# Płytki do toczenia WIDIA™ Victory™

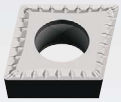
## Toczenie

Oferta płytek do toczenia Victory ISO obejmuje szeroką gamę płytek do toczenia ISO z zaawansowanymi substratami i technologiami powlekania, które zapewniają wysoką produktywność, dużą trwałość narzędzia i niezawodność w zastosowaniach toczenia zgrubnego i wykańczającego. Płytki z tej oferty mogą być używane w szerokim zakresie zastosowań dzięki efektywnemu łamaniu wióra i wysokiej jakości powierzchni obrobionej przy bardzo korzystnym stosunku kosztów do wydajności.

### PŁYTKI NEGATYWOWE

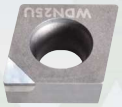
- Płytki typu negatywowego to doskonały wybór w przypadku ogólnej obróbki skrawaniem wszystkich materiałów na średnich i dużych tokarkach
- Płytki negatywowe są dostępne z płaską powierzchnią natarcia i łamaczem wióra, zarówno w opcjach prasowanych, jak i szlifowanych, odpowiednich do wszystkich materiałów przedmiotu obrabianego

### PŁYTKI POZYTYWOWE



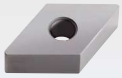
- Płytki przykręcane śrubką są pierwszym wyborem do toczenia wewnętrznego i zewnętrznego na małych i średnich tokarkach odpowiednich do wszystkich materiałów obrabianych

### PŁYTKI PcBN I PCD



- PcBN może być stosowany do obróbki stali o twardości wyższej niż 48 HRC
- Płytki PcBN mogą być również stosowane do poprawy produktywności podczas obróbki żeliwa i stopów żarowytrzymałych
- Płytki PCD są używane do obróbki materiałów nieżelaznych

### PŁYTKI CERAMICZNE



- Płytki ceramiczne to doskonały wybór do wydajnej obróbki stopów żarowytrzymałych
- Płytki z ujemnym kątem natarcia są również zalecane do obróbki materiałów hartowanych i żeliwa dostępnych w płaskich łamaczach wióra z opcjami prasowanymi i szlifowanymi

# PŁYTKI DO TOCZENIA WIDIA VICTORY

## UNIWERSALNOŚĆ

Specjalnie opracowany substrat z odporną na zużycie, wielowarstwową powłoką sprawia, że nadaje się do szerokiego zakresu zastosowań.

## STABILNOŚĆ

Obróbka przed i po nałożeniu powłoki wraz ze szlifowaniem po nałożeniu powłoki poprawia ciągliwość krawędzi i zapewnia bezpieczne osadzenie, a więc stałą wydajność.

## PRODUKTYWNOŚĆ

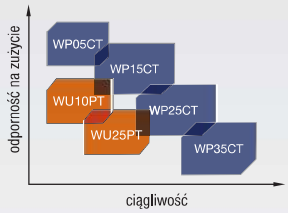
Wielowarstwowa powłoka CVD z warstwą tlenku glinu alfa zapewnia większą produktywność i trwałość narzędzia oraz niezawodność przy zwiększonych prędkościach skrawania i posuwach.

## PROSTOTA

Zewnętrzna warstwa brązowa ułatwia identyfikację zużycia. Łatwe do wyboru i stosowania gatunki i łamacze wiórów do obróbki zgrubnej i wykańczającej różnych materiałów przedmiotu obrabianego.

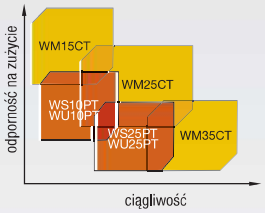
# PŁYTKI DO STALI, STALI NIERDZEWNEJ, ŻELIWA ORAZ STOPÓW ŻAROWYTRZYMAŁYCH

## TOCZENIE GATUNKAMI VICTORY™



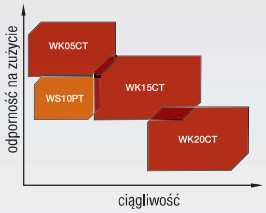

### GATUNKI WP DO STALI

- Cztery gatunki do obróbki zgrubnej i wykańczającej
- Wyższa prędkość skrawania i/lub wartość posuwu w celu zwiększenia produktywności



