-3.0 | 0.25-0.54 | 0.15-0.27 | | | | ● | ● | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |



●: Standard items

TDIM

Double-ended inserts for internal turning and grooving on small diameter



| Size | Dimension (mm) | | | |
|----------|----------------|------|-----|------|
| | CW | RE | BW | INSL |
| 2 | 2.0 | 0.15 | 1.6 | 10 |
| 3 | 3.0 | 0.20 | 2.4 | 10 |
| | | | | |
| | | | | |

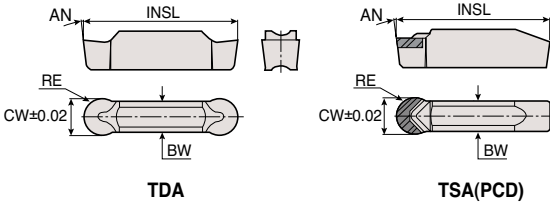
| Insert | Designation | Insert seat size | Turning | | Grooving | Cermet | | | | | Coated | | | | | Uncoated | | |
|--------|---------------------|------------------|---------|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|-----|---|--|----------|--|--|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 | | | | | |
| | TDIM 2E-0.15 | 2 | 0.2-0.6 | 0.05-0.08 | 0.03-0.05 | | | | | | | | | | | | | |
| | 3E-0.2 | 3 | 0.3-1.3 | 0.10-0.14 | 0.05-0.09 | | | | | | | | | ● | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |



• Used holder TTSER/L, TGSFR/L, TTSIR/L, TGSIR/L

●: Standard items

Inserts for aluminum wheel machining



| Size | Dimension (mm) | | | | |
|----------|----------------|-----|-----|------|----|
| | CW | RE | BW | INSL | AN |
| 3 | 3.00 | 1.5 | 2.4 | 20.0 | 7 |
| 4 | 4.00 | 2.0 | 3.0 | 20.0 | 7 |
| 5 | 5.00 | 2.5 | 4.0 | 25.0 | 7 |
| 6 | 6.00 | 3.0 | 5.0 | 25.0 | 7 |
| 8 | 8.00 | 4.0 | 6.0 | 30.0 | 10 |
| | | | | | |
| | | | | | |

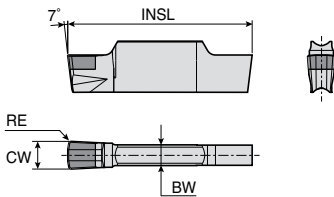
| Insert | Designation | Insert seat size | Turning | | Grooving | PCD | | | | | Coated | | Uncoated | |
|---------|----------------------|------------------|---------|---------------|---------------|-------|--------|--------|---------|--------|--------|--------|----------|---|
| | | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | KP300 | TT7505 | TT6080 | TT15100 | TT9080 | TT7220 | TT8020 | K10 | |
| TDA | TDA 3.00-1.50 | 3 | 0.0-1.5 | 0.15-0.30 | 0.08-0.16 | | | | | | | | | ● |
| | 4.00-2.00 | 4 | 0.0-2.0 | 0.20-0.43 | 0.10-0.22 | | | | | | | | | ● |
| | 5.00-2.50 | 5 | 0.0-2.5 | 0.20-0.48 | 0.10-0.25 | | | | | | | | | ● |
| | 6.00-3.00 | 6 | 0.0-3.0 | 0.21-0.58 | 0.11-0.29 | | | | | | | | | ● |
| | 8.00-4.00 | 8 | 0.0-4.0 | 0.24-0.67 | 0.14-0.38 | | | | | | | | | ● |
| TSA | TSA 6.00-3.00 | 6 | 0.0-3.0 | 0.26-0.72 | 0.13-0.36 | ● | | | | | | | | |
| | 8.00-4.00 | 8 | 0.0-4.0 | 0.24-0.67 | 0.14-0.38 | ● | | | | | | | | |
| | | | | | | | | | | | | | | |



● : Standard items

TSG-HF

Single-ended CBN inserts for high feed turning



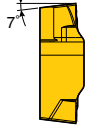
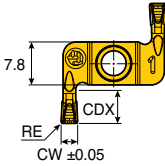
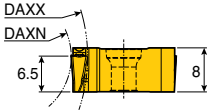
| Size | Dimension (mm) | | | | |
|----------|----------------|-----|-----|------|--|
| | CW | RE | BW | INSL | |
| 3 | 3.0 | 0.3 | 2.2 | 20 | |
| 5 | 5.0 | 0.3 | 4.0 | 25 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Insert | Designation | Insert seat size | ap (mm) | Feed (mm/rev) | CBN |
|--------|-----------------------|------------------|-----------|---------------|--------|
| | | | | | TB2015 |
| | TSG 3.0-0.3-HF | 3 | 0.08-0.12 | 0.40-0.80 | ● |
| | 5.0-0.3-HF | 5 | 0.08-0.12 | 0.40-1.20 | ● |
| | | | | | |
| | | | | | |



● : Standard items

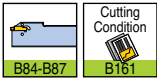
Double-ended inserts for face grooving and turning



Right hand shown

| Size | Dimension (mm) | | | | |
|----------|----------------|-----|-----|------|------|
| | CW | RE | CDX | DAXN | DAXX |
| 3 | 3 | 0.3 | 6 | 24 | N.L. |
| 4 | 4 | 0.4 | 6 | 32 | N.L. |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Insert | Designation | Turning | | Grooving | Cermet | | Coated | | | | Uncoated | |
|--------|---------------------------|---------|---------------|---------------|--------|--------|--------|--------|--------|--------|----------|-----|
| | | ap (mm) | Feed (mm/rev) | Feed (mm/rev) | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 | K10 |
| | TDFX 3E-0.3-D24R/L | 0.4-1.8 | 0.15-0.20 | 0.07-0.20 | | | | | ● | | | |
| | 4E-0.4-D32R/L | 0.5-2.4 | 0.15-0.24 | 0.09-0.25 | | | | | ● | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

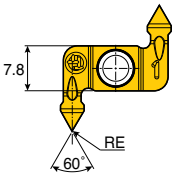


● N.L.: No limit

●: Standard items

TDX

Double-ended threading inserts with 60° partial profile



Right hand shown

| Size | Dimension (mm) | | | | |
|----------|----------------|------|-----|------|------|
| | RE | TPN | TPX | TPIX | TPIN |
| 4 | 0.05 | 0.45 | 3.5 | 56 | 8 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Insert | Designation | Cermet | | Coated | | | | Uncoated |
|--------|-------------------------|--------|--------|--------|--------|--------|--------|----------|
| | | CT3000 | TT7505 | TT6080 | TT5100 | TT9080 | TT7220 | TT8020 |
| | TDX 4MT-0.05-R/L | | | | | ● | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

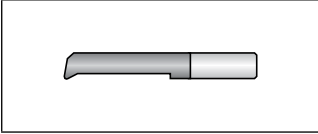


- TPN : Thread pitch minimum (mm)
- TPX : Thread pitch maximum (mm)
- TPIX : Thread per inch maximum
- TPIN : Thread per inch minimum

●: Standard items

| | | | | | | |
|------------|----------|----------|-----------|------------|------------|-------------|
| MIN | T | R | 04 | 040 | 005 | D010 |
| 1 | 7 | 2 | 3 | 4 | 5 | 6 |

1 TOP-MICRO series



2 Hand of tool

R Right-hand
L Left-hand

3 Shank dia.

04 4.0mm
07 7.0mm

4 Max. depth

050 5.0mm
140 14.0mm

5 Corner radius

010 0.10mm
020 0.20mm

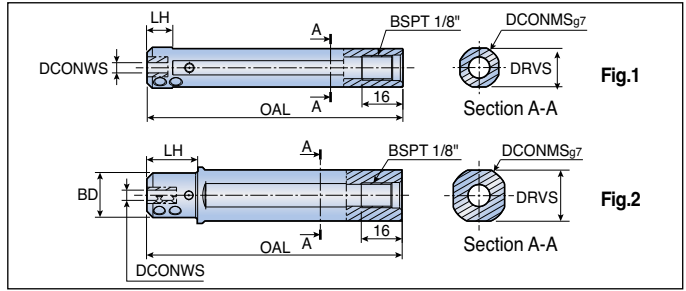
6 Min. bore dia.

D010 1.0mm

7 Application type

| | |
|----|---|
| T | Turning and chamfering |
| B | Back turning |
| P | Turning and profiling |
| U | Undercutting and chamfering |
| C | Turning and 45° chamfering |
| G | Grooving and turning |
| A | Grooving along shaft |
| F | Face grooving |
| R | Full radius for internal boring and profiling |
| N | ISO full profile internal threading |
| SL | Sleeve for MINS |

Sleeves for direct connection for coolant



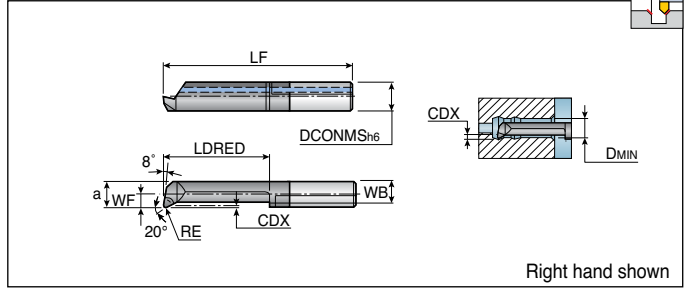
| Designation | Dimension (mm) | | | | | | Fig. |
|------------------------|----------------|--------|-------|--------|-------|-------|------|
| | DCONMS | DCONWS | BD | OAL | LH | DRVS | |
| MINS 16-4-L100C | 16.00 | 4.00 | - | 100.00 | 10.00 | 15.00 | 1 |
| 16-7-L100C | 16.00 | 7.00 | - | 100.00 | 10.00 | 15.00 | 1 |
| 20-4-L100C | 20.00 | 4.00 | 17.50 | 100.00 | 20.00 | 18.00 | 2 |
| 20-7-L100C | 20.00 | 7.00 | 17.50 | 100.00 | 20.00 | 18.00 | 2 |
| 22-4-L100C | 22.00 | 4.00 | 17.50 | 100.00 | 20.00 | 20.00 | 2 |
| 22-7-L100C | 22.00 | 7.00 | 17.50 | 100.00 | 20.00 | 20.00 | 2 |
| 25-4-L100C | 25.00 | 4.00 | 18.00 | 100.00 | 23.00 | 23.00 | 2 |
| 25-7-L100C | 25.00 | 7.00 | 18.00 | 100.00 | 23.00 | 23.00 | 2 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

• All sleeves applicable for Citizen Swiss type machine

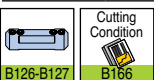
Spare parts

| Designation | Set screw | Wrench | | |
|-----------------------|----------------|---------|--|--|
| | | | | |
| MINS ...-L100C | SS M5x0.8x6-MG | L-W 2.5 | | |
| | | | | |
| | | | | |

