Ganzhou Grand Sea Cemented Carbide Co, .ltd ist die hundertprozentige Tochtergesellschaft von Ganzhou Grand Sea GroupwelcheristSino-ausländisches Joint Venture investiert von der Kyocera Corporation.

Nun CarbideEinfügungProjekt ist das Schlüsselentwicklungsprojekt vonGroßMeerCeneted.Hartmetall, Grand.Meer Hat 5 elektrische Pressen aus Japan importiert,produzierenHartmetallEinfügung2.MillionproMonat.

**UnsereVorteil**

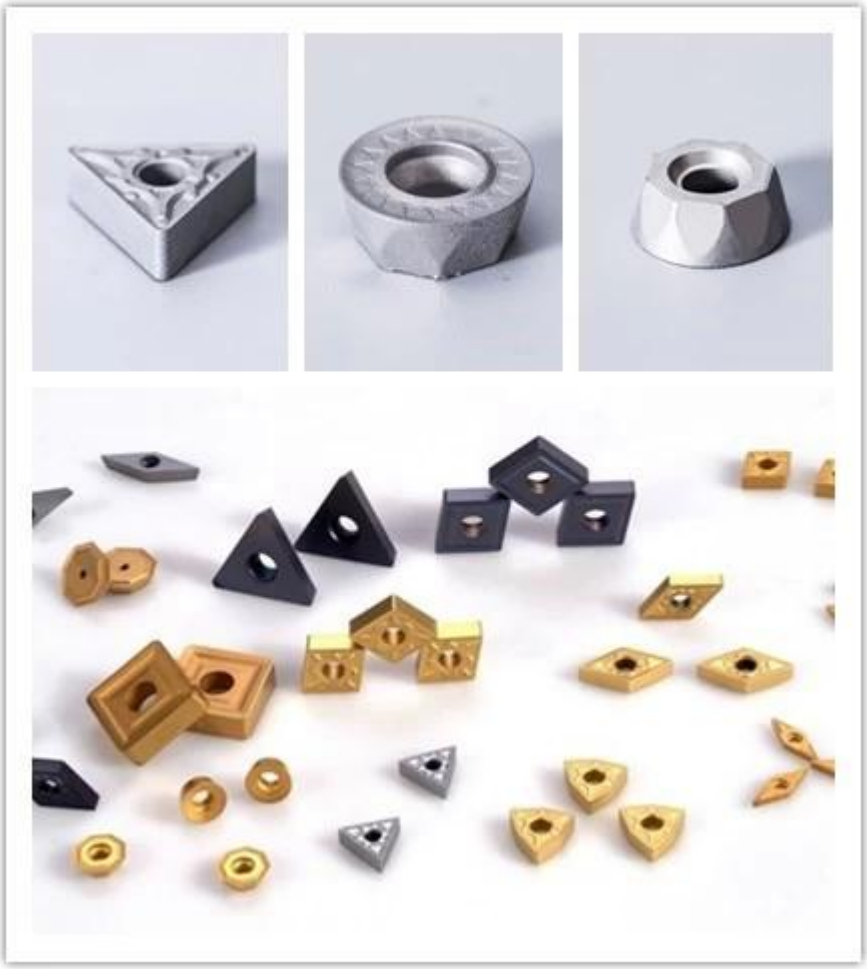
1. 100% Wolframkarbid-Rohmaterial.

2. F & E- und Produktionsfähigkeit, um mit den Markttrends Schritt zu halten.

3. Technische Unterstützung, um die Verarbeitungslösungen für Kunden in allen Aspekten zu lösen.

4. Angemessene Aktie, um eine schnelle Lieferung zu gewährleisten.

5. Wir sind der Lieferant, der den Hartmetalleinsätzen für Sie großhandel und anpassen kann.



| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| C | N | M | G | 12 | 04 | 08 | (E) | (N)- | MP |

## 1. Insert Shape

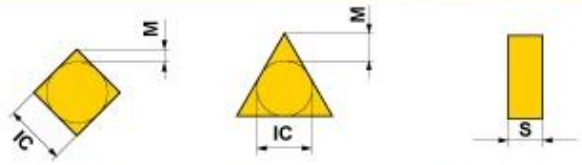
| 1. Insert Shape | |
|---|---|
| Symbol | Insert Shape |
| H | Hexagonal |
| O | Octagonal |
| P | Pentagonal |
| S | Square |
| T | Triangular |
| C | Rhombic 80° |
| D | Rhombic 55° |
| E | Rhombic 75° |
| F | Rhombic 50° |
| M | Rhombic 86° |
| V | Rhombic 35° |
| W | Trigon |
| L | Rectangular |
| A | Parallelogram 85° |
| B | Parallelogram 82° |
| K | Parallelogram 55° |
| R | Round |
| X | Special Design |

