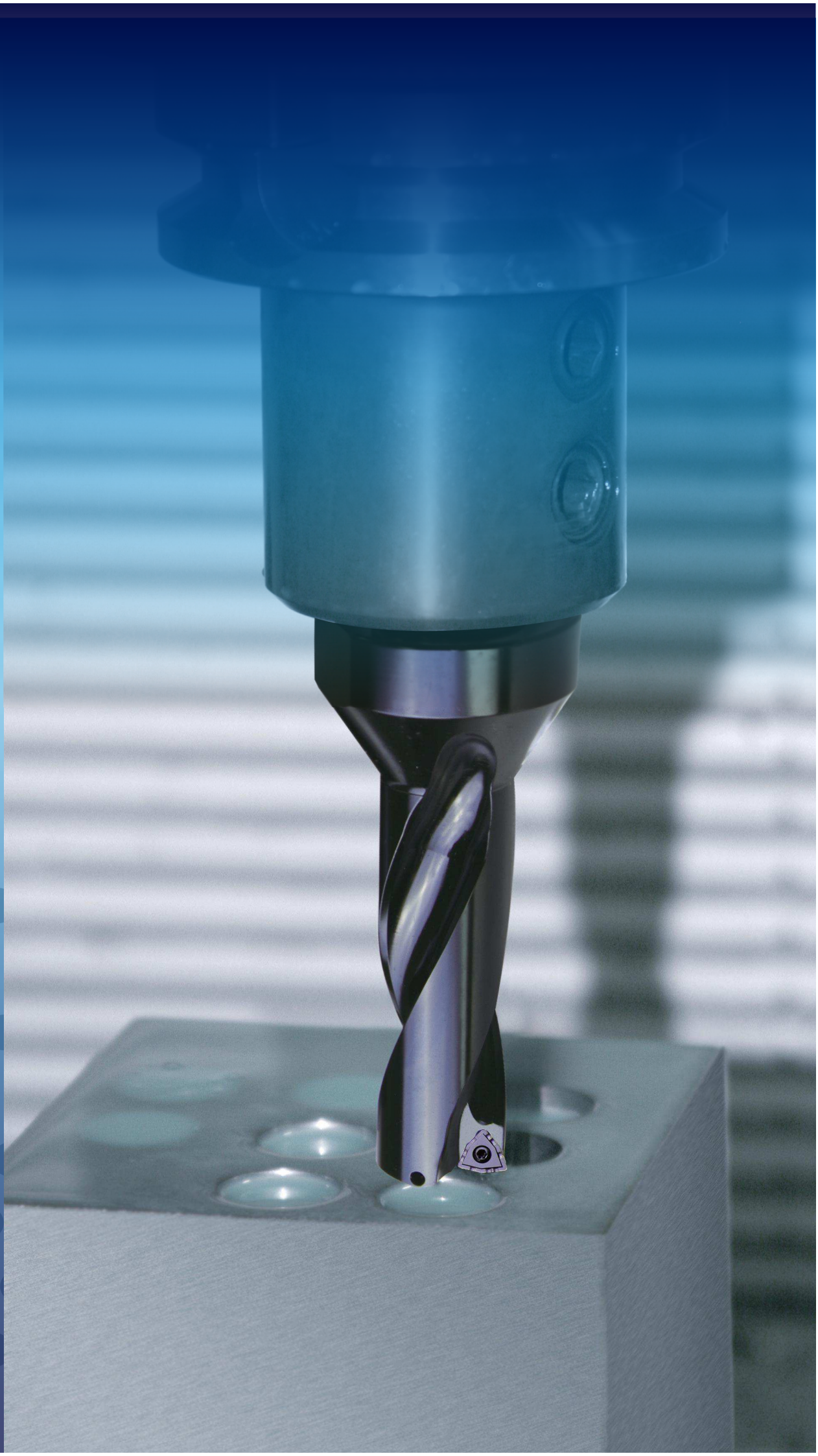
## Drilling tools overview · Bohrer Übersicht