Mini carbide bars for internal turning and chamfering



| Designation | Dimension (mm) | | | | | | | | | R/L | Grade TT9030 |
|---------------------------|----------------|------|------|------|-------|-------|------|------|------|-----|-----------------|
| | DCONMS | WF | a | WB | LF | LDRED | RE | CDX | DMIN | | |
| MINTR07-090015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 25.00 | 10.00 | 0.15 | 0.50 | 5.00 | R | ● |
| 140015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 30.00 | 15.00 | 0.15 | 0.50 | 5.00 | R | ● |
| 190015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 35.00 | 20.00 | 0.15 | 0.50 | 5.00 | R | ● |
| 240015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 40.00 | 25.00 | 0.15 | 0.50 | 5.00 | R | ● |
| 290015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 45.00 | 30.00 | 0.15 | 0.50 | 5.00 | R | ● |
| 340015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 50.00 | 35.00 | 0.15 | 0.50 | 5.00 | R | ● |
| 140015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 30.00 | 15.00 | 0.15 | 0.50 | 6.00 | R | ● |
| 210015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 37.00 | 22.00 | 0.15 | 0.50 | 6.00 | R | ● |
| 240015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 40.00 | 25.00 | 0.15 | 0.50 | 6.00 | R | ● |
| 290015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 45.00 | 30.00 | 0.15 | 0.50 | 6.00 | R | ● |
| 340015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 50.00 | 35.00 | 0.15 | 0.50 | 6.00 | R | ● |
| 410015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 57.00 | 42.00 | 0.15 | 0.50 | 6.00 | R | ● |
| 190015D068 | 7.00 | 2.80 | 6.30 | 5.40 | 35.00 | 20.00 | 0.15 | 0.60 | 6.80 | R | ● |
| 240015D068 | 7.00 | 2.80 | 6.30 | 5.40 | 40.00 | 25.00 | 0.15 | 0.60 | 6.80 | R | ● |
| 290015D068 | 7.00 | 2.80 | 6.30 | 5.40 | 45.00 | 30.00 | 0.15 | 0.60 | 6.80 | R | ● |
| 340015D070 | 7.00 | 2.80 | 6.30 | 5.40 | 50.00 | 35.00 | 0.15 | 0.60 | 7.00 | R | ● |
| 390015D070 | 7.00 | 2.80 | 6.30 | 5.40 | 55.00 | 40.00 | 0.15 | 0.60 | 7.00 | R | ● |
| 440015D070 | 7.00 | 2.80 | 6.30 | 5.40 | 60.00 | 45.00 | 0.15 | 0.60 | 7.00 | R | ● |
| 490015D070 | 7.00 | 2.80 | 6.30 | 5.40 | 65.00 | 50.00 | 0.15 | 0.60 | 7.00 | R | ● |
| MINTL07-090015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 25.00 | 10.00 | 0.15 | 0.50 | 5.00 | L | ● |
| 140015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 30.00 | 15.00 | 0.15 | 0.50 | 5.00 | L | ● |
| 190015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 35.00 | 20.00 | 0.15 | 0.50 | 5.00 | L | ● |
| 240015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 40.00 | 25.00 | 0.15 | 0.50 | 5.00 | L | ● |
| 290015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 45.00 | 30.00 | 0.15 | 0.50 | 5.00 | L | ● |
| 140015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 30.00 | 15.00 | 0.15 | 0.50 | 6.00 | L | ● |
| 210015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 37.00 | 22.00 | 0.15 | 0.50 | 6.00 | L | ● |
| 240015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 40.00 | 25.00 | 0.15 | 0.50 | 6.00 | L | ● |
| 290015D060 | 7.00 | 1.80 | 5.30 | 4.40 | 45.00 | 30.00 | 0.15 | 0.50 | 6.00 | L | ● |
| 190015D068 | 7.00 | 2.80 | 6.30 | 5.40 | 35.00 | 20.00 | 0.15 | 0.60 | 6.80 | L | ● |
| 290015D068 | 7.00 | 2.80 | 6.30 | 5.40 | 45.00 | 30.00 | 0.15 | 0.60 | 6.80 | L | ● |
| 340015D070 | 7.00 | 2.80 | 6.30 | 5.40 | 50.00 | 35.00 | 0.15 | 0.60 | 7.00 | L | ● |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

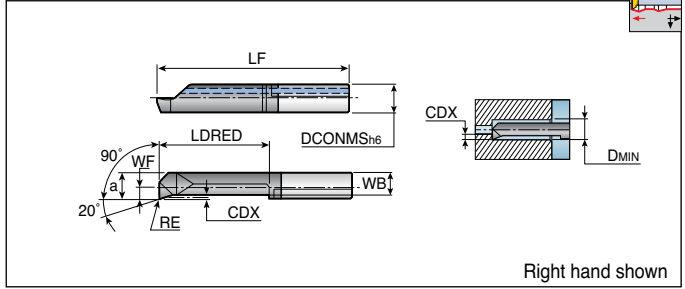


●: Standard items

MINP R 04/07

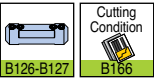


Mini carbide bars for internal turning and profiling



| Designation | Dimension (mm) | | | | | | | | | R/L | Grade TT9030 |
|---------------------------|----------------|------|------|------|-------|-------|------|------|------|-----|-----------------|
| | DCONMS | WF | a | WB | LF | LDRED | RE | CDX | DMIN | | |
| MINPR04-090010D028 | 4.00 | 0.90 | 2.60 | 2.20 | 25.50 | 10.50 | 0.10 | 0.20 | 2.80 | R | ● |
| 150010D028 | 4.00 | 0.90 | 2.60 | 2.20 | 31.50 | 16.50 | 0.10 | 0.20 | 2.80 | R | ● |
| 090010D040 | 4.00 | 1.50 | 3.50 | 2.90 | 25.50 | 10.50 | 0.10 | 0.30 | 4.00 | R | ● |
| 150010D040 | 4.00 | 1.50 | 3.50 | 2.90 | 31.50 | 16.50 | 0.10 | 0.30 | 4.00 | R | ● |
| MINPR07-140015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 30.00 | 15.00 | 0.15 | 0.50 | 5.00 | R | ● |
| 190015D050 | 7.00 | 0.90 | 4.40 | 3.65 | 35.00 | 20.00 | 0.15 | 0.50 | 5.00 | R | ● |

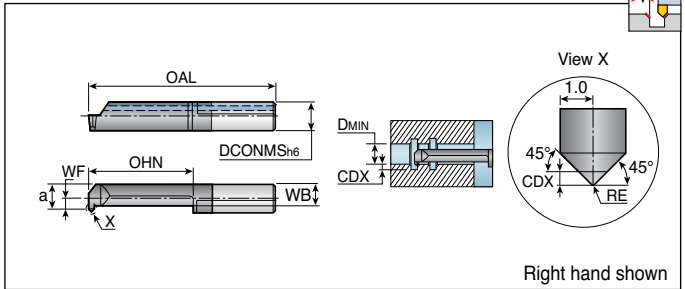
●: Standard items



MINC R 07

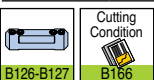


Mini carbide bars for internal turning and 45° chamfering



| Designation | Dimension (mm) | | | | | | | | | R/L | Grade TT9030 |
|---------------------------|----------------|------|------|------|-------|-------|------|------|------|-----|-----------------|
| | DCONMS | WF | a | WB | OAL | OHN | RE | CDX | DMIN | | |
| MINCR07-140020D050 | 7.00 | 0.90 | 4.40 | 3.20 | 30.00 | 15.00 | 0.20 | 0.70 | 5.00 | R | ● |
| 190020D050 | 7.00 | 0.90 | 4.40 | 3.20 | 35.00 | 20.00 | 0.20 | 0.70 | 5.00 | R | ● |
| 190020D068 | 7.00 | 2.80 | 6.30 | 3.80 | 35.00 | 20.00 | 0.20 | 0.70 | 6.80 | R | ● |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

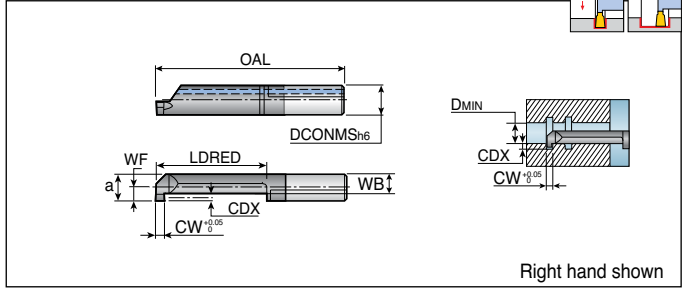
●: Standard items



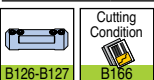
MING R/L 07



Mini carbide bars for grooving and turning



| Designation | Dimension (mm) | | | | | | | | | R/L | Grade TT9030 |
|----------------------------|----------------|------|------|------|------|-------|-------|------|------|-----|-----------------|
| | DCONMS | CW | WF | a | WB | OAL | LDRED | CDX | DMIN | | |
| MINGR07- 090100D050 | 7.00 | 1.00 | 0.90 | 4.40 | 3.00 | 25.00 | 10.00 | 1.00 | 5.00 | R | ● |
| 140100D050 | 7.00 | 1.00 | 0.90 | 4.40 | 3.00 | 30.00 | 15.00 | 1.00 | 5.00 | R | ● |
| 090150D050 | 7.00 | 1.50 | 0.90 | 4.40 | 3.00 | 25.00 | 10.00 | 1.00 | 5.00 | R | ● |
| 140150D050 | 7.00 | 1.50 | 0.90 | 4.40 | 3.00 | 30.00 | 15.00 | 1.00 | 5.00 | R | ● |
| 090200D050 | 7.00 | 2.00 | 0.90 | 4.40 | 3.00 | 25.00 | 10.00 | 1.00 | 5.00 | R | ● |
| 190200D050 | 7.00 | 2.00 | 0.90 | 4.40 | 3.00 | 35.00 | 20.00 | 1.00 | 5.00 | R | ● |
| 090100D060 | 7.00 | 1.00 | 1.80 | 5.30 | 3.10 | 25.00 | 10.00 | 1.80 | 6.00 | R | ● |
| 140100D060 | 7.00 | 1.00 | 1.80 | 5.30 | 3.10 | 30.00 | 15.00 | 1.80 | 6.00 | R | ● |
| 210100D060 | 7.00 | 1.00 | 1.80 | 5.30 | 3.10 | 37.00 | 22.00 | 1.80 | 6.00 | R | ● |
| 290100D060 | 7.00 | 1.00 | 1.80 | 5.30 | 3.10 | 45.00 | 30.00 | 1.80 | 6.00 | R | ● |
| 090150D060 | 7.00 | 1.50 | 1.80 | 5.30 | 3.10 | 25.00 | 10.00 | 1.80 | 6.00 | R | ● |
| 140150D060 | 7.00 | 1.50 | 1.80 | 5.30 | 3.10 | 30.00 | 15.00 | 1.80 | 6.00 | R | ● |
| 210150D060 | 7.00 | 1.50 | 1.80 | 5.30 | 3.10 | 37.00 | 22.00 | 1.80 | 6.00 | R | ● |
| 240150D060 | 7.00 | 1.50 | 1.80 | 5.30 | 3.10 | 40.00 | 25.00 | 1.80 | 6.00 | R | ● |
| 290150D060 | 7.00 | 1.50 | 1.80 | 5.30 | 3.10 | 45.00 | 30.00 | 1.80 | 6.00 | R | ● |
| 090200D060 | 7.00 | 2.00 | 1.80 | 5.30 | 3.10 | 25.00 | 10.00 | 1.80 | 6.00 | R | ● |
| 140200D060 | 7.00 | 2.00 | 1.80 | 5.30 | 3.10 | 30.00 | 15.00 | 1.80 | 6.00 | R | ● |
| 210200D060 | 7.00 | 2.00 | 1.80 | 5.30 | 3.10 | 37.00 | 22.00 | 1.80 | 6.00 | R | ● |
| 240200D060 | 7.00 | 2.00 | 1.80 | 5.30 | 3.10 | 40.00 | 25.00 | 1.80 | 6.00 | R | ● |
| 290200D060 | 7.00 | 2.00 | 1.80 | 5.30 | 3.10 | 45.00 | 30.00 | 1.80 | 6.00 | R | ● |
| 090100D068 | 7.00 | 1.00 | 2.70 | 6.20 | 3.30 | 25.00 | 10.00 | 2.50 | 6.80 | R | ● |
| 140100D068 | 7.00 | 1.00 | 2.70 | 6.20 | 3.30 | 30.00 | 15.00 | 2.50 | 6.80 | R | ● |
| 210100D068 | 7.00 | 1.00 | 2.70 | 6.20 | 3.30 | 37.00 | 22.00 | 2.50 | 6.80 | R | ● |
| 090150D068 | 7.00 | 1.50 | 2.70 | 6.20 | 3.30 | 25.00 | 10.00 | 2.50 | 6.80 | R | ● |
| 140150D068 | 7.00 | 1.50 | 2.70 | 6.20 | 3.30 | 30.00 | 15.00 | 2.50 | 6.80 | R | ● |
| 210150D068 | 7.00 | 1.50 | 2.70 | 6.20 | 3.30 | 37.00 | 22.00 | 2.50 | 6.80 | R | ● |
| 290150D068 | 7.00 | 1.50 | 2.70 | 6.20 | 3.30 | 45.00 | 30.00 | 2.50 | 6.80 | R | ● |
| 090200D068 | 7.00 | 2.00 | 2.70 | 6.20 | 3.30 | 25.00 | 10.00 | 2.50 | 6.80 | R | ● |
| 140200D068 | 7.00 | 2.00 | 2.70 | 6.20 | 3.30 | 30.00 | 15.00 | 2.50 | 6.80 | R | ● |
| 210200D068 | 7.00 | 2.00 | 2.70 | 6.20 | 3.30 | 37.00 | 22.00 | 2.50 | 6.80 | R | ● |
| 290200D068 | 7.00 | 2.00 | 2.70 | 6.20 | 3.30 | 45.00 | 29.00 | 2.50 | 6.80 | R | ● |
| MINGL07- 090100D060 | 7.00 | 1.00 | 1.80 | 5.30 | 3.10 | 25.00 | 10.00 | 1.80 | 6.00 | L | ● |
| 090150D060 | 7.00 | 1.50 | 1.80 | 5.30 | 3.10 | 25.00 | 10.00 | 1.80 | 6.00 | L | ● |
| 140200D068 | 7.00 | 2.00 | 2.70 | 6.20 | 3.30 | 30.00 | 15.00 | 2.50 | 6.80 | L | ● |