## 2. Relief Angle

| 2. Relief Angle | |
|---|---|
| Symbol | Normal Clearance |
| A | 3° |
| B | 5° |
| C | 7° |
| D | 15° |
| E | 20° |
| F | 25° |
| G | 30° |
| N | 0° |
| P | 11° |
| O | Other Relief Angle |
| Major Relief Angle | |

## 3. Tolerance Class

### 3. Tolerance Class



Triangular insert with a facet (Secondary Cutting Edge)

### 3. Tolerance Class

| Symbol | Tolerance of Nose Height **M** (mm) | Tolerance of Inscribed Circle **IC** (mm) | Tolerance of Thickness **S** (mm) |
|---|---|---|---|
| **A** | ±0.005 | ±0.025 | ±0.025 |
| **F** | ±0.005 | ±0.013 | ±0.025 |
| **C** | ±0.013 | ±0.025 | ±0.025 |
| **H** | ±0.013 | ±0.013 | ±0.025 |
| **E** | ±0.025 | ±0.025 | ±0.025 |
| **G** | ±0.025 | ±0.025 | ±0.13 |
| **J** | ±0.005 | ±0.05−±0.15 | ±0.025 |
| **K*** | ±0.013 | ±0.05−±0.15 | ±0.025 |
| **L*** | ±0.025 | ±0.05−±0.15 | ±0.025 |
| **M*** | ±0.08−±0.18 | ±0.05−±0.15 | ±0.13 |
| **N*** | ±0.08−±0.18 | ±0.05−±0.15 | ±0.025 |
| **U*** | ±0.13−±0.38 | ±0.08−±0.25 | ±0.13 |

The surface of insert with * mark is sintered.

Detail of M Class Insert Tolerance

●Tolerance of Nose Height **M** (mm)

| D.I.C. | Triangular | Square | Rhombic 80° | Rhombic 55° | Rhombic 35° | Round |
|---|---|---|---|---|---|---|
| **6.35** | ±0.08 | ±0.08 | ±0.08 | ±0.11 | ±0.16 | – |
| **9.525** | ±0.08 | ±0.08 | ±0.08 | ±0.11 | ±0.16 | – |
| **12.70** | ±0.13 | ±0.13 | ±0.13 | ±0.15 | – | – |
| **15.875** | ±0.15 | ±0.15 | ±0.15 | ±0.18 | – | – |
| **19.05** | ±0.15 | ±0.15 | ±0.15 | ±0.18 | – | – |
| **25.40** | – | ±0.18 | – | – | – | – |
| **31.75** | – | ±0.20 | – | – | – | – |

●Tolerance of Inscribed Circle **IC** (mm)

| D.I.C. | Triangular | Square | Rhombic 80° | Rhombic 55° | Rhombic 35° | Round |
|---|---|---|---|---|---|---|
| **6.35** | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | – |
| **9.525** | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 |
| **12.70** | ±0.08 | ±0.08 | ±0.08 | ±0.08 | – | ±0.08 |
| **15.875** | ±0.10 | ±0.10 | ±0.10 | ±0.10 | – | ±0.10 |
| **19.05** | ±0.10 | ±0.10 | ±0.10 | ±0.10 | – | ±0.10 |
| **25.40** | – | ±0.13 | – | – | – | ±0.13 |
| **31.75** | – | ±0.15 | – | – | – | ±0.15 |

## 4. Chipbreaker and Clamping System

### 4. Chipbreaker and Clamping System

Metric

| Symbol | Hole | Hole Configuration | Chip Breaker | Figure | Symbol | Hole | Hole Configuration | Chip Breaker | Figure |
|---|---|---|---|---|---|---|---|---|---|
| **W** | With Hole | Cylindrical Hole + One Countersink (40−60°) | No | | **A** | With Hole | Cylindrical Hole | No | |
| **T** | With Hole | | One Sided | | **M** | With Hole | Cylindrical Hole | Single Sided | |
| **Q** | With Hole | Cylindrical Hole + Double Countersink (40−60°) | No | | **G** | With Hole | Cylindrical Hole | Double Sided | |
| **U** | With Hole | | Double Sided | | **N** | Without Hole | – | No | |
| **B** | With Hole | Cylindrical Hole + One Countersink (70−90°) | No | | **R** | Without Hole | – | Single Sided | |
| **H** | With Hole | | One Sided | | **F** | Without Hole | – | Double Sided | |
| **C** | With Hole | Cylindrical Hole + Double Countersink (70−90°) | No | | **X** | – | – | – | Special Design |
| **J** | With Hole | | Double Sided | | | | | | |