| Machining Bearbeitung | Typ of drill Bohrertyp | Type · Typ | L/D | Shape of drills Bohrerausführung | Cooling mode Kühlmittel | Ø | material · Material P: Carbon steel Kohlenstoff Stahl | P: Alloy steel Legierter Stahl | M: Stainless steel · Rostfreier Stahl | K: Cast iron Grauguss | N: Non-ferrous metal NE-Metalle | S: Heat resistant alloy Warmfeste Legier. | H: Hardened steel Gehärteter Stahl | Page · Seite: Specification Spezifikation | Page · Seite: Cutting data Schnittdaten |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General machining Allgemeine Bearbeitung | Twist drill Spiralbohrer | 1534SU03 | 3xD | | External Extern | Ø2-Ø20 | ✓ | ✔ | ✓ | ✔ | | | | C12-C50 | C94-C96 |
| | | 1534SU03C | 3xD | | Internal Intern | Ø3-Ø20 | ✓ | ✔ | ✓ | ✔ | | | | | |
| | | 1634SU03C | 3xD | | Internal Intern | Ø3-Ø20 | ✓ | ✔ | ✓ | ✔ | | | | | |
| | | 1734SU03C | 3xD | | Internal Intern | Ø3-Ø20 | ✓ | ✔ | ✓ | ✔ | | | | | |
| | | 1536SU05 | 5xD | | External Extern | Ø2-Ø20 | ✓ | ✔ | ✓ | ✔ | | | | | |
| | | 1536SU05C | 5xD | | Internal Intern | Ø3-Ø20 | ✓ | ✔ | ✓ | ✔ | | | | | |
| | | 1636SU05C | 5xD | | Internal Intern | Ø3-Ø20 | ✓ | ✔ | ✓ | ✔ | | | | | |
| | | 1736SU05C | 5xD | | Internal Intern | Ø3-Ø20 | ✓ | ✔ | ✓ | ✔ | | | | | |
| | | 1538SU08C | 8xD | | Internal Intern | Ø3-Ø18 | ✓ | ✔ | ✓ | ✔ | | | | | |
| | Deep drill Tiefbohrer | 1588SL12C | 12xD | | Internal Intern | Ø3-Ø21 | ✔ | ✔ | ✓ | ✔ | | ✓ | | C54-C60 | C98 |
| | | 1588SL20C | 20xD | | Internal Intern | Ø3-Ø21 | ✔ | ✔ | ✓ | ✔ | | ✓ | | C54-C60 | C98 |
| | | 1588SL30C | 30xD | | Internal Intern | Ø3-Ø21 | ✔ | ✔ | ✓ | ✔ | | ✓ | | C54-C60 | C98 |
| | Pilot drills Pilotbohrer | 1534SP03C | 3xD | | Internal Intern | Ø3.03-Ø20.03 | ✔ | ✔ | ✓ | ✔ | | ✓ | | C61-C64 | C99 |
| | Step drill Stufenbohrer | 1557SU03 | 3xD | | External Extern | M4-M16 | ✓ | ✔ | ✓ | ✔ | | ✓ | | C51 | C97 |
| Carbon steel alloy steel Kohlenstoff Stahl Legierter Stahl | Twist drill Spiralbohrer | 1534ST03C | 3xD | | Internal Intern | Ø3-Ø20 | ✔ | ✓ | ✔ | | | ✓ | | C66-C77 | C101 |
| | | 1536ST05C | 5xD | | Internal Intern | Ø3-Ø20 | ✔ | ✓ | ✔ | | | ✓ | | | |
| | | 1736ST05C | 5xD | | Internal Intern | Ø3-Ø20 | ✔ | ✓ | ✔ | | | ✓ | | | |
| high hardness steel Gehärteter Stahl | Twist drill Spiralbohrer | 1534SH03 | 3xD | | External Extern | Ø3-Ø16 | | | | | | | ✔ | C79 | C102 |
| For aluminum, cast iron Für Aluminium, Gusseisen | Twist drill Spiralbohrer | 1105SC03 | 3xD | | External Extern | Ø2-Ø16 | | | | ✔ | ✔ | | | C80-C83 | C103 |
| | | 1101SC05 | 5xD | | External Extern | Ø2-Ø16 | | | | ✔ | ✔ | | | | |
| | Three-lips drill Dreilippenb. | 1165PA03 | 3xD | | External Extern | Ø3-Ø20 | | | | ✔ | ✔ | ✓ | | C84-C86 | C104 |
| | Three-lips drill Dreilippenb. | 1165PC03 | 3xD | | External Extern | Ø3-Ø20 | | | | ✔ | | | | C87-C89 | C105 |
| | Straight flute drill Gerade genuteter Bohrer | 1576PC05 | 5xD | | External Extern | Ø4-Ø20 | | | | ✔ | ✔ | | | C90-C92 | C105-C106 |
| | | 1576PC05C | 5xD | | Internal Intern | Ø4-Ø20 | | | | ✔ | ✔ | | | | |
| | | 1579PC15C | 15xD | | Internal Intern | Ø5-Ø14 | | | | ✔ | ✔ | | | | |
| | Centering drill Zentrierbohrer | 1143SC90 | | | External Extern | Ø5-Ø20 | | | | ✔ | ✓ | | | C93 | C107 |
| | | 1143SC120 | | | External Extern | Ø5-Ø20 | | | | ✔ | ✓ | | | | |
| Indexable drills series WSP-Bohrer | Indexable drills WSP-Bohrer | ZTD03/04 | 3xD 4xD | | Internal Intern | Ø17-Ø50 | ✔ | ✔ | ✓ | ✔ | | | | C126-C127 | C136 C138 |
| | | ZD03 | 3xD | | Internal Intern | Ø16-Ø58 | ✔ | ✔ | ✓ | ✔ | | | | C128-C129 | |