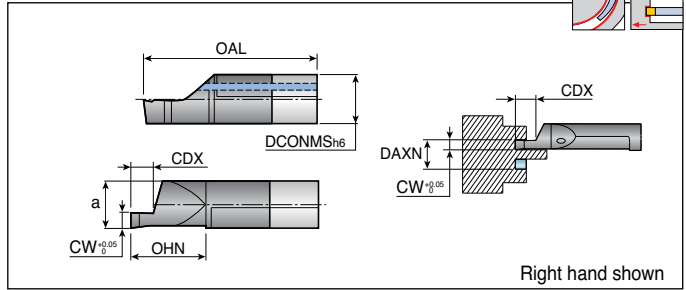
• The corner radius is less than 0.1mm

●: Standard items

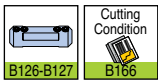
MINA R 07



Mini carbide bars for grooving along shaft



| Designation | Dimension (mm) | | | | | | | R/L | Grade TT9030 |
|---------------------------|----------------|------|------|-------|-------|------|------|-----|-----------------|
| | DCONMS | CW | a | OAL | OHN | CDX | DAXN | | |
| MINAR07-200200D060 | 7.00 | 2.00 | 5.20 | 36.00 | 21.00 | 4.00 | 6.00 | R | ● |
| | | | | | | | | | |



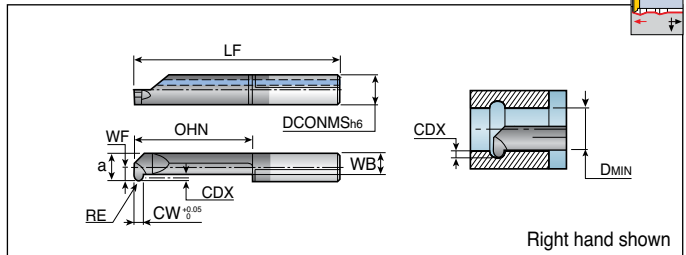
• The corner radius is less than 0.1mm

● Standard items

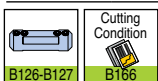
MINR R 07



Mini carbide bars, full radius for internal turning and profiling



| Designation | Dimension (mm) | | | | | | | | | | R/L | Grade TT9030 |
|---------------------------|----------------|------|------|------|------|------|-------|-------|------|------|-----|-----------------|
| | DCONMS | CW | WF | a | WB | RE | LF | OHN | CDX | DMIN | | |
| MINRR07-190050D050 | 7.00 | 1.00 | 0.90 | 4.40 | 3.10 | 0.50 | 35.00 | 20.00 | 1.00 | 5.00 | R | ● |
| 240050D060 | 7.00 | 1.00 | 1.80 | 5.30 | 3.20 | 0.50 | 40.00 | 25.00 | 1.80 | 6.00 | R | ● |
| 290050D068 | 7.00 | 1.00 | 2.80 | 6.30 | 3.55 | 0.50 | 45.00 | 30.00 | 2.50 | 6.80 | R | ● |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |



● Standard items

TV **E** **R** **4** **07** **010** **45**
1 2 3 4 5 6 7

1 TaeguTec TOP-CUT series

2 Application type

E External turning
R Reverse turning
B Back turning
T Threading
P Parting

3 Hand of tool

R Right-hand
L Left-hand

4 Insert thickness

4 3.97mm

5 Width of insert

07 0.7mm
10 1.0mm
12 1.2mm
15 1.5mm
18 1.8mm
20 2.0mm

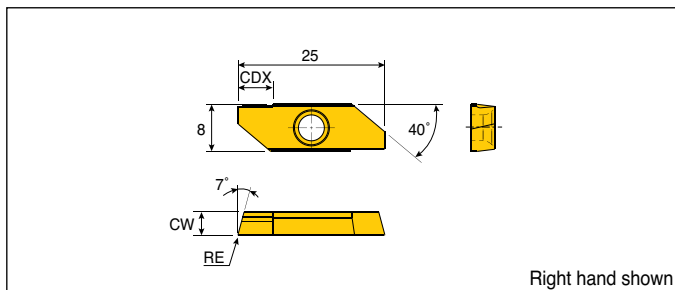
6 Corner radius

000 0mm
003 0.03mm
005 0.05mm
010 0.10mm
015 0.15mm

7 CDX (TVPR/L only)

45 4.5mm
50 5.0mm
60 6.0mm

General turning inserts



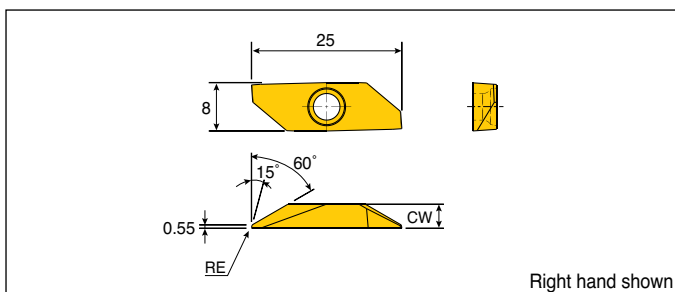
| Designation | ap (mm) | Feed (mm/rev) | Dimension (mm) | | | Grade (TT9010) | |
|---------------------|---------|---------------|----------------|------|-----|----------------|---|
| | | | CW | RE | CDX | R | L |
| TVER/L 40003 | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.03 | 5.5 | ● | |
| 40010 | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.10 | 5.5 | ● | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



●: Standard items

TVRR/L

Reverse turning inserts

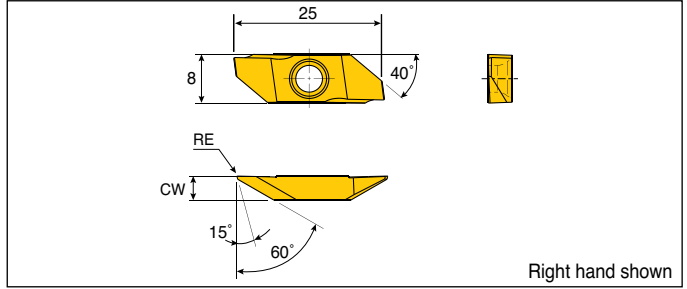


| Designation | ap (mm) | Feed (mm/rev) | Dimension (mm) | | | Grade (TT9010) | |
|------------------------|---------|---------------|----------------|------|-----|----------------|---|
| | | | CW | RE | CDX | R | L |
| TVRR/L 40003-60 | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.03 | 5.5 | ● | |
| 40010-60 | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.10 | 5.5 | ● | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



●: Standard items

Back turning inserts



| Designation | ap (mm) | Feed (mm/rev) | Dimension (mm) | | | Grade (TT9010) | |
|------------------------------|---------|---------------|----------------|------|-----|----------------|---|
| | | | CW | RE | CDX | R | L |
| TVBR/L 40003 | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.03 | 5.5 | ● | ● |
| 40005 | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.05 | 5.5 | ● | ● |
| 40010 | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.10 | 5.5 | ● | ● |
| 40015 | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.15 | 5.5 | ● | ● |
| 40005-H⁽¹⁾ | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.05 | 5.5 | ● | ● |
| 40010-H⁽¹⁾ | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.10 | 5.5 | ● | ● |
| 40015-H⁽¹⁾ | 0.1-5.5 | 0.01-0.15 | 3.97 | 0.15 | 5.5 | ● | ● |

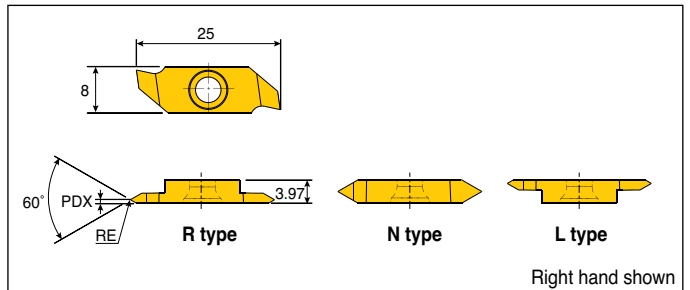


● ⁽¹⁾ With honed edges

●: Standard items

TVTR/L

Threading inserts



| Designation | Dimension (mm) | | | | Grade (TT9010) | |
|-----------------------|----------------|-----|-----|------|----------------|---|
| | TPN | TPX | PDX | RE | R | L |
| TVTR/L 41203-R | 0.5 | 1.0 | 0.6 | 0.03 | ● | |
| 40003-N | 0.5 | 2.0 | 2.1 | 0.03 | ● | |
| 41203-L | 0.5 | 1.0 | 0.6 | 0.03 | | |
| | | | | | | |
| | | | | | | |



- TVTR 41203-R/L → pitch range: 0.5 - 1.0mm
- TVTR 40003-N → pitch range: 0.5 - 2.0mm
- TPN: Thread pitch minimum (mm), TPX: Thread pitch maximum (mm)

●: Standard items

T **Q** **J** - **27** - **3** - **0.2** - **6** - **R**

1 2 3 4 5 6 7 8

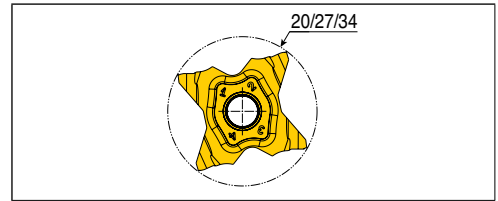
1 TaeguTec

2 QUAD-RUSH

3 Chip breaker type

| | | |
|------------|-----------|-------------------------|
| | | |
| C | J | S |
| For medium | For light | For light & tailor made |

4 Circular circumference of the insert



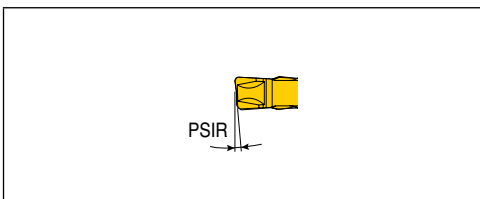
5 Width of insert

| | |
|--|---|
| | <p>1.00 = 1.0 mm</p> <p>1.50 = 1.5 mm</p> <p>2.53 = 2.53 mm</p> <p>3.18 = 3.18 mm</p> |
|--|---|

6 Corner radius

| | |
|--|---|
| | <p>0.10 = 0.1 mm</p> <p>0.20 = 0.2 mm</p> <p>0.30 = 0.3 mm</p> <p>0.40 = 0.4 mm</p> |
|--|---|