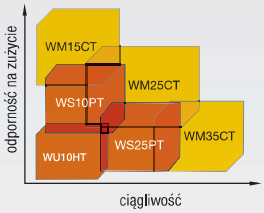

### GATUNKI WM DO STALI NIERDZEWNEJ

- Trzy gatunki z odpowiednimi łamaczami wiórów do obróbki zgrubnej i wykańczającej
- Bardzo dobra równowaga między odpornością na zużycie a ciągliwością, zapewniająca długą i przewidywalną trwałość narzędzia




### GATUNKI WK DO ŻELIWA

- Trzy gatunki do wszystkich operacji toczenia żeliwa
- Prędkość skrawania i/lub wartość posuwu wyższe aż o 30% w porównaniu z gatunkami oferowanymi przez konkurencję
- WK15CT to pierwszy wybór do toczenia żeliwa




### GATUNKI WS DO OBRÓBKI STOPÓW ŻAROWYTRZYMAŁYCH

- Dwa gatunki do obróbki zgrubnej i wykańczającej
- Bardzo dobra odporność na zużycie zapewniająca większą trwałość narzędzia

## BRANŻA

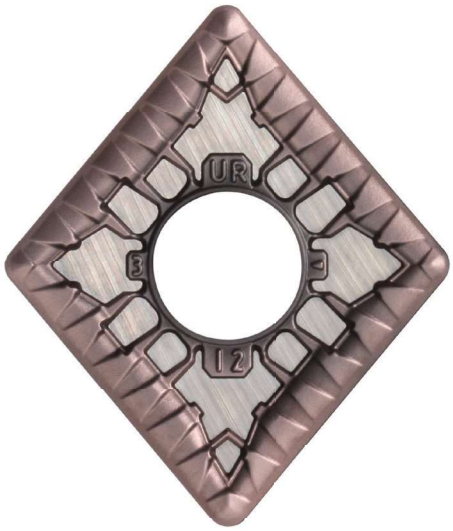
GENERAL ENGINEERING

TRANSPORTATION

ENERGY

AEROSPACE

MEDICAL



# System oznaczeń katalogowych

Każdy symbol w naszym oznaczeniu katalogowym oznacza specyficzną cechę danego wyrobu.
Skorzystaj z poniższych kolumn kluczowych i odpowiadających im obrazów, aby łatwo określić, które atrybuty mają zastosowanie.

## C

Kształt płytki

| | | |
|---|---|---|
| H | Sześciokąt 120° | |
| O | Ośmiokąt 135° | |
| P | Pięciokąt 108° | |
| R | Okrągłe — | |
| S | Kwadratowe 90° | |
| T | Trójkąt 60° | |
| C<br>D<br>E<br>M<br>V | Romb<br>80°<br>55°<br>75°<br>86°<br>35° | |
| W | Kształt trygonalny 80° z powiększonym kątem naroża | |
| L | Prostokąt 90° | |
| A<br>B<br>N/K | Równoległobok<br>85°<br>82°<br>55° | |

## N

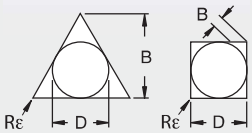
Kąt przyłożenia
Kąt

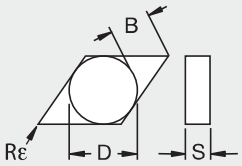
| | |
|---|---|
| A | 3° |
| B | 5° |
| C | 7° |
| D | 15° |
| E | 20° |
| F | 25° |
| G | 30° |
| N | 0° |
| P | 11° |
| O | Oznaczenie innego kąta przyłożenia, wymagającego objaśnienia. |

## M

Tolerancja narzędzia

Tolerancje dotyczą stanu przed przygotowaniem i powlekaniem krawędzi skrawającej




**D** = Teoretyczna średnica okręgu wpisanego płytki
**S** = Grubość
**B** = Patrz poniższe rysunki.

## G

Płytka
Właściwości

| | |
|---|---|
| N | |
| R | |
| F | |
| A | |
| M | |
| G | |
| W | |
| T | |
| Q | |
| U | |
| B | |
| H | |
| C | |
| J | |
| X<br>V | Konstrukcja specjalna |