✔ = Very suitable · Sehr empfohlen
✓ = Suitable · Empfohlen



## Indexable drill Code Key · ISO Kennzeichnung WSP-Bohrern

**The ratio of length and diameter L / D Verhältnis**

02 03 04 05

**Diameter Durchmesser**

| | |
|---|---|
| Range Bereich | 160-580 |
| | 16mm-58mm |

**Insert shape WSP Form**

| | |
|---|---|
| W | |
| S | |

**Insert clearance angle WSP Freiwinkel**

| | |
|---|---|
| C | 7° |
| P | 11° |

**Cutting edge length Schneiden-länge (mm)**

| Code | Length Länge | |
|---|---|---|
| | W | S |
| 03 | 3.8 | |
| 04 | 4.3 | |
| 05 | 5.4 | |
| 06 | 6.5 | 6 |
| 08 | 8.7 | 7.94 |
| 09 | | 9.8 |
| 11 | | 11.5 |
| 12 | | 12.7 |
| 14 | | 14.3 |

**ZD-03300-XP-32WC05-02**

**Tool Type Werkzeugtyp**

| Code | Description Beschreibung |
|---|---|
| ZD | Indexable drill (WCMX *) |
| ZTD | Indexable drill (SPGT *) |

**Coupling structure and Type Kupplungsart**

| Code | Description Beschreibung |
|---|---|
| XP | Weldon shank |

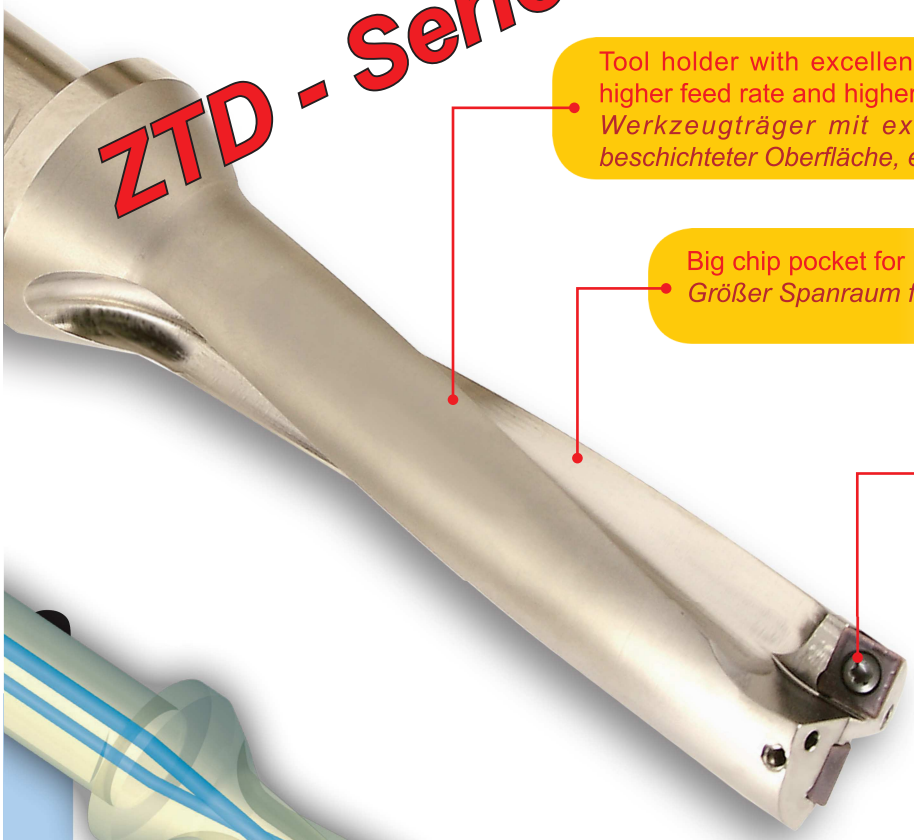
**Coupling size(mm) Kupplungsgröße**

25 32 40

**Number of teeth Anzahl der Zähne**

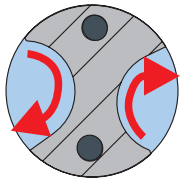
2

# ZTD - Serie

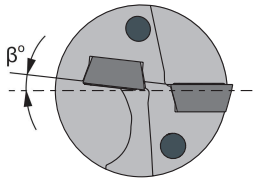


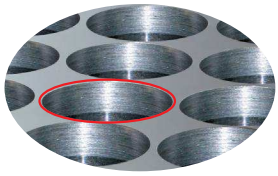
Tool holder with excellent stiffness and special surface coating. For higher feed rate and higher productivity.
*Werkzeugträger mit exzellenter Torsionsteifigkeit und speziell beschichteter Oberfläche, ermöglicht höhere Vorschübe und Produktivität*