7 Lead angle



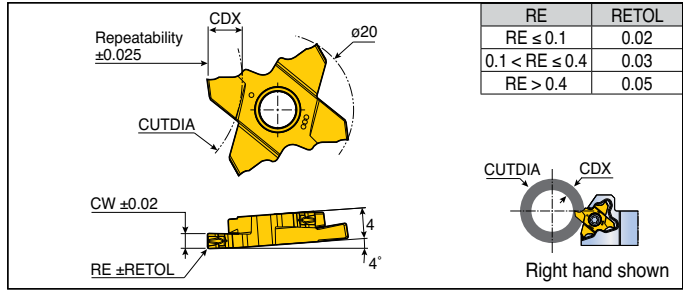
8 Hand of insert

| | |
|-----------|------------|
| | |
| L | R |
| Left-hand | Right-hand |

TQJ 20

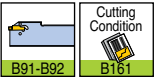


Precision grooving and parting inserts with J-Type chip breaker



| RE | RETOL |
|----------------|-------|
| RE ≤ 0.1 | 0.02 |
| 0.1 < RE ≤ 0.4 | 0.03 |
| RE > 0.4 | 0.05 |

| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | Grade |
|-----------------------------|---------------|------|------|-----|-----------|-----------|-----------|-----------|-----------|-------|
| | | | | | CDX ≤ 2.7 | CDX ≤ 3.5 | CDX ≤ 4.0 | CDX ≤ 4.5 | CDX ≤ 5.0 | |
| TQJ 20-1.00-0.10-R/L | 0.03-0.07 | 1.00 | 0.10 | 2.7 | N.L. | - | - | - | - | ● |
| 20-1.50-0.20-R/L | 0.03-0.08 | 1.50 | 0.20 | 5.0 | N.L. | 70 | 50 | 30 | 16 | ● |
| 20-2.00-0.20-R/L | 0.04-0.10 | 2.00 | 0.20 | 5.0 | N.L. | 70 | 50 | 30 | 16 | ● |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |



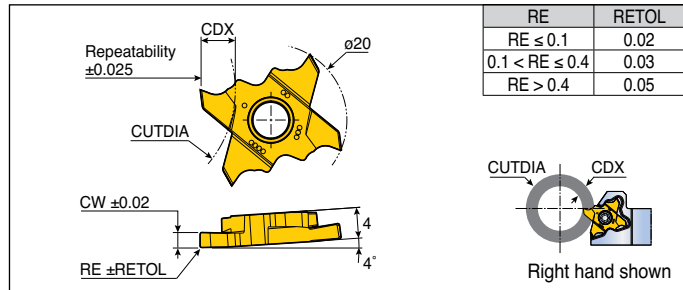
● N.L.: No limit

●: Standard items

TQS 20

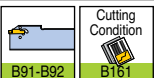


Precision grooving and parting inserts with ground chip breaker



| RE | RETOL |
|----------------|-------|
| RE ≤ 0.1 | 0.02 |
| 0.1 < RE ≤ 0.4 | 0.03 |
| RE > 0.4 | 0.05 |

| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | Grade | |
|-----------------------------|---------------|------|------|-----|-----------|-----------|-----------|-----------|-----------|-------|-----------|
| | | | | | CDX ≤ 2.2 | CDX ≤ 2.7 | CDX ≤ 3.5 | CDX ≤ 4.0 | CDX ≤ 4.5 | | CDX ≤ 5.0 |
| TQS 20-0.50-0.05-R/L | 0.03-0.07 | 0.50 | 0.05 | 2.2 | N.L. | - | - | - | - | ● | |
| 20-1.00-0.10-R/L | 0.03-0.07 | 1.00 | 0.10 | 2.7 | N.L. | N.L. | - | - | - | ● | |
| 20-1.50-0.10-R/L | 0.03-0.10 | 1.50 | 0.10 | 5.0 | N.L. | N.L. | 70 | 50 | 30 | 16 | ● |
| 20-2.00-0.10-R/L | 0.04-0.12 | 2.00 | 0.10 | 5.0 | N.L. | N.L. | 70 | 50 | 30 | 16 | ● |
| 20-2.00-1.00-R/L* | 0.05-0.13 | 2.00 | 1.00 | 5.0 | N.L. | N.L. | 70 | 50 | 30 | 16 | ● |
| 20-2.50-0.10-R/L | 0.04-0.15 | 2.50 | 0.10 | 5.0 | N.L. | N.L. | 70 | 50 | 30 | 16 | ● |
| 20-3.00-0.10-R/L | 0.04-0.16 | 3.00 | 0.10 | 5.0 | N.L. | N.L. | 70 | 50 | 30 | 16 | ● |
| 20-3.00-1.50-R/L* | 0.04-0.16 | 3.00 | 1.50 | 5.0 | N.L. | N.L. | 70 | 50 | 30 | 16 | ● |



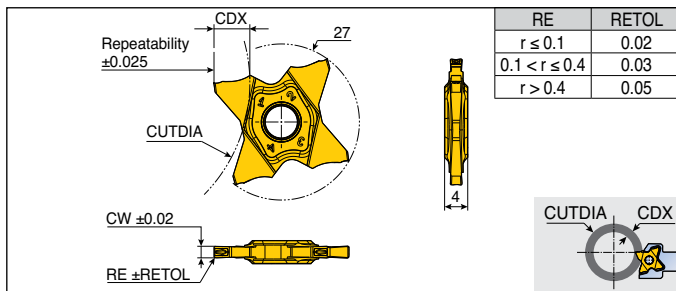
● N.L.: No limit
● *: Full radius insert

●: Standard items

TQJ 27

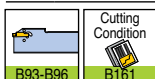


Precision grooving and parting inserts



| RE | RETOL |
|--------------------|-------|
| $r \leq 0.1$ | 0.02 |
| $0.1 < r \leq 0.4$ | 0.03 |
| $r > 0.4$ | 0.05 |

| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | | | | | | Grade | |
|-------------------------|---------------|------|------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|---|
| | | | | | T \leq 3.0 | T \leq 3.5 | T \leq 4.0 | T \leq 4.5 | T \leq 5.0 | T \leq 5.5 | T \leq 5.7 | T \leq 6.0 | T \leq 6.2 | T \leq 6.4 | | |
| TQJ 27-0.50-0.00 | 0.02-0.04 | 0.50 | 0.00 | 1.0 | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-0.50-0.04 | 0.02-0.04 | 0.50 | 0.04 | 2.5 | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-0.75-0.10 | 0.02-0.05 | 0.75 | 0.10 | 2.5 | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-0.80-0.00 | 0.02-0.05 | 0.80 | 0.00 | 1.6 | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.00-0.06 | 0.03-0.07 | 1.00 | 0.06 | 3.5 | N.L.. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-1.00-0.10 | 0.03-0.07 | 1.00 | 0.10 | 3.5 | N.L.. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-1.04-0.00 | 0.03-0.07 | 1.04 | 0.00 | 2.0 | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.20-0.00 | 0.03-0.07 | 1.20 | 0.00 | 2.0 | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.25-0.10 | 0.03-0.07 | 1.25 | 0.10 | 3.5 | N.L.. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-1.25-0.20 | 0.03-0.07 | 1.25 | 0.20 | 3.5 | N.L.. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-1.40-0.00 | 0.03-0.08 | 1.40 | 0.00 | 2.0 | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.47-0.00 | 0.03-0.08 | 1.47 | 0.00 | 2.5 | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.50-0.10 | 0.03-0.08 | 1.50 | 0.10 | 5.7 | N.L.. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-1.50-0.20 | 0.03-0.08 | 1.50 | 0.20 | 5.7 | N.L.. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-1.57-0.10 | 0.03-0.08 | 1.57 | 0.10 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.57-0.15 | 0.03-0.08 | 1.57 | 0.15 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.70-0.10 | 0.03-0.08 | 1.70 | 0.10 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.75-0.10 | 0.03-0.08 | 1.75 | 0.10 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.75-0.20 | 0.03-0.08 | 1.75 | 0.20 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.78-0.18 | 0.04-0.10 | 1.78 | 0.18 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.85-0.20 | 0.04-0.10 | 1.85 | 0.20 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.96-0.15 | 0.04-0.10 | 1.96 | 0.15 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-2.00-0.10 | 0.04-0.10 | 2.00 | 0.10 | 6.4 | N.L.. | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | - | ● |
| 27-2.00-0.20 | 0.04-0.10 | 2.00 | 0.20 | 6.4 | N.L.. | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | - | ● |
| 27-2.22-0.15 | 0.04-0.10 | 2.22 | 0.15 | 3.5 | N.L.. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-2.30-0.20 | 0.04-0.10 | 2.30 | 0.20 | 3.5 | N.L.. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-2.39-0.15 | 0.04-0.10 | 2.39 | 0.15 | 5.7 | N.L.. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-2.47-0.20 | 0.04-0.10 | 2.47 | 0.20 | 5.7 | N.L.. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-2.50-0.10 | 0.04-0.10 | 2.50 | 0.10 | 5.7 | N.L.. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-2.50-0.30 | 0.05-0.12 | 2.50 | 0.30 | 5.7 | N.L.. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-2.70-0.10 | 0.05-0.12 | 2.70 | 0.10 | 6.2 | N.L.. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | - | - | ● |
| 27-2.87-0.20 | 0.05-0.12 | 2.87 | 0.20 | 6.2 | N.L.. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | - | - | ● |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |



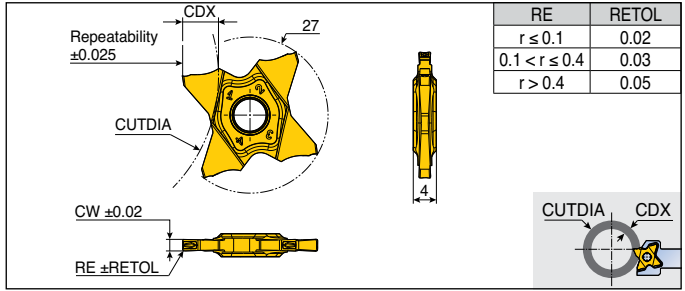
● N.L. = No limit

●: Standard items

TQJ 27

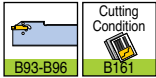


Precision grooving and parting inserts



| RE | RETOL |
|--------------------|-------|
| $r \leq 0.1$ | 0.02 |
| $0.1 < r \leq 0.4$ | 0.03 |
| $r > 0.4$ | 0.05 |

| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | | | | | | Grade |
|-------------------------|---------------|------|------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| | | | | | T \leq 3.0 | T \leq 3.5 | T \leq 4.0 | T \leq 4.5 | T \leq 5.0 | T \leq 5.5 | T \leq 5.7 | T \leq 6.0 | T \leq 6.2 | T \leq 6.4 | |
| TQJ 27-3.00-0.00 | 0.05-0.12 | 3.00 | 0.00 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | ● |
| 27-3.00-0.20 | 0.05-0.12 | 3.00 | 0.20 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | ● |
| 27-3.00-0.30 | 0.05-0.12 | 3.00 | 0.30 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | ● |
| 27-3.00-0.40 | 0.05-0.12 | 3.00 | 0.40 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | ● |
| 27-3.15-0.15 | 0.05-0.12 | 3.15 | 0.15 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 68 | ● |
| 27-3.18-0.20 | 0.05-0.12 | 3.18 | 0.20 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 68 | ● |



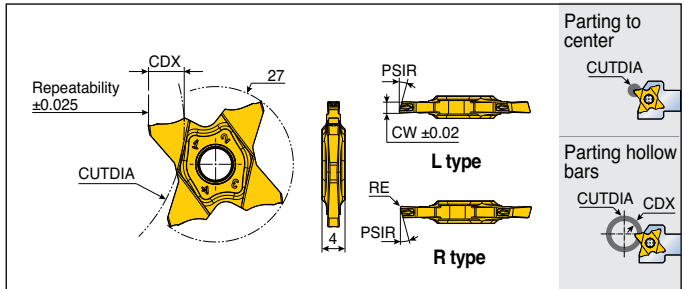
● N.L. = No limit

●: Standard items

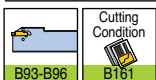
TQJ 27



Parting inserts



| Designation | Feed (mm/rev) | CW | RE | PSIR | Parting to center | | Parting hollow bars | | Grade |
|--------------------------|---------------|------|------|------|-------------------|-----|---------------------|-----|-------|
| | | | | | CUTDIA | CDX | CUTDIA | CDX | |
| TQJ 27-1.00-15R/L | 0.02-0.06 | 1.00 | 0.06 | 15° | 7.0 | 3.5 | 600 | ● | |
| 27-1.50-6R/L | 0.02-0.06 | 1.50 | 0.06 | 6° | 12.0 | 5.7 | 35 | ● | |
| 27-1.50-15R/L | 0.02-0.06 | 1.50 | 0.06 | 15° | 12.0 | 5.7 | 35 | ● | |
| 27-2.00-6R/L | 0.03-0.08 | 2.00 | 0.10 | 6° | 13.0 | 6.4 | 30 | ● | |
| 27-2.00-15R/L | 0.03-0.08 | 2.00 | 0.10 | 15° | 13.0 | 6.4 | 30 | ● | |