## 12

Rozmiar

Kod dla długości calowej krawędzi skrawającej "L10"

| "D" mm | C | D | R | S | T | V | W |
|---|---|---|---|---|---|---|---|
| 3,97 | S4 | 04 | 03 | 03 | 06 | — | — |
| 4,76 | 04 | 05 | 04 | 04 | 08 | 08 | S3 |
| 5,56 | 05 | 06 | 05 | 05 | 09 | 09 | 03 |
| 6,00 | — | — | 06 | — | — | — | — |
| 6,35 | 06 | 07 | 06 | 06 | 11 | 11 | 04 |
| 7,94 | 08 | 09 | 07 | 07 | 13 | 13 | 05 |
| 8,00 | — | — | 08 | — | — | — | — |
| 9,52 | 09 | 11 | 09 | 09 | 16 | 16 | 06 |
| 10,00 | — | — | 10 | — | — | — | — |
| 11,11 | 11 | 13 | 11 | 11 | 19 | 19 | 07 |
| 12,00 | — | — | 12 | — | — | — | — |
| 12,70 | 12 | 15 | 12 | 12 | 22 | 22 | 08 |
| 14,29 | 14 | 17 | 14 | 14 | 24 | 24 | 09 |
| 15,88 | 16 | 19 | 15 | 15 | 27 | 27 | 10 |
| 16,00 | — | — | 16 | — | — | — | — |
| 17,46 | 17 | 21 | 17 | 17 | 30 | 30 | 11 |
| 19,05 | 19 | 23 | 19 | 19 | 33 | 33 | 13 |
| 20,00 | — | — | 20 | — | — | — | — |
| 22,22 | 22 | 27 | 22 | 22 | 38 | 38 | 15 |
| 25,00 | — | — | 25 | — | — | — | — |
| 25,40 | 25 | 31 | 25 | 25 | 44 | 44 | 17 |
| 31,75 | 32 | 38 | 31 | 31 | 54 | 54 | 21 |
| 32,00 | — | — | 32 | — | — | — | — |

| tolerancja wykonania | tolerancja dla wymiaru "D" | tolerancja dla wymiaru "B" | tolerancja dla wymiaru "S" |
|---|---|---|---|
| C | ±0,025 | ±0,013 | ±0,025 |
| H | ±0,013 | ±0,013 | ±0,025 |
| E | ±0,025 | ±0,025 | ±0,025 |
| G | ±0,025 | ±0,025 | ±0,013 |
| M | Patrz tabele na następnej stronie | | ±0,013 |
| U | Patrz tabele na następnej stronie | | ±0,013 |

# System oznaczeń katalogowych

*(cd.)*

## 04

Grubość
S

| symbol | grubość |
|---|---|
| mm | mm |
| — | 0,79 |
| T0 | 1,00 |
| 01 | 1,59 |
| T1 | 1,98 |
| 02 | 2,38 |
| 03 | 3,18 |
| T3 | 3,97 |
| 04 | 4,76 |
| 05 | 5,56 |
| 06 | 6,35 |
| 07 | 7,94 |
| 9 | 9,52 |
| 11 | 11,11 |
| 12 | 12,70 |

## 08

Promień
naroża "Rε"

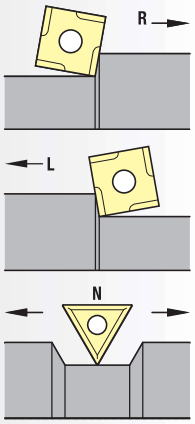
| symbol | promień naroża |
|---|---|
| mm | mm |
| X0 | 0,04 |
| 01 | 0,1 |
| 02 | 0,2 |
| 04 | 0,4 |
| 08 | 0,8 |
| 12 | 1,2 |
| 16 | 1,6 |
| 20 | 2,0 |
| 24 | 2,4 |
| 28 | 2,8 |
| 32 | 3,2 |
| 00 | płytka okrągła |
| M0 | |
| — | |