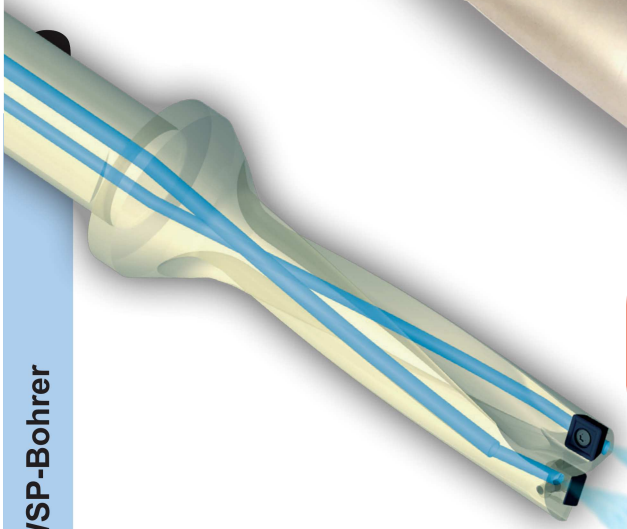
Big chip pocket for better chip removal
*Größer Spanraum für optimalen Spanabfluß*



Optimised insert seat and clamping. Less vibration and higher tool life.
*Optimierter Plattensitz und optimierte Plattenklemmung für vibrationsfreie Bearbeitung mit hohen Standzeiten*



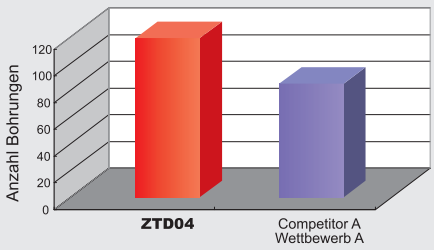
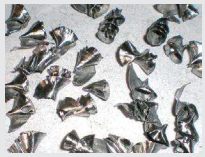





Double helix internal cooling for more effective cooling and good chip removal, also in deep hole boring.
*Innenkühlung mit Doppelhelixdesign für effektivere Kühlmittelzufuhr und Spanabfluß speziell bei tieferen Bohrungen.*



## Beispiel

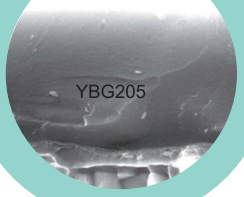
| | | | |
|---|---|---|---|
| Type / Typ | ZTD04-260-XP25-SP07-02<br>SPGT07T308-PM /YBG205<br>(Außenschneide / outer insert)<br>SPGT07T308-PM / YBG212<br>(Innenschneide / inner insert) | Comparison<br>Vergleich |  |
| Workpiece<br>Werkstückstoff | 50Mn(HB240) | | |
| Cooling system<br>Kühlsystem | Doublehelix internal cooling<br>Doppelhelix-Innenkülung | | |
| Cutting data<br>Schnittdaten | $V_c$=130m/min f=210mm/min $a_p$=90mm | | |
| Results<br>Ergebnis | | Chips<br>Span-<br>bildung | ZTD04-260-XP25-SP07-02  Competitor A<br>Wettbewerb A |

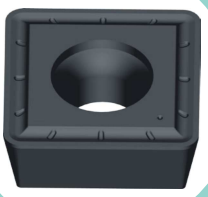
# ZTD-Serie

Optimised edge design for stable operation with new chip breaker design / *Optimierte Schneidkante, stabile Bearbeitung, neuartiger Spanbrecher*

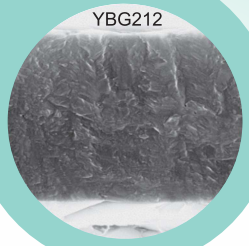
Special grades for outer and inner insert for more efficiency in different material / *Optimierte Sorten für Innen- und Außenschneide für höhere Effizienz bei vielen Materialen*

Outer insert
Außere Schneide



Inner insert
Innere Schneide




## YBG205

New nano coating structure with good hardness and wear resistance, but also good toughness. Ultra fine surface design prevent friction for best chip flow. Excellent thermal and chemical wear resistance. Best choice for all material also for stainless steel and high alloy material.

*Neue Nano-Beschichtungsstruktur mit gleichzeitiger Härte und Verschleißfestigkeit bzw. Zähigkeit. Eine ultra glatte Schichtoberfläche vermindert die Reibung und garantiert einen optimierten Spanabfluß. Die exzellente thermische und chemische Widerstandsfähigkeit zeigt diese Sorte besonders bei der Bearbeitung von rostfreien Stählen und warmfesten Legierungen.*

## YBG212

Special Nano TiAlN coating with smooth surface for less friction and better chipflow / *Speziale Nano TiAlN Beschichtung mit sehr glatter Oberfläche für weniger Reibung und besseren Spanablauf*

In combination with super fine grain size substract good balance between wear resistance and toughness / *In Verbindung mit neuem Superfeinkorn-Substrat die ideale Kombination aus Verschleißfestigkeit und Zähigkeit*

Excellent thermal and oxidation resistence for more stable edge / *Mit sehr guter Temperatur- und Oxidationsbeständigkeit für optimalen Schneidkantenschutz*

For boring operation the cutting speed at inner insert is lower. Therefore the grade must be more tough to prevent breakage. YBG212 is best choice in that case. YBG205 is excellent for higher wear resistance.