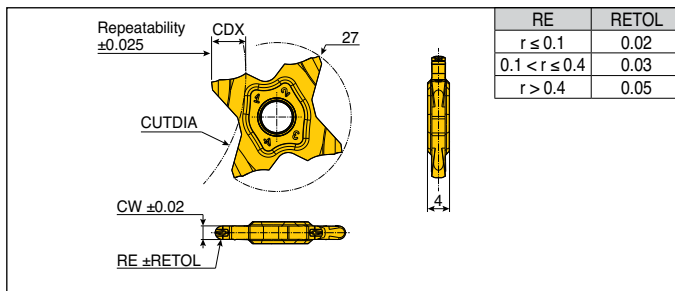


●: Standard items

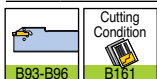
TQJ 27



Full radius inserts



| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | | | | | | Grade | |
|-------------------------|---------------|------|------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|--------|
| | | | | | T \leq 3.0 | T \leq 3.5 | T \leq 4.0 | T \leq 4.5 | T \leq 5.0 | T \leq 5.5 | T \leq 5.7 | T \leq 6.0 | T \leq 6.2 | T \leq 6.4 | | TT9080 |
| TQJ 27-1.57-0.79 | 0.05-0.08 | 1.57 | 0.79 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-2.00-1.00 | 0.05-0.11 | 2.00 | 1.00 | 3.5 | N.L.. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-2.39-1.20 | 0.05-0.11 | 2.39 | 1.20 | 5.7 | N.L.. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-3.00-1.50 | 0.06-0.12 | 3.00 | 1.50 | 6.4 | N.L.. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | - | ● |



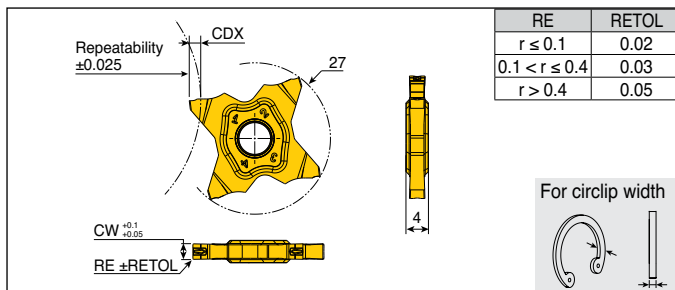
• N.L. = No limit

• Standard items

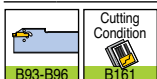
TQJ 27



DIN 471 circlip grooving and shallow grooving inserts



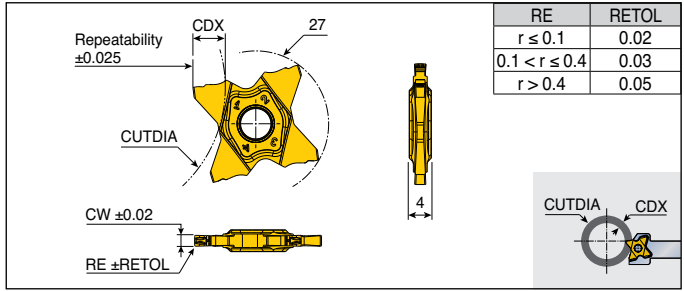
| Designation | Feed (mm/rev) | CW | RE | CDX | For circlip width | Grade |
|----------------------------|---------------|------|------|------|-------------------|--------|
| | | | | | | TT9080 |
| TQJ 27-1.10-0.08-CG | 0.03-0.07 | 1.10 | 0.08 | 1.50 | 1.10 | ● |
| 27-1.30-0.08-CG | 0.03-0.07 | 1.30 | 0.08 | 1.50 | 1.30 | ● |
| 27-1.60-0.08-CG | 0.03-0.08 | 1.60 | 0.08 | 2.00 | 1.60 | ● |
| 27-1.85-0.08-CG | 0.03-0.08 | 1.85 | 0.08 | 2.00 | 1.85 | ● |
| 27-2.15-0.08-CG | 0.04-0.10 | 2.15 | 0.08 | 2.50 | 2.15 | ● |
| 27-2.65-0.15-CG | 0.05-0.12 | 2.65 | 0.15 | 2.50 | 2.65 | ● |



• When selecting insert, please keep in your mind insert tolerance

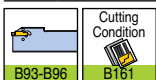
• Standard items

Precision grooving and parting inserts



| RE | RETOL |
|--------------------|-------|
| $r \leq 0.1$ | 0.02 |
| $0.1 < r \leq 0.4$ | 0.03 |
| $r > 0.4$ | 0.05 |

| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | | | | | | | Grade |
|-------------------------|---------------|------|------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| | | | | | T \leq 3.0 | T \leq 3.5 | T \leq 4.0 | T \leq 4.5 | T \leq 5.0 | T \leq 5.5 | T \leq 5.7 | T \leq 6.0 | T \leq 6.2 | T \leq 6.4 | T \leq 6.5 | |
| TQC 27-1.50-0.10 | 0.05-0.08 | 1.50 | 0.10 | 5.7 | N.L. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-1.50-0.20 | 0.05-0.06 | 1.50 | 0.20 | 5.7 | N.L. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-1.57-0.15 | 0.05-0.08 | 1.57 | 0.15 | 3.0 | N.L. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.70-0.10 | 0.05-0.09 | 1.70 | 0.10 | 3.0 | N.L. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.75-0.10 | 0.05-0.10 | 1.75 | 0.10 | 3.0 | N.L. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.75-0.20 | 0.05-0.09 | 1.75 | 0.20 | 3.0 | N.L. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.78-0.18 | 0.05-0.11 | 1.78 | 0.18 | 3.0 | N.L. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.85-0.20 | 0.05-0.11 | 1.85 | 0.20 | 3.0 | N.L. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-1.96-0.15 | 0.05-0.11 | 1.96 | 0.15 | 3.0 | N.L. | - | - | - | - | - | - | - | - | - | - | ● |
| 27-2.00-0.10 | 0.05-0.17 | 2.00 | 0.10 | 6.4 | N.L. | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | - | ● |
| 27-2.00-0.20 | 0.05-0.15 | 2.00 | 0.20 | 6.4 | N.L. | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | - | ● |
| 27-2.22-0.15 | 0.05-0.15 | 2.22 | 0.15 | 3.5 | N.L. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-2.30-0.20 | 0.05-0.16 | 2.30 | 0.20 | 3.5 | N.L. | 600 | - | - | - | - | - | - | - | - | - | ● |
| 27-2.39-0.15 | 0.05-0.16 | 2.39 | 0.15 | 5.7 | N.L. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-2.47-0.20 | 0.05-0.19 | 2.47 | 0.20 | 5.7 | N.L. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-2.50-0.10 | 0.05-0.20 | 2.50 | 0.10 | 5.7 | N.L. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-2.50-0.30 | 0.05-0.17 | 2.50 | 0.30 | 5.7 | N.L. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | ● |
| 27-2.70-0.10 | 0.05-0.19 | 2.70 | 0.10 | 6.2 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | - | - | ● |
| 27-2.87-0.20 | 0.05-0.19 | 2.87 | 0.20 | 6.2 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | - | - | ● |
| 27-3.00-0.00 | 0.05-0.11 | 3.00 | 0 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | - | ● |
| 27-3.00-0.20 | 0.06-0.23 | 3.00 | 0.20 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | - | ● |
| 27-3.00-0.30 | 0.06-0.25 | 3.00 | 0.30 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | - | ● |
| 27-3.00-0.40 | 0.06-0.25 | 3.00 | 0.40 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | - | ● |
| 27-3.15-0.15 | 0.06-0.21 | 3.15 | 0.15 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 68 | - | ● |
| 27-3.18-0.20 | 0.06-0.23 | 3.18 | 0.20 | 6.4 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 68 | - | ● |
| 27-3.30-0.10 | 0.06-0.23 | 3.30 | 0.10 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 85 | 65 | 50 | 40 | 35 | ● |
| 27-3.48-0.20 | 0.06-0.23 | 3.48 | 0.20 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 85 | 65 | 50 | 40 | 35 | ● |
| 27-3.56-0.20 | 0.06-0.23 | 3.56 | 0.20 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 85 | 65 | 55 | 40 | 35 | ● |
| 27-3.74-0.20 | 0.06-0.23 | 3.74 | 0.20 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 85 | 65 | 55 | 40 | 35 | ● |
| 27-3.98-0.20 | 0.07-0.30 | 3.98 | 0.20 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 40 | 45 | ● |
| 27-4.00-0.30 | 0.07-0.30 | 4.00 | 0.30 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 40 | 45 | ● |
| 27-4.00-0.40 | 0.07-0.30 | 4.00 | 0.40 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 40 | 45 | ● |
| 27-4.00-0.80 | 0.07-0.30 | 4.00 | 0.80 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 40 | 45 | ● |
| 27-4.15-0.15 | 0.07-0.30 | 4.15 | 0.15 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 40 | 45 | ● |
| 27-4.23-0.10 | 0.07-0.30 | 4.23 | 0.10 | 6.5 | N.L. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | 65 | ● |



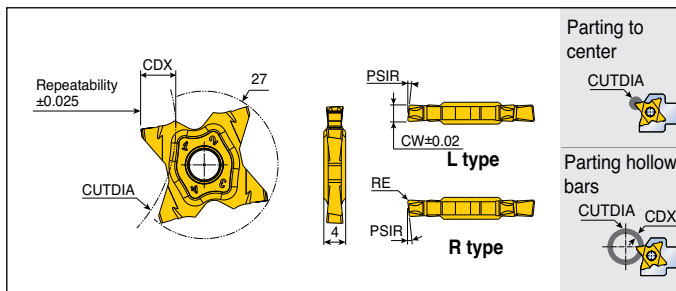
● N.L. = No limit

●: Standard items

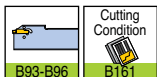
TQC 27



Parting inserts



| Designation | Feed (mm/rev) | CW | RE | PSIR | Parting to center | | | Grade |
|-------------------------|---------------|------|------|------|-------------------|-----|--------|-------|
| | | | | | CUTDIA | CDX | CUTDIA | |
| TQC 27-1.50-6R/L | 0.03-0.07 | 1.50 | 0.06 | 6° | 12.0 | 5.7 | 35 | ● |
| 27-1.50-15R/L | 0.03-0.07 | 1.50 | 0.06 | 15° | 12.0 | 5.7 | 35 | ● |
| 27-2.00-6R/L | 0.04-0.14 | 2.00 | 0.10 | 6° | 13.0 | 6.4 | 30 | ● |
| 27-2.00-15R/L | 0.04-0.14 | 2.00 | 0.10 | 15° | 13.0 | 6.4 | 30 | ● |
| | | | | | | | | |
| | | | | | | | | |

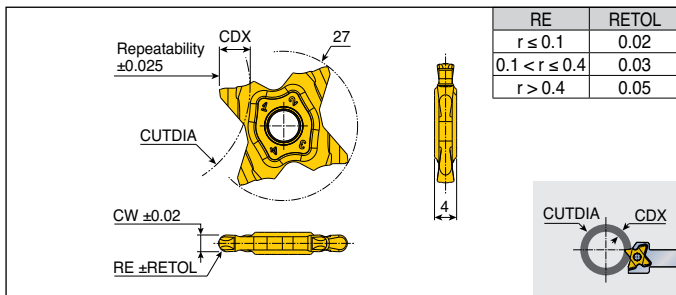


●: Standard items

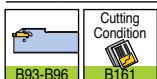
TQC 27



Full radius inserts



| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | | | | | | Grade | | |
|-------------------------|---------------|------|------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|---|---|
| | | | | | T \leq 3.0 | T \leq 3.5 | T \leq 4.0 | T \leq 4.5 | T \leq 5.0 | T \leq 5.5 | T \leq 5.7 | T \leq 6.0 | T \leq 6.2 | T \leq 6.4 | | | |
| TQC 27-1.57-0.79 | 0.05-0.09 | 1.57 | 0.79 | 3.0 | N.L.. | - | - | - | - | - | - | - | - | - | - | - | ● |
| 27-2.00-1.00 | 0.05-0.13 | 2.00 | 1.00 | 3.5 | N.L.. | 600 | - | - | - | - | - | - | - | - | - | - | ● |
| 27-2.39-1.20 | 0.06-0.17 | 2.39 | 1.20 | 5.7 | N.L.. | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | - | ● |
| 27-3.00-1.50 | 0.06-0.20 | 3.00 | 1.50 | 6.4 | N.L.. | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | - | - | ● |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