Kierunek płytki
(opcjonalnie)

R = Wersja prawa

L = Wersja lewa

N = Neutralne




Krawędź skrawająca
(opcjonalnie)

F — Ostry

E — Zaokrąglona

T — Fazowane

S — Fazowana i zaokrąglona

K — Podwójnie fazowana

P — Podwójnie fazowana i zaokrąglona

## UR

Łamacz wióra
(opcjonalnie)

| | | |
|---|---|---|
| 13 | = | Lekka obróbka elementów kolejowych |
| CT | = | Toczenie kształtowe |
| FF | = | Obróbka bardzo dokładna |
| FP | = | Obróbka wykańczająca, pozytywowa |
| FW | = | Geometria Wiper — do obróbki dokładnej |
| ML | = | Obróbka lekka średniodokładna |
| MR | = | Obróbka średniozgrubna |
| MW | = | Geometria Wiper do obróbki średniodokładnej |
| Prawe (RH) | = | Ciężka obróbka zgrubna |
| T | = | Ujemny kąt natarcia, krawędź fazowana |
| UF | = | Uniwersalna geometria — do obróbki dokładnej |
| UM | = | Uniwersalna geometria — do obróbki średniodokładnej |
| UR | = | Uniwersalna geometria do obróbki zgrubnej |
| .NMP | = | Ostra krawędź skrawająca — do obróbki średniodokładnej |
| MP | = | Dodatni kąt natarcia — do obróbki średniodokładnej |
| FS | = | Obróbka wykańczająca w wysokiej temperaturze (S) |
| MS | = | Obróbka średniodokładna w wysokiej temperaturze (S) |
| MU | = | Obróbka średniodokładna, uniwersalna |
| SR | = | Obróbka zgrubna ciężka |
| 65 | = | Ciężka obróbka zgrubna |
| 8 | = | Ciężka obróbka zgrubna |
| .NGP | = | Ostra krawędź skrawająca — do obróbki średniodokładnej |

| | Tolerancja ± na "D" | | | | | Tolerancja ± na "B" | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Tolerancja klasy M | | Tolerancja klasy U | | | Tolerancja klasy M | | Tolerancja klasy U |
| "D" | Kształt S, T, C, R i W | Kształt D | Kształt V | Kształt S, T i C | "D" | Kształt S, T, C, R i W | Kształt D | Kształt V | Kształt S, T i C |
| mm | mm | mm | mm | mm | mm | mm | mm | mm | mm |
| 3,97 | 0,05 | – | – | – | 3,97 | 0,08 | – | – | – |
| 4,76 | 0,05 | – | – | 0,08 | 4,76 | 0,08 | – | – | 0,13 |
| 5,56 | 0,05 | 0,05 | 0,05 | 0,08 | 5,56 | 0,08 | 0,11 | – | 0,13 |
| 6,35 | 0,05 | 0,05 | 0,05 | 0,08 | 6,35 | 0,08 | 0,11 | – | 0,13 |
| 7,94 | 0,05 | 0,05 | 0,05 | 0,08 | 7,94 | 0,08 | 0,11 | – | 0,13 |
| 9,52 | 0,05 | 0,05 | 0,05 | 0,08 | 9,52 | 0,08 | 0,11 | 0,18 | 0,13 |
| 11,11 | 0,08 | 0,08 | 0,08 | 0,13 | 11,11 | 0,13 | 0,15 | – | – |
| 12,70 | 0,08 | 0,08 | 0,08 | 0,13 | 12,70 | 0,13 | 0,15 | 0,25 | 0,20 |
| 14,29 | 0,08 | 0,08 | 0,08 | 0,13 | 14,29 | 0,13 | 0,15 | – | – |
| 15,88 | 0,10 | 0,10 | 0,10 | 0,18 | 15,88 | 0,15 | 0,18 | – | 0,27 |
| 17,46 | 0,10 | 0,10 | 0,10 | 0,18 | 17,46 | 0,15 | 0,18 | – | 0,27 |
| 19,05 | 0,10 | 0,10 | 0,10 | 0,18 | 19,05 | 0,15 | 0,18 | – | 0,27 |
| 22,22 | 0,13 | – | – | 0,25 | 22,22 | 0,15 | – | – | 0,38 |
| 25,40 | 0,13 | – | – | 0,25 | 25,40 | 0,18 | – | – | 0,38 |
| 31,75 | 0,15 | – | – | 0,25 | 31,75 | 0,20 | – | – | 0,38 |