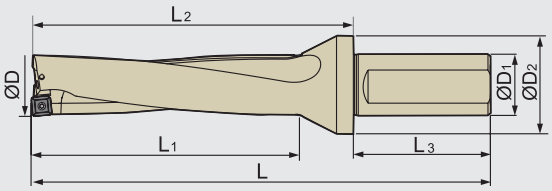
*Bei der Bohrbearbeitung ist die Schnittgeschwindigkeit an der Innenschneide niedriger als an der Außerschneide. Mit solch ungünstigen Bearbeitungsbedingungen sollte die Innenschneide eine höhere Zähigkeit haben. Hier ist die YBG212 optimal einzusetzen. Die Außenplatte hat mit der YBG205 eine höhere Verschleißfestigkeit.*

### Beispiel

| | | | | |
|---|---|---|---|---|
| | | Cooling system<br>Kühlsystem | Doublehelix Internal cooling<br>Doppelhelix-Innenkühlung | |
| | | Type / Typ | ZTD04-240-XP25-SP07-02<br>SPGT07T308-PM/YBG205<br>(Außenschneide / outer insert)<br>SPGT07T308-PM/YBG212<br>(Innenschneide / inner insert) | Competitor A<br>Wettbewerb A |
| Workpiece<br>Werkstückstoff | 42CrMo(HRC25) | Compare<br>Vergleich<br><br>(after 15 min /<br>nach 15 min) | | |
| Cutting data<br>Schnittdaten | $V_c$=150m/min $f_r$=0.12mm/μ<br>$a_p$=80mm | | | |

# ZTD03

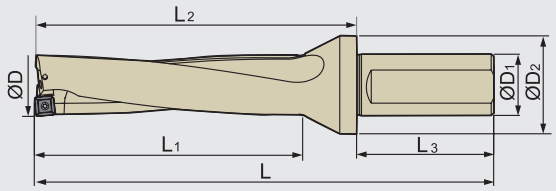
## 3D




| Type Typ | Stock Lager | Dimension Abmessung (mm) | | | | | | | Insert WSP | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ØD | ØD1 | ØD2 | L3 | L2 | L1 | L | | | |
| ZTD03-170-XP25-SP06-02 | ● | 17 | 25 | 32 | 56 | 79 | 56 | 135 | SPGT060204-PM | I60M2.2×4.5 | WT07IP |
| ZTD03-180-XP25-SP06-02 | ● | 18 | 25 | 32 | 56 | 82 | 59 | 138 | SPGT060204-PM | I60M2.2×4.5 | WT07IP |
| ZTD03-190-XP25-SP06-02 | ● | 19 | 25 | 32 | 56 | 84 | 62 | 140 | SPGT060204-PM | I60M2.2×4.5 | WT07IP |
| ZTD03-200-XP25-SP06-02 | ● | 20 | 25 | 32 | 56 | 87 | 65 | 143 | SPGT060204-PM | I60M2.2×5.5 | WT07IP |
| ZTD03-210-XP25-SP06-02 | ● | 21 | 25 | 32 | 56 | 90 | 68 | 146 | SPGT060204-PM | I60M2.2×5.5 | WT07IP |
| ZTD03-220-XP25-SP06-02 | ● | 22 | 25 | 32 | 56 | 93 | 71 | 149 | SPGT060204-PM | I60M2.2×5.5 | WT07IP |
| ZTD03-230-XP25-SP07-02 | ● | 23 | 25 | 40 | 56 | 96 | 74 | 153 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD03-240-XP25-SP07-02 | ● | 24 | 25 | 40 | 56 | 102 | 77 | 159 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD03-250-XP25-SP07-02 | ● | 25 | 25 | 40 | 56 | 102 | 80 | 159 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD03-260-XP25-SP07-02 | ● | 26 | 25 | 40 | 56 | 105 | 83 | 162 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD03-270-XP25-SP07-02 | ● | 27 | 25 | 40 | 56 | 108 | 86 | 165 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD03-280-XP25-SP07-02 | ● | 28 | 25 | 40 | 56 | 111 | 89 | 168 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD03-290-XP32-SP07-02 | ● | 29 | 32 | 45 | 60 | 117 | 92 | 178 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD03-300-XP32-SP09-02 | ● | 30 | 32 | 45 | 60 | 120 | 95 | 181 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD03-310-XP32-SP09-02 | ● | 31 | 32 | 45 | 60 | 123 | 98 | 184 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD03-320-XP32-SP09-02 | ● | 32 | 32 | 45 | 60 | 126 | 101 | 187 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD03-330-XP32-SP09-02 | ● | 33 | 32 | 45 | 60 | 129 | 104 | 190 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD03-340-XP32-SP09-02 | ● | 34 | 32 | 45 | 60 | 132 | 107 | 193 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD03-350-XP32-SP09-02 | ● | 35 | 32 | 45 | 60 | 135 | 110 | 196 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD03-360-XP32-SP09-02 | ● | 36 | 32 | 45 | 60 | 138 | 113 | 199 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD03-370-XP40-SP11-02 | ● | 37 | 40 | 55 | 70 | 147 | 117 | 217 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD03-380-XP40-SP11-02 | ● | 38 | 40 | 55 | 70 | 150 | 119 | 220 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD03-390-XP40-SP11-02 | ● | 39 | 40 | 55 | 70 | 153 | 122 | 223 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD03-400-XP40-SP11-02 | ● | 40 | 40 | 55 | 70 | 160 | 125 | 231 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD03-410-XP40-SP11-02 | ● | 41 | 40 | 55 | 70 | 158 | 128 | 229 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD03-420-XP40-SP11-02 | ● | 42 | 40 | 55 | 70 | 161 | 131 | 232 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD03-430-XP40-SP11-02 | ● | 43 | 40 | 55 | 70 | 169 | 134 | 240 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD03-440-XP40-SP14-02 | ● | 44 | 40 | 60 | 70 | 178 | 138 | 248 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD03-450-XP40-SP14-02 | ● | 45 | 40 | 60 | 70 | 181 | 141 | 251 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD03-460-XP40-SP14-02 | ● | 46 | 40 | 60 | 70 | 184 | 144 | 254 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD03-470-XP40-SP14-02 | ● | 47 | 40 | 60 | 70 | 187 | 147 | 257 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD03-480-XP40-SP14-02 | ● | 48 | 40 | 60 | 70 | 189 | 149 | 260 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD03-490-XP40-SP14-02 | ● | 49 | 40 | 60 | 70 | 192 | 152 | 263 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD03-500-XP40-SP14-02 | ● | 50 | 40 | 60 | 70 | 195 | 155 | 266 | SPGT140512-PM | I60M5×13 | WT20IP |