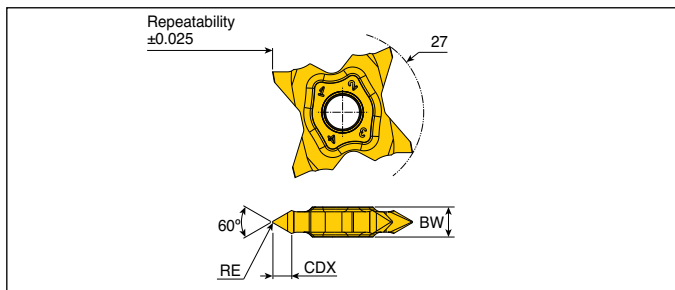


● N.L. = No limit

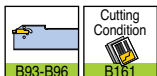
●: Standard items

TQS 27-MT

Partial profile 60° threading inserts



| Designation | Dimension (mm) | | | | | | | Grade |
|------------------------|----------------|-----|------|------|------|----|-----|--------|
| | TPN | TPX | TPIX | TPIN | RE | BW | CDX | TT9080 |
| TQS 27-4MT-0.05 | 0.45 | 3 | 56 | 8 | 0.05 | 4 | 2.8 | ● |
| 27-4MT-0.14 | 1.11 | 3 | 23 | 8 | 0.14 | 4 | 2.7 | ● |
| 27-5MT-0.15 | 1.25 | 3 | 20 | 8 | 0.15 | 5 | 3.1 | ● |
| 27-5MT-0.20 | 1.63 | 3 | 16 | 8 | 0.20 | 5 | 3.1 | ● |
| 27-6MT-0.25 | 1.94 | 3 | 13 | 8 | 0.25 | 6 | 3.6 | ● |
| | | | | | | | | |
| | | | | | | | | |

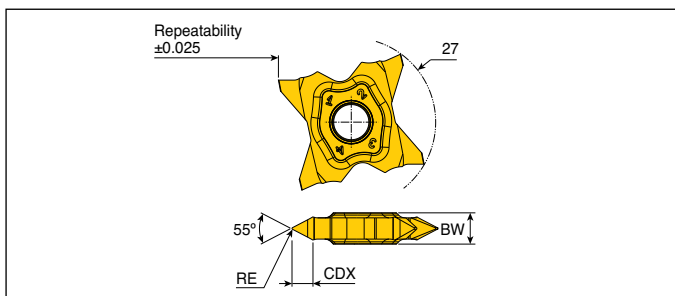


- D: Diameter of thread
- TPN: Thread pitch minimum (mm)
- TPX: Thread pitch maximum (mm)
- TPIX: Thread per inch maximum
- TPIN: Thread per inch minimum

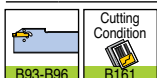
●: Standard items

TQS 27-WT

Partial profile 55° threading inserts



| Designation | Dimension (mm) | | | | | Grade |
|------------------------|----------------|------|------|----|-----|--------|
| | TPIX | TPIN | RE | BW | CDX | TT9080 |
| TQS 27-4WT-0.05 | 54 | 10 | 0.05 | 4 | 2.9 | ● |
| 27-5WT-0.15 | 19 | 10 | 0.15 | 5 | 3.3 | ● |
| 27-6WT-0.25 | 12 | 9 | 0.25 | 6 | 3.9 | ● |
| | | | | | | |
| | | | | | | |

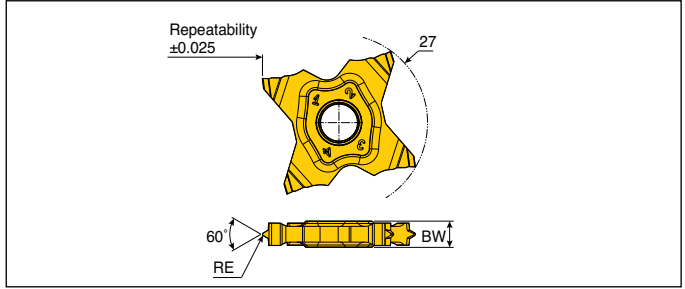
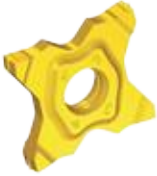


- D: Diameter of thread
- TPIX: Thread per inch maximum
- TPIN: Thread per inch minimum

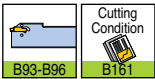
●: Standard items

TQS 27-ISO

ISO metric full profile, external threading inserts



| Designation | Dimension (mm) | | | Grade |
|-----------------------|----------------|------|----|--------|
| | TP | RE | BW | TT9080 |
| TQS 27-0.5-ISO | 0.50 | 0.08 | 4 | ● |
| 27-0.75-ISO | 0.75 | 0.11 | 4 | ● |
| 27-0.8-ISO | 0.80 | 0.12 | 4 | ● |
| 27-1.0-ISO | 1.00 | 0.14 | 4 | ● |
| 27-1.25-ISO | 1.25 | 0.18 | 4 | ● |
| 27-1.5-ISO | 1.50 | 0.22 | 4 | ● |
| 27-1.75-ISO | 1.75 | 0.25 | 4 | ● |
| 27-2.0-ISO | 2.00 | 0.28 | 4 | ● |

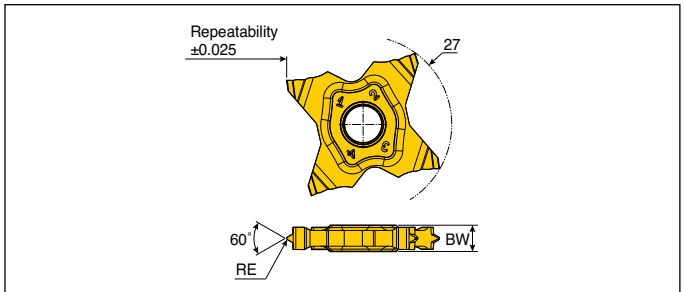
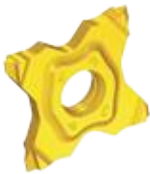


● TP: Thread pitch (mm)

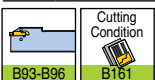
●: Standard items

TQS 27-UN

American UN (UNC, UNF, UNEF) full profile, external threading inserts



| Designation | Dimension (mm) | | | Grade |
|---------------------|----------------|------|----|--------|
| | TP | RE | BW | TT9080 |
| TQS 27-24-UN | 24 | 0.13 | 4 | ● |
| 27-20-UN | 20 | 0.16 | 4 | ● |
| 27-18-UN | 18 | 0.16 | 4 | ● |
| 27-16-UN | 16 | 0.21 | 4 | ● |
| 27-14-UN | 14 | 0.23 | 4 | ● |
| 27-12-UN | 12 | 0.27 | 4 | ● |



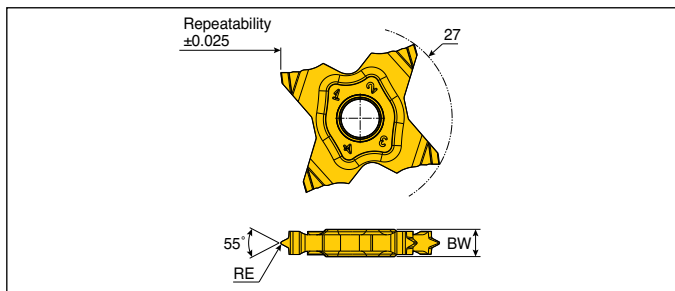
● TPI: Thread per inch

●: Standard items

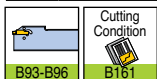
TQS 27-W



Whitworth (BSW, BSF, BSP) full profile, external threading inserts



| Designation | Dimension (mm) | | | Grade |
|--------------------|----------------|------|----|--------|
| | TP | RE | BW | TT9080 |
| TQS 27-28-W | 28 | 0.09 | 4 | ● |
| 27-19-W | 19 | 0.15 | 4 | ● |
| 27-18-W | 18 | 0.16 | 4 | ● |
| 27-16-W | 16 | 0.19 | 4 | ● |
| 27-14-W | 14 | 0.21 | 4 | ● |
| 27-12-W | 12 | 0.25 | 4 | ● |



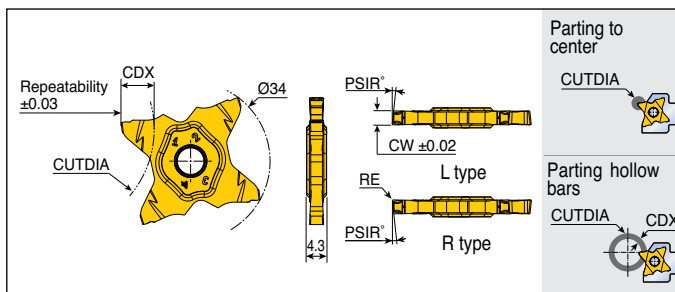
● TPI: Thread per inch

● Standard items

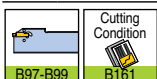
TQC 34



Parting inserts



| Designation | Feed (mm/rev) | CW | RE | PSIR° | Parting to center | | Parting hollow bars | | Grade |
|-------------------------|---------------|------|------|-------|-------------------|-----|---------------------|-----|-------|
| | | | | | CUTDIA | CDX | CUTDIA | CDX | |
| TQC 34-1.50-8R/L | 0.03-0.10 | 1.50 | 0.07 | 8 | 18.5 | 9 | 40 | ● | |
| 34-2.00-6R/L | 0.03-0.15 | 2.00 | 0.10 | 6 | 18.5 | 9 | 40 | ● | |
| 34-2.00-15R/L | 0.03-0.15 | 2.00 | 0.10 | 15 | 18.5 | 9 | 40 | ● | |
| 34-3.00-6R/L | 0.03-0.18 | 3.00 | 0.20 | 6 | 20.0 | 10 | 20 | ● | |



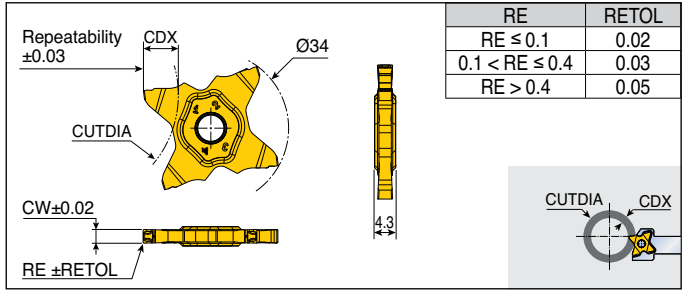
● Standard items



TQC 34

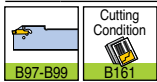


Deep grooving and parting inserts



| RE | RETOL |
|----------------|-------|
| RE ≤ 0.1 | 0.02 |
| 0.1 < RE ≤ 0.4 | 0.03 |
| RE > 0.4 | 0.05 |

| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | | Grade | |
|-------------------------|---------------|------|------|------|---------|---------|---------|---------|---------|---------|-------|----------|
| | | | | | CDX≤4.0 | CDX≤5.0 | CDX≤6.0 | CDX≤7.0 | CDX≤8.0 | CDX≤9.0 | | CDX≤10.0 |
| TQC 34-1.50-0.15 | 0.05-0.12 | 1.50 | 0.15 | 9.0 | N.L. | 400 | 190 | 125 | 90 | 40 | - | ● |
| 34-2.00-0.20 | 0.05-0.18 | 2.00 | 0.20 | 9.0 | N.L. | 400 | 190 | 125 | 90 | 40 | - | ● |
| 34-2.30-0.20 | 0.05-0.18 | 2.30 | 0.20 | 9.0 | N.L. | 400 | 190 | 125 | 90 | 45 | - | ● |
| 34-2.47-0.20 | 0.05-0.18 | 2.47 | 0.20 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 45 | 20 | ● |
| 34-2.50-0.20 | 0.05-0.21 | 2.50 | 0.20 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 45 | 20 | ● |
| 34-2.70-0.10 | 0.05-0.21 | 2.70 | 0.10 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 45 | 20 | ● |
| 34-3.00-0.20 | 0.05-0.25 | 3.00 | 0.20 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 50 | 20 | ● |
| 34-3.00-0.40 | 0.05-0.25 | 3.00 | 0.40 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 50 | 20 | ● |
| 34-3.18-0.20 | 0.05-0.25 | 3.18 | 0.20 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 50 | 20 | ● |
| 34-3.50-0.25 | 0.07-0.30 | 3.50 | 0.25 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 50 | 20 | ● |
| 34-4.00-0.30 | 0.07-0.30 | 4.00 | 0.30 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 50 | 20 | ● |