## System nazewnictwa gatunków Victory

Produkty do toczenia ISO oferowane w ramach programu All-Star to rozwiązania do obróbki stali, stali nierdzewnej, żeliwa i stopów żarowytrzymałych.
Gatunki i geometrie do toczenia WIDIA™ Victory zapewniają wyższą produktywność dzięki skróceniu czasu cyklu, wydłużeniu trwałości narzędzia i lepszemu łamaniu wióra.

| W | P | 15 | C | T |
|---|---|---|---|---|
| Marka | Materiał przedmiotu obrabianego | Zakres zastosowań | Materiał płytki | Zastosowanie |
| **W** = WIDIA | **P** = Stal | **05** = Obróbka bardzo dokładna | **H** = Węglik spiekany (niepowlekany) | **T** = Toczenie |
| | **M** = Stal nierdzewna | **10** = Obróbka wykańczająca | **C** = Węglik spiekany z powłoką CVD | **M** = Frezowanie |
| | **K** = Żeliwo | **15 =** Obróbka średniodokładna i zgrubna | **P** = Węglik spiekany z powłoką PVD | **H** = obróbka otworów |
| | **N** = Materiały nieżelazne | **20 =** Obróbka średniodokładna i zgrubna | **T** = Cermetal | **D** = Wiertła monolityczne |
| | **S** = Stopy żaroodporne | **25 =** Obróbka zgrubna | **Y** = Ceramika | **E** = Monolityczne frezy trzpieniowe |
| | **H** = Materiały hartowane | **30 =** Obróbka zgrubna | **D** = Diament | **G** = Gwintowniki |
| | **U** = Uniwersalne zastosowanie | **35 =** Obróbka zgrubna | **B** = PCBN | **R** = Rozwiertaki |
| | | **40 =** Ciężka obróbka zgrubna | **S** = HSS | **V** = Frezy do gwintów |
| | | **45 =** Ciężka obróbka zgrubna | **E** = HSS-E | |
| | | **50 =** Ciężka obróbka zgrubna | **M** = HSS-E-PM | |

## Zalecenia dotyczące prędkości skrawania • P • Metryczne

Stal niskowęglowa (<0,3% C) i automatowa

szybkość skrawania — m/min

| grupa materiałowa | gatunek | 135 | 180 | 225 | 275 | 320 | 360 | 410 | 455 | 495 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P0/P1 | WP05CT | | | | | | | | | | 435 |
| | WP15CT | | | | | | | | | | 395 |
| | WP25CT | | | | | | | | | | 275 |
| | WP35CT | | | | | | | | | | 210 |
| | WS10PT/WU10PT | | | | | | | | | | 280 |

Stale średnio- i wysokowęglowe (>0,3% C)

szybkość skrawania — m/min

| grupa materiałowa | gatunek | 135 | 180 | 225 | 275 | 320 | 360 | 410 | 455 | 495 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P2 | WP05CT | | | | | | | | | | 240 |
| | WP15CT | | | | | | | | | | 265 |
| | WP25CT | | | | | | | | | | 195 |
| | WP35CT | | | | | | | | | | 150 |
| | WS10PT/WU10PT | | | | | | | | | | 200 |

Stale stopowe i stale narzędziowe (≤ 330 HB) (≤ 35 HRC)

szybkość skrawania — m/min

| grupa materiałowa | gatunek | 135 | 180 | 225 | 275 | 320 | 360 | 410 | 455 | 495 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P3 | WP05CT | | | | | | | | | | 205 |
| | WP15CT | | | | | | | | | | 190 |
| | WP25CT | | | | | | | | | | 155 |
| | WP35CT | | | | | | | | | | 120 |
| | WS10PT/WU10PT | | | | | | | | | | 155 |