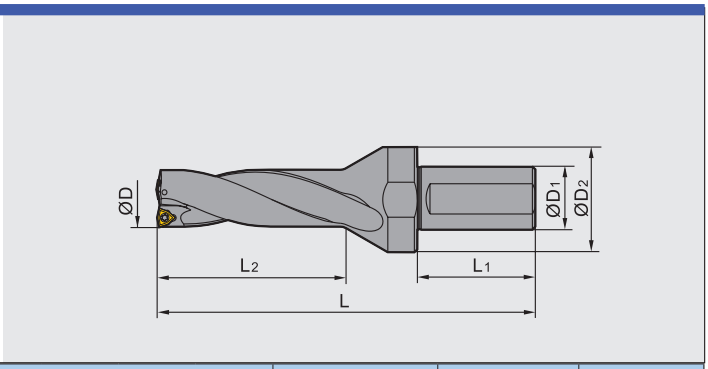
# ZTD04

## 4D




| Type Typ | Dimension Abmessung (mm) | | | | | | | Insert WSP | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|
| | ØD | ØD1 | ØD2 | L3 | L2 | L1 | L | | | |
| ZTD04-170-XP25-SP06-02 | 17 | 25 | 32 | 56 | 95 | 73 | 152 | SPGT060204-PM | I60M2.2×4.5 | WT07IP |
| ZTD04-180-XP25-SP06-02 | 18 | 25 | 32 | 56 | 99 | 77 | 156 | SPGT060204-PM | I60M2.2×4.5 | WT07IP |
| ZTD04-190-XP25-SP06-02 | 19 | 25 | 32 | 56 | 103 | 81 | 160 | SPGT060204-PM | I60M2.2×4.5 | WT07IP |
| ZTD04-200-XP25-SP06-02 | 20 | 25 | 32 | 56 | 107 | 85 | 163 | SPGT060204-PM | I60M2.2×5.5 | WT07IP |
| ZTD04-210-XP25-SP06-02 | 21 | 25 | 32 | 56 | 111 | 89 | 167 | SPGT060204-PM | I60M2.2×5.5 | WT07IP |
| ZTD04-220-XP25-SP06-02 | 22 | 25 | 32 | 56 | 115 | 93 | 171 | SPGT060204-PM | I60M2.2×5.5 | WT07IP |
| ZTD04-230-XP25-SP07-02 | 23 | 25 | 40 | 56 | 119 | 97 | 176 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD04-240-XP25-SP07-02 | 24 | 25 | 40 | 56 | 123 | 101 | 180 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD04-250-XP25-SP07-02 | 25 | 25 | 40 | 56 | 127 | 105 | 184 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD04-260-XP25-SP07-02 | 26 | 25 | 40 | 56 | 131 | 109 | 188 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD04-270-XP25-SP07-02 | 27 | 25 | 40 | 56 | 135 | 113 | 192 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD04-280-XP25-SP07-02 | 28 | 25 | 40 | 56 | 139 | 117 | 196 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD04-290-XP32-SP07-02 | 29 | 32 | 45 | 60 | 146 | 121 | 207 | SPGT07T308-PM | I60M2.5×6.5 | WT07IP |
| ZTD04-300-XP32-SP09-02 | 30 | 32 | 45 | 60 | 150 | 125 | 211 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD04-310-XP32-SP09-02 | 31 | 32 | 45 | 60 | 154 | 129 | 215 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD04-320-XP32-SP09-02 | 32 | 32 | 45 | 60 | 158 | 133 | 219 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD04-330-XP32-SP09-02 | 33 | 32 | 45 | 60 | 162 | 137 | 223 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD04-340-XP32-SP09-02 | 34 | 32 | 45 | 60 | 166 | 141 | 227 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD04-350-XP32-SP09-02 | 35 | 32 | 45 | 60 | 170 | 145 | 231 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD04-360-XP32-SP09-02 | 36 | 32 | 45 | 60 | 174 | 149 | 235 | SPGT090408-PM | I60M3.5×8 | WT15IP |
| ZTD04-370-XP40-SP11-02 | 37 | 40 | 55 | 70 | 184 | 154 | 254 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD04-380-XP40-SP11-02 | 38 | 40 | 55 | 70 | 188 | 158 | 258 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD04-390-XP40-SP11-02 | 39 | 40 | 55 | 70 | 196 | 161 | 267 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD04-400-XP40-SP11-02 | 40 | 40 | 55 | 70 | 200 | 165 | 271 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD04-410-XP40-SP11-02 | 41 | 40 | 55 | 70 | 199 | 169 | 270 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD04-420-XP40-SP11-02 | 42 | 40 | 55 | 70 | 208 | 173 | 279 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD04-430-XP40-SP11-02 | 43 | 40 | 55 | 70 | 212 | 177 | 283 | SPGT110408-PM | I60M4×10 | WT15IP |
| ZTD04-440-XP40-SP14-02 | 44 | 40 | 60 | 70 | 222 | 182 | 292 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD04-450-XP40-SP14-02 | 45 | 40 | 60 | 70 | 226 | 186 | 296 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD04-460-XP40-SP14-02 | 46 | 40 | 60 | 70 | 230 | 190 | 300 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD04-470-XP40-SP14-02 | 47 | 40 | 60 | 70 | 234 | 194 | 304 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD04-480-XP40-SP14-02 | 48 | 40 | 60 | 70 | 237 | 198 | 308 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD04-490-XP40-SP14-02 | 49 | 40 | 60 | 70 | 241 | 202 | 312 | SPGT140512-PM | I60M5×13 | WT20IP |
| ZTD04-500-XP40-SP14-02 | 50 | 40 | 60 | 70 | 245 | 206 | 316 | SPGT140512-PM | I60M5×13 | WT20IP |