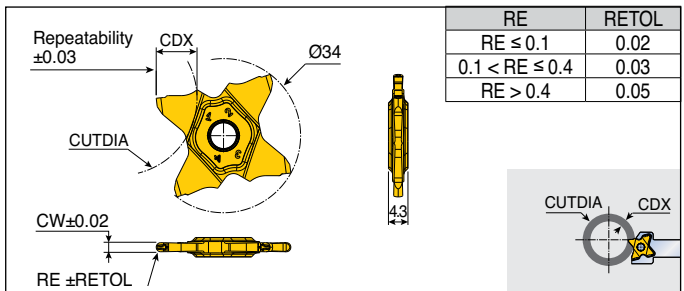
● N.L. = No limit

● Standard items

TQC 34

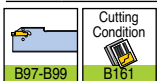


Full radius inserts



| RE | RETOL |
|----------------|-------|
| RE ≤ 0.1 | 0.02 |
| 0.1 < RE ≤ 0.4 | 0.03 |
| RE > 0.4 | 0.05 |

| Designation | Feed (mm/rev) | CW | RE | CDX | CUTDIA | | | | | | Grade | |
|-------------------------|---------------|------|------|------|---------|---------|---------|---------|---------|---------|-------|----------|
| | | | | | CDX≤4.0 | CDX≤5.0 | CDX≤6.0 | CDX≤7.0 | CDX≤8.0 | CDX≤9.0 | | CDX≤10.0 |
| TQC 34-2.00-1.00 | 0.05-0.11 | 2.00 | 1.00 | 9.0 | N.L. | 400 | 190 | 125 | 90 | 40 | - | ● |
| 34-2.39-1.20 | 0.05-0.11 | 2.39 | 1.20 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 45 | 20 | ● |
| 34-3.00-1.50 | 0.06-0.12 | 3.00 | 1.50 | 10.0 | N.L. | 400 | 190 | 125 | 90 | 50 | 20 | ● |

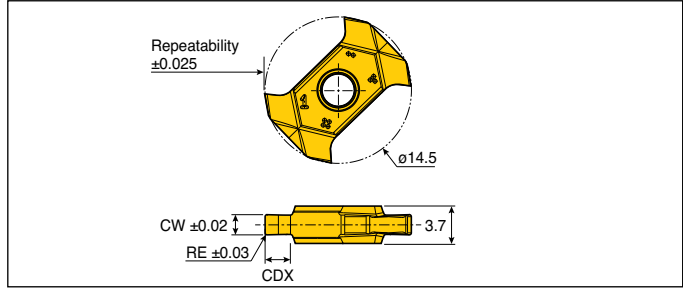


● N.L. = No limit

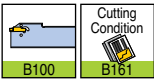
● Standard items

TQIS 14

4 cutting edge inserts for internal shallow grooving



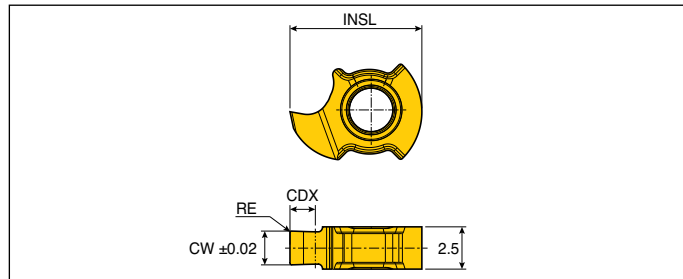
| Designation | Feed (mm/rev) | Dimension (mm) | | | Grade |
|--------------------------|---------------|----------------|------|------|-------|
| | | CW | RE | CDX | |
| TQIS 14-1.50-0.10 | 0.02-0.07 | 1.50 | 0.10 | 2.00 | ● |
| 14-2.00-0.10 | 0.03-0.08 | 2.00 | 0.10 | 2.50 | ● |
| 14-2.00-0.20 | 0.03-0.08 | 2.00 | 0.20 | 2.50 | ● |
| 14-2.50-0.20 | 0.03-0.09 | 2.50 | 0.20 | 2.50 | ● |
| 14-3.00-0.20 | 0.03-0.10 | 3.00 | 0.20 | 2.50 | ● |
| | | | | | |
| | | | | | |



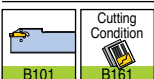
●: Standard items

TMIS 8

Precise inserts for internal shallow grooving on small diameter



| Designation | Feed (mm/rev) | Dimension (mm) | | | | Grade |
|-------------------------|---------------|----------------|------|------|------|-------|
| | | CW | RE | CDX | INSL | |
| TMIS 8-0.50-0.00 | 0.01-0.03 | 0.50 | 0.00 | 0.70 | 7.8 | ● |
| 8-1.00-0.00 | 0.01-0.03 | 1.00 | 0.00 | 1.50 | 7.8 | ● |
| 8-1.50-0.05 | 0.01-0.03 | 1.50 | 0.05 | 1.50 | 7.8 | ● |
| 8-2.00-0.10 | 0.01-0.03 | 2.00 | 0.10 | 1.50 | 7.8 | ● |



●: Standard items

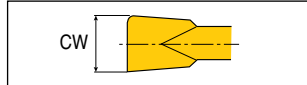
TDIT **3.20** - **0.00** - **0.25** - - **TT8020**

1 **2** **3** **4** **5** **6**

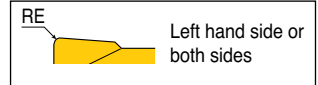
1 Main style of insert

T type: Chip breaker
G type: Non-chip breaker

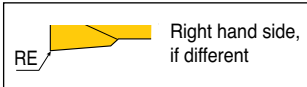
2 Insert width



3 Corner radius



4 Corner radius



5 Additional codes

6 Grades

| Parting & Grooving | Turning & Grooving |
|-----------------------------------|--|
| <p>TDJ / TDC</p> <p>TSJ / TSC</p> | <p>TDT TDA TDG</p> <p>TDIT TDFT</p> <p>Internal Facing</p> |

Special profile inserts



Tailor-made inserts are available upon request.

| Shape | Designation | Remarks |
|-------|--------------------|---|
| | TDT 4.00-0.50 | Symmetrical type |
| | TDT 3.20-0.00-0.25 | Non-symmetrical type |
| | TDT 3.30-1.65 | Full-R type |
| | TDT 4.00-0.30-5RA | L: Chamfer on left hand side R: Chamfer on right hand side |
| | TDT 3.10-0.10-15LA | |
| | TDG 5.28-1.20-R25A | |
| | TDT 5.28-1.20-L25A | |

| Shape | Designation | Remarks |
|--|---|---|
| <p>RE0.35 TYP 4.4 1.82 29° RE0.35 4.4 1.5 30° RE0.1</p> | <p>TDG 4.40-1.82-29A</p> <p>TDT 4.40-1.50-30A</p> | <p>L: Chamfer on left hand side R: Chamfer on right hand side</p> |
| <p>RE0.2 5.28 4.1 2.05 45° RE0.0 25°</p> | <p>TDT 5.28-2.05-45R25L</p> | |
| <p>RE0.15 4.4 60°</p> | <p>TDG 4.40-0.15-60A</p> | |
| <p>RE0.1 5.4 30° 50°</p> | <p>TDG 5.40-0.10-30R50L</p> | |
| <p>RE4.0 3.90 RE0.05 3.5 2.0 1.90 RE0.30 4.2 1.90 RE0.30 TYP</p> | <p>TDT 3.90-4.00</p> <p>TDT 1.90-T3.5C</p> <p>TDT 1.90-0.30-4.20T</p> | |

| Shape | Designation |
|------------|-----------------------------------|
| | TDG 1.98-T4.5C |
| | TDFT 3.80E-0.25 |
| | TDIT 2.60-1.30 |
| The others | Available upon customer's request |

Heavy Industry

Tailor-made

| Designation | Dimension (mm) | Remarks |
|----------------|----------------|---------|
| XNMR 401416-HD | | |
| XNGT 332-GV | | |

► Specific dimensions

External holder

Right handed shown

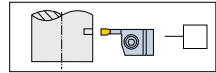
Internal holder

Right handed shown

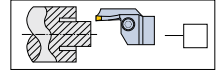
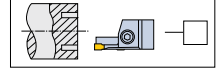
Facing holder

Right handed shown

External holder

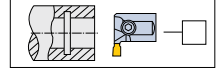


Facing holder



RN type

Internal holder



Holder handed

- Right handed
- Light handed

Insert

- Grade: _____
- Chip breaker type: _____

Quantity

- _____ pcs

Workpieces

- Part: _____
- Material: _____
- Hardness: _____

Comment

■ Customer: _____ ■ Contact: _____
 ■ Address : _____
 ■ Telephone : _____ ■ Fax : _____
 ■ E-mail : _____

Recommended Cutting Conditions

Parting

| ISO | Material | Condition | Tensile strength (N/mm ²) | Hardness HB | Material No. | Cutting speed Vc(m/min) | | | | |
|-------------------------|--|------------------------------|---------------------------------------|-------------|--------------|-------------------------|---------|---------------|--------|--|
| | | | | | | TT9080 | TT4430 | TT7220 TT8020 | K10 | |
| P | Non-alloy steel, cast steel, free cutting steel | <0.25%C | Annealed | 420 | 125 | 1 | 140-250 | 120-220 | 80-120 | |
| | | >=0.25%C | Annealed | 650 | 190 | 2 | 130-220 | 100-190 | 80-110 | |
| | | <0.55%C | Quenched and tempered | 850 | 250 | 3 | 90-200 | 80-170 | 70-90 | |
| | | >=0.55%C | Annealed | 750 | 220 | 4 | 100-220 | 80-190 | 70-100 | |
| | | | Quenched and tempered | 1000 | 300 | 5 | 70-170 | 70-140 | 40-70 | |
| | Low alloy steel and cast steel (Less than 5% of alloying elements) | Quenched and tempered | 600 | 200 | 6 | 90-120 | 80-110 | 70-100 | | |
| | | | 930 | 275 | 7 | 80-170 | 80-140 | 50-70 | | |
| | | | 1000 | 300 | 8 | 70-130 | 70-110 | 40-60 | | |
| | High alloy steel, cast steel and tool steel | Annealed | 680 | 200 | 10 | 60-140 | 60-120 | 50-80 | | |
| | | Quenched and tempered | 1100 | 325 | 11 | 50-70 | 40-60 | 30-60 | | |
| M | Stainless steel and cast steel | Ferritic / martensitic | 680 | 200 | 12 | 70-170 | 60-150 | 60-120 | | |
| | | Martensitic | 820 | 240 | 13 | 60-150 | 60-120 | 60-90 | | |
| | | Austenitic | 600 | 180 | 14 | 90-180 | 80-150 | 60-90 | | |
| K | Gray cast iron (GG) | Ferritic | | 160 | 15 | 150-260 | | | 60-80 | |
| | | Pearlitic | | 250 | 16 | 130-190 | | | 50-70 | |
| | Cast iron nodular (GGG) | Ferritic | | 180 | 17 | 140-230 | | | 70-100 | |
| | | Pearlitic | | 260 | 18 | 110-180 | | | 70-90 | |
| Malleable cast iron | Ferritic | | 130 | 19 | 170-270 | | | 60-85 | | |
| | Pearlitic | | 230 | 20 | 140-230 | | | 45-75 | | |
| N | Aluminum - Wrought alloy | Not cureable | | 60 | 21 | | | | | |
| | | Cured | | 100 | 22 | | | | | |
| | Aluminum-cast, alloyed | <=12% Si | Not cureable | | 75 | 23 | | | | |
| | | Cured | | 90 | 24 | | | | | |
| | >12% Si | High temp. | | 130 | 25 | | | | | |
| | | >1% Pb | Free cutting | | 110 | 26 | | | | |
| | Copper alloys | Brass | | 90 | 27 | | | | | |
| | | Electrolitic copper | | 100 | 28 | | | | | |
| | Non-metallic | Duroplastics, fiber plastics | | | 29 | | | | | |
| | | Hard rubber | | | 30 | | | | | |
| S | High temp. alloys | Fe based | Annealed | | 200 | 31 | 40-70 | | 35-50 | |
| | | | Cured | | 280 | 32 | 30-50 | | 25-40 | |
| | | Ni or Co based | Annealed | | 250 | 33 | 30-40 | | 20-30 | |
| | | | Cured | | 350 | 34 | 15-25 | | 15-20 | |
| | | | Cast | | 320 | 35 | 15-30 | | 15-20 | |
| | Titanium, Ti alloys | | Rm 400 | | 36 | 90-190 | | 150-200 | | |
| Alpha+beta alloys cured | | Rm 1050 | | 37 | 30-60 | | 50-80 | | | |
| H | Hardened steel | Hardened | | 55HRC | 38 | | | | | |
| | | Hardened | | 60HRC | 39 | | | | | |
| | Chilled cast iron | Cast | | 400 | 40 | | | | | |
| Cast iron nodular | Hardened | | 55HRC | 41 | | | | | | |