## 5. Insert Size

| 5. Insert Size | | | | | | | |
|---|---|---|---|---|---|---|---|
| Symbol | | | | | | | Diameter of Inscribed Circle (mm) |
| R | W | V | D | C | S | T | |
| | 02 | | 04 | 03 | 03 | 06 | 3.97 |
| | L3 | 08 | 05 | 04 | 04 | 08 | 4.76 |
| | 03 | 09 | 06 | 05 | 05 | 09 | 5.56 |
| 06 | | | | | | | 6.00 |
| | 04 | 11 | 07 | 06 | 06 | 11 | 6.35 |
| | 05 | 13 | 09 | 08 | 07 | 13 | 7.94 |
| 08 | | | | | | | 8.00 |
| 09 | 06 | 16 | 11 | 09 | 09 | 16 | 9.525 |
| 10 | | | | | | | 10.00 |
| 12 | | | | | | | 12.00 |
| 12 | 08 | 22 | 15 | 12 | 12 | 22 | 12.70 |
| 15 | 10 | | 19 | 16 | 15 | 27 | 15.875 |
| 16 | | | | | | | 16.00 |
| 19 | 13 | | 23 | 19 | 19 | 33 | 19.05 |
| 20 | | | | | | | 20.00 |
| | | | 27 | 22 | 22 | 38 | 22.225 |
| 25 | | | | | | | 25.00 |
| 25 | | | 31 | 25 | 25 | 44 | 25.40 |
| 31 | | | 38 | 32 | 31 | 54 | 31.75 |
| 32 | | | | | | | 32.00 |

## 6. Insert Thickness

**6. Insert Thickness**

*Thickness is from the bottom of the insert to the top of the cutting edge.

| Symbol | Thickness (mm) |
|---|---|
| S1 | 1.39 |
| 01 | 1.59 |
| T0 | 1.79 |
| 02 | 2.38 |
| T2 | 2.78 |
| 03 | 3.18 |
| T3 | 3.97 |
| 04 | 4.76 |
| 06 | 6.35 |
| 07 | 7.94 |
| 09 | 9.52 |

## 7. Insert Corner Configuration

| 7. Insert Corner Configuration | |
|---|---|
| Symbol | Corner Radius (mm) |
| 00 | Sharp Nose |
| V3 | 0.03 |
| V5 | 0.05 |
| 01 | 0.1 |
| 02 | 0.2 |
| 04 | 0.4 |
| 08 | 0.8 |
| 12 | 1.2 |
| 16 | 1.6 |
| 20 | 2.0 |
| 24 | 2.4 |
| 28 | 2.8 |
| 32 | 3.2 |
| 00 : Inch<br>M0 : Metric | Round Insert |

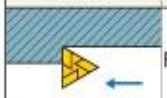
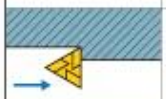
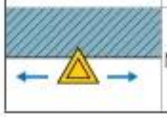
## 8. Cutting Edge Condition

**8. Cutting Edge Condition**

| Figure | Cutting Edge | Symbol |
|---|---|---|
| | Sharp Cutting Edges | F |
| | Round Cutting Edges | E |
| | Chamfered Cutting Edges | T |
| | Chamfered and Rounded Cutting Edges | S |

Mitsubishi Materials omit the honing symbol.

## 9. Cutting Direction

| 9. Cutting Direction | | |
|---|---|---|
| Figure | Hand | Symbol |
|  | Right | R |
|  | Left | L |
|  | Neutral | N |

## 10. Chip Breaker

| 10. Chip Breaker | | |
|---|---|---|
| LP | MP | RP |
| | | |
| LM | MM | RM |
| | | |
| LK | MK | RK |
| | | |
| LS | MS | RS |
| | | |
| FP | LP | MP |
| | | |
| MA | SW | MW |
| | | |
| HZ | HX | HV |
| | | |