# ZD03

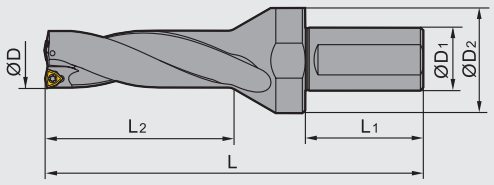



| Type · Typ | Stock Lager | Basic dimension(mm) · Abmessungen | | | | | | Inserts WSP | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|
| | | D | $D_1$ | $D_2$ | $L_1$ | $L_2$ | L | | | |
| **ZD03-160-XP25-WC03-02** | ● | 16 | 25 | 32 | 56 | 52 | 129 | WCMX030208 | I60M2.5×6.5 | WT07IP |
| **ZD03-170-XP25-WC03-02** | ● | 17 | 25 | 32 | 56 | 55 | 133 | WCMX030208 | I60M2.5×6.5 | WT07IP |
| **ZD03-180-XP25-WC03-02** | ● | 18 | 25 | 32 | 56 | 58 | 137 | WCMX030208 | I60M2.5×6.5 | WT07IP |
| **ZD03-190-XP25-WC03-02** | ● | 19 | 25 | 32 | 56 | 61 | 140 | WCMX030208 | I60M2.5×6.5 | WT07IP |
| **ZD03-200-XP25-WC03-02** | ● | 20 | 25 | 32 | 56 | 64 | 143 | WCMX030208 | I60M2.5×6.5 | WT07IP |
| **ZD03-210-XP25-WC04-02** | ● | 21 | 25 | 45 | 56 | 67 | 153 | WCMX040208 | I60M2.5×6.5T | WT08IP |
| **ZD03-220-XP25-WC04-02** | ● | 22 | 25 | 45 | 56 | 70 | 156 | WCMX040208 | I60M2.5×6.5T | WT08IP |
| **ZD03-230-XP25-WC04-02** | ● | 23 | 25 | 45 | 56 | 73 | 159 | WCMX040208 | I60M2.5×6.5T | WT08IP |
| **ZD03-240-XP25-WC04-02** | ● | 24 | 25 | 45 | 56 | 76 | 162 | WCMX040208 | I60M2.5×6.5T | WT08IP |
| **ZD03-250-XP25-WC04-02** | ● | 25 | 25 | 45 | 56 | 79 | 165 | WCMX040208 | I60M2.5×6.5T | WT08IP |
| **ZD03-260-XP32-WC05-02** | ● | 26 | 32 | 55 | 60 | 83 | 176 | WCMX050308 | I60M3×7 | WT09IP |
| **ZD03-270-XP32-WC05-02** | ● | 27 | 32 | 55 | 60 | 86 | 180 | WCMX050308 | I60M3×7 | WT09IP |
| **ZD03-280-XP32-WC05-02** | ● | 28 | 32 | 55 | 60 | 89 | 184 | WCMX050308 | I60M3×7 | WT09IP |
| **ZD03-290-XP32-WC05-02** | ● | 29 | 32 | 55 | 60 | 92 | 188 | WCMX050308 | I60M3×7 | WT09IP |
| **ZD03-300-XP32-WC05-02** | ● | 30 | 32 | 55 | 60 | 95 | 192 | WCMX050308 | I60M3×7 | WT09IP |
| **ZD03-310-XP40-WC06-02** | ● | 31 | 40 | 60 | 70 | 98 | 203 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-320-XP40-WC06-02** | ● | 32 | 40 | 60 | 70 | 101 | 206 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-330-XP40-WC06-02** | ● | 33 | 40 | 60 | 70 | 104 | 209 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-340-XP40-WC06-02** | ● | 34 | 40 | 60 | 70 | 107 | 212 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-350-XP40-WC06-02** | ● | 35 | 40 | 60 | 70 | 110 | 215 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-360-XP40-WC06-02** | ● | 36 | 40 | 60 | 70 | 113 | 218 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-370-XP40-WC06-02** | ● | 37 | 40 | 60 | 70 | 116 | 221 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-380-XP40-WC06-02** | ● | 38 | 40 | 60 | 70 | 119 | 225 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-390-XP40-WC06-02** | ● | 39 | 40 | 60 | 70 | 122 | 228 | WCMX06T308 | I60M3×7 | WT09IP |