• For more information of material groups, see the materials & grades "material conversion table"

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

Recommended Cutting Conditions

Grooving and Turning

| ISO | Material | Condition | Tensile strength (N/mm ²) | Hardness HB | Material No. | Cutting speed Vc(m/min) | |
|-----------|--|-------------------------|---------------------------------------|-------------|--------------|-------------------------|----------|
| | | | | | | | KP300 |
| P | Non-alloy steel, cast steel, free cutting steel | <0.25%C | Annealed | 420 | 125 | 1 | |
| | | ≥0.25%C | Annealed | 650 | 190 | 2 | |
| | | <0.55%C | Quenched and tempered | 850 | 250 | 3 | |
| | | ≥0.55%C | Annealed | 750 | 220 | 4 | |
| | | | Quenched and tempered | 1000 | 300 | 5 | |
| | Low alloy steel and cast steel (Less than 5% of alloying elements) | Quenched and tempered | 600 | 200 | 6 | | |
| | | | 930 | 275 | 7 | | |
| | | | 1000 | 300 | 8 | | |
| | | | 1200 | 350 | 9 | | |
| | High alloy steel, cast steel and tool steel | Annealed | 680 | 200 | 10 | | |
| | | Quenched and tempered | 1100 | 325 | 11 | | |
| M | Stainless steel and cast steel | Ferritic / martensitic | 680 | 200 | 12 | | |
| | | Martensitic | 820 | 240 | 13 | | |
| | | Austenitic | 600 | 180 | 14 | | |
| K | Gray cast iron (GG) | Ferritic | | 160 | 15 | | |
| | | Pearlitic | | 250 | 16 | | |
| | Cast iron nodular (GGG) | Ferritic | | 180 | 17 | | |
| | | Pearlitic | | 260 | 18 | | |
| | Malleable cast iron | Ferritic | | 130 | 19 | | |
| Pearlitic | | | 230 | 20 | | | |
| N | Aluminum - Wrought alloy | Not cureable | | 60 | 21 | 150-2500 | |
| | | Cured | | 100 | 22 | 150-2500 | |
| | Aluminum-cast, alloyed | ≤12% Si | Not cureable | | 75 | 23 | 150-2500 |
| | | | Cured | | 90 | 24 | 150-2500 |
| | | >12% Si | High temp. | | 130 | 25 | 330-800 |
| | Copper alloys | >1% Pb | Free cutting | | 110 | 26 | |
| | | | Brass | | 90 | 27 | 330-800 |
| | | | Electrolitic copper | | 100 | 28 | 190-400 |
| | Non-metallic | | Duroplastics, fiber plastics | | | 29 | |
| | | | Hard rubber | | | 30 | |
| S | High temp. alloys | Fe based | Annealed | | 200 | 31 | |
| | | | Cured | | 280 | 32 | |
| | | Ni or Co based | Annealed | | 250 | 33 | |
| | | | Cured | | 350 | 34 | |
| | | | Cast | | 320 | 35 | |
| | Titanium, Ti alloys | | Rm 400 | | | 36 | |
| | | Alpha+beta alloys cured | Rm 1050 | | | 37 | |
| H | Hardened steel | Hardened | | 55HRC | 38 | | |
| | | Hardened | | 60HRC | 39 | | |
| | Chilled cast iron | Cast | | 400 | 40 | | |
| | Cast iron nodular | Hardened | | 55HRC | 41 | | |

• For more information of material groups, see the materials & grades "material conversion table"

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

Recommended Cutting Conditions

Face grooving and Internal grooving

| ISO | Material | Condition | Tensile strength (N/mm ²) | Hardness HB | Material No. | Cutting speed Vc(m/min) | | |
|-------------------------|--|------------------------------|---------------------------------------|---------------------|--------------|-------------------------|-------|--|
| | | | | | | TT7505 | | |
| P | Non-alloy steel, cast steel, free cutting steel | <0.25%C | Annealed | 420 | 125 | 1 | | |
| | | ≥0.25%C | Annealed | 650 | 190 | 2 | | |
| | | <0.55%C | Quenched and tempered | 850 | 250 | 3 | | |
| | | ≥0.55%C | Annealed | 750 | 220 | 4 | | |
| | | | Quenched and tempered | 1000 | 300 | 5 | | |
| | Low alloy steel and cast steel (Less than 5% of alloying elements) | | Annealed | | 600 | 200 | 6 | |
| | | | | | 930 | 275 | 7 | |
| | | | Quenched and tempered | | 1000 | 300 | 8 | |
| | | | | | 1200 | 350 | 9 | |
| | High alloy steel, cast steel and tool steel | | Annealed | 680 | 200 | 10 | | |
| | | | Quenched and tempered | 1100 | 325 | 11 | | |
| M | Stainless steel and cast steel | Ferritic / martensitic | 680 | 200 | 12 | | | |
| | | Martensitic | 820 | 240 | 13 | | | |
| | | Austenitic | 600 | 180 | 14 | | | |
| K | Gray cast iron (GG) | Ferritic | | 160 | 15 | 90-140 | | |
| | | Pearlitic | | 250 | 16 | 80-120 | | |
| | Cast iron nodular (GGG) | Ferritic | | 180 | 17 | 90-130 | | |
| | | Pearlitic | | 260 | 18 | 80-110 | | |
| | Malleable cast iron | Ferritic | | 130 | 19 | 80-130 | | |
| Pearlitic | | | 230 | 20 | 60-100 | | | |
| N | Aluminum - Wrought alloy | Not cureable | | 60 | 21 | | | |
| | | Cured | | 100 | 22 | | | |
| | Aluminum-cast, alloyed | ≤12% Si | Not cureable | | 75 | 23 | | |
| | | | Cured | | 90 | 24 | | |
| | | >12% Si | High temp. | | 130 | 25 | | |
| | Copper alloys | | >1% Pb | Free cutting | | 110 | 26 | |
| | | | | Brass | | 90 | 27 | |
| | | | | Electrolitic copper | | 100 | 28 | |
| Non-metallic | | Duroplastics, fiber plastics | | | | 29 | | |
| | | Hard rubber | | | | | 30 | |
| S | High temp. alloys | Fe based | Annealed | | 200 | 31 | | |
| | | | Cured | | 280 | 32 | | |
| | | Ni or Co based | Annealed | | 250 | 33 | | |
| | | | Cured | | 350 | 34 | | |
| | | | Cast | | 320 | 35 | | |
| | Titanium, Ti alloys | | | Rm 400 | | | 36 | |
| Alpha+beta alloys cured | | | Rm 1050 | | | | 37 | |
| H | Hardened steel | | Hardened | | 55HRC | 38 | 15-25 | |
| | | | Hardened | | 60HRC | 39 | 15-25 | |
| | Chilled cast iron | Cast | | 400 | 40 | 15-25 | | |
| | Cast iron nodular | Hardened | | | 55HRC | 41 | 15-25 | |

• For more information of material groups, see the materials & grades "material conversion table"

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

Recommended Cutting Conditions

Face grooving and Internal grooving

| Cutting speed Vc(m/min) | | | | | | | |
|----------------------------|---------|---------|---------|---------|------------------|---------|--|
| TT6080 | TT3010 | TT5100 | TT9080 | TT4430 | TT7220 TT8020 | K10 | |
| | | 110-160 | 100-150 | 100-130 | 80-110 | | |
| | | 70-110 | 60-100 | 60-90 | 50-80 | | |
| | | | | | | | |
| | | 70-120 | 60-110 | 60-100 | 50-90 | | |
| | | | | | | | |
| | | 70-120 | 60-110 | 60-100 | 40-70 | | |
| | | 80-120 | 70-110 | 70-100 | 40-60 | | |
| | | | | | | | |
| | | 70-100 | 60-90 | 60-80 | 30-50 | | |
| | | 70-100 | 60-90 | 60-80 | 30-50 | | |
| | | 60-90 | 50-80 | 50-70 | 30-40 | | |
| | | 60-140 | 50-130 | 50-110 | 40-80 | | |
| | | | | | | | |
| | | 50-140 | 40-130 | 40-110 | 30-80 | | |
| 70-120 | | | | | | 40-60 | |
| 60-100 | | | | | | 40-60 | |
| 70-110 | | | | | | 40-60 | |
| 60-90 | | | | | | 30-50 | |
| 60-110 | | | | | | 20-40 | |
| 50-90 | | | | | | 20-40 | |
| | | | | | | 100-300 | |
| | | | | | | 100-300 | |
| | | | | | | 100-300 | |
| | | | | | | 100-300 | |
| | | | | | | 80-200 | |
| | | | | | | | |
| | | | | | | 80-150 | |
| | | | | | | 60-100 | |
| | | | | | | | |
| | 30-50 | 30-50 | 20-40 | 20-30 | 15-25 | | |
| | 25-40 | 20-40 | 15-30 | 15-25 | 10-15 | | |
| | 25-35 | 20-30 | 15-20 | 15-20 | 10-15 | | |
| | 20-30 | 20-30 | 15-20 | 15-20 | 10-15 | | |
| | 20-30 | 20-30 | 15-20 | 15-20 | 10-15 | | |
| | 100-130 | 100-130 | 90-120 | 80-100 | 60-80 | | |
| | 30-60 | 30-60 | 20-50 | 20-40 | 15-30 | | |
| | | | | | | 15-20 | |
| | | | | | | 15-20 | |
| | | | | | | 15-25 | |
| | | | | | | 15-25 | |

Recommended Cutting Conditions

T-CLAMP ceramic insert

| Material | | Grooving | | Turning |
|----------|---------------------|------------|-----------------|-----------|
| P | High hardened steel | Vc (m/min) | Not recommended | 250-350 |
| | | F (mm/rev) | | 0.08-0.20 |
| K | Cast iron | Vc (m/min) | 600-800 | 600-800 |
| | | F (mm/rev) | 0.1-0.2 | 0.1-0.24 |

• Above condition is adapted to TDT 4E-0.4T CE AB30

TOP-MICRO carbide bars

| Cutting speed Vc(m/min) | | Feed (mm/rev) | | |
|-------------------------|--------|------------------------|-----------|---------------|
| | | Turning / Back turning | Grooving | Face grooving |
| P | 30-150 | 0.01-0.08 | 0.01-0.05 | 0.01-0.04 |
| M | 30-130 | | | |
| K | 30-150 | | | |
| N | 50-200 | | | |
| S | 10-50 | | | |