● Ex Stock / ab Lager ○ On demand / auf Anfrage

● Ex Stock / ab Lager ○ On demand / auf Anfrage

# ZD03




| Type · Typ | Stock Lager | Basic dimension(mm) · Abmessungen | | | | | | Inserts WSP | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|
| | | D | $D_1$ | $D_2$ | $L_1$ | $L_2$ | L | | | |
| **ZD03-400-XP40-WC06-02** | ● | 40 | 40 | 60 | 70 | 125 | 231 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-410-XP40-WC06-02** | ● | 41 | 40 | 60 | 70 | 128 | 234 | WCMX06T308 | I60M3×7 | WT09IP |
| **ZD03-420-XP40-WC08-02** | ● | 42 | 40 | 60 | 70 | 131 | 239 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-430-XP40-WC08-02** | ● | 43 | 40 | 60 | 70 | 134 | 242 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-440-XP40-WC08-02** | ● | 44 | 40 | 60 | 70 | 137 | 245 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-450-XP40-WC08-02** | ● | 45 | 40 | 60 | 70 | 140 | 248 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-460-XP40-WC08-02** | ● | 46 | 40 | 60 | 70 | 143 | 251 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-470-XP40-WC08-02** | ● | 47 | 40 | 60 | 70 | 146 | 253 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-480-XP40-WC08-02** | ● | 48 | 40 | 70 | 70 | 149 | 255 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-490-XP40-WC08-02** | ● | 49 | 40 | 70 | 70 | 152 | 257 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-500-XP40-WC08-02** | ● | 50 | 40 | 70 | 70 | 155 | 259 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-510-XP40-WC08-02** | ● | 51 | 40 | 70 | 70 | 158 | 261 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-520-XP40-WC08-02** | ● | 52 | 40 | 70 | 70 | 161 | 263 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-530-XP40-WC08-02** | ● | 53 | 40 | 70 | 70 | 164 | 265 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-540-XP40-WC08-02** | ● | 54 | 40 | 70 | 70 | 167 | 267 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-550-XP40-WC08-02** | ● | 55 | 40 | 70 | 70 | 170 | 269 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-560-XP40-WC08-02** | ● | 56 | 40 | 70 | 70 | 173 | 271 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-570-XP40-WC08-02** | ● | 57 | 40 | 70 | 70 | 176 | 273 | WCMX080412 | I60M3.5×10.4 | WT15IP |
| **ZD03-580-XP40-WC08-02** | ● | 58 | 40 | 70 | 70 | 179 | 275 | WCMX080412 | I60M3.5×10.4 | WT15IP |

● Ex Stock / ab Lager ○ On demand / auf Anfrage

Code key C130-131
ISO Kennzeichen

Cutting data 138
Schnittdaten

Technical Information C132-137
Technische Information.