Stale stopowe i stale narzędziowe (340–450 HB) (36–48 HRC)

szybkość skrawania — m/min

| grupa materiałowa | gatunek | 60 | 90 | 120 | 150 | 180 | 210 | 240 | 270 | 300 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P4 | WP05CT | | | | | | | | | | 160 |
| | WP15CT | | | | | | | | | | 145 |
| | WP25CT | | | | | | | | | | 105 |
| | WP35CT | | | | | | | | | | 95 |
| | WS10PT/WU10PT | | | | | | | | | | 110 |

Stale ferrytyczne, martenzytyczne i stale nierdzewne PH (≤330 HB) (≤35 HRC)

szybkość skrawania — m/min

| grupa materiałowa | gatunek | 120 | 150 | 180 | 210 | 240 | 270 | 300 | 330 | 360 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P5 | WP05CT | | | | | | | | | | 240 |
| | WP15CT | | | | | | | | | | 215 |
| | WP25CT | | | | | | | | | | 195 |
| | WP35CT | | | | | | | | | | 135 |
| | WS10PT/WU10PT | | | | | | | | | | 200 |

Stale ferrytyczne, martenzytyczne i nierdzewne PH (340–450 HB) (36–48 HRC)

szybkość skrawania — m/min

| grupa materiałowa | gatunek | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | 345 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P6 | WP05CT | | | | | | | | | | 200 |
| | WP15CT | | | | | | | | | | 180 |
| | WP25CT | | | | | | | | | | 150 |
| | WP35CT | | | | | | | | | | 105 |
| | WS10PT/WU10PT | | | | | | | | | | 150 |

## Zalecenia dotyczące prędkości skrawania • M • Metryczne

Stal nierdzewna austenityczna — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 90 | 135 | 180 | 225 | 270 | 315 | 360 | 405 | 450 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M1 | WM15CT | | | | | | | | | | 180 |
| | WM25CT | | | | | | | | | | 150 |
| | WM35CT | | | | | | | | | | 120 |
| | WS10PT | | | | | | | | | | 215 |
| | WS25PT | | | | | | | | | | 180 |

Stal nierdzewna austenityczna — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 90 | 135 | 180 | 225 | 270 | 315 | 360 | 405 | 450 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M2 | WM15CT | | | | | | | | | | 165 |
| | WM25CT | | | | | | | | | | 140 |
| | WM35CT | | | | | | | | | | 105 |
| | WS10PT | | | | | | | | | | 200 |
| | WS25PT | | | | | | | | | | 165 |

Stal nierdzewna austenityczna: Duplex (stal ferrytyczno-austenityczna) — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 90 | 135 | 180 | 225 | 270 | 315 | 360 | 405 | 450 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M3 | WM15CT | | | | | | | | | | 150 |
| | WM25CT | | | | | | | | | | 120 |
| | WM35CT | | | | | | | | | | 90 |
| | WS10PT | | | | | | | | | | 185 |
| | WS10PT/WU25PT | | | | | | | | | | 150 |

## Zalecenia dotyczące prędkości skrawania • K • Metryczne

Żeliwo szare — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 60 | 180 | 305 | 430 | 550 | 675 | 800 | 920 | 1040 | 1160 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K1 | WK05CT | | | | | | | | | | | 450 |
| | WK15CT | | | | | | | | | | | 360 |
| | WK20CT | | | | | | | | | | | 300 |

Żeliwa sferoidalne, wermikularne i ciągliwe(<wytrzymałość na rozciąganie 600 MPa) — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 90 | 135 | 180 | 225 | 275 | 320 | 360 | 410 | 460 | 500 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K2 | WS10PT/WU10PT | | | | | | | | | | | 200 |
| | WK05CT | | | | | | | | | | | 360 |
| | WK15CT | | | | | | | | | | | 270 |
| | WK20CT | | | | | | | | | | | 240 |

Żeliwo sferoidalne, ciągliwe i hartowane izotermicznie (wytrzymałość na rozciąganie >600 MPa) — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 90 | 135 | 180 | 225 | 275 | 320 | 360 | 410 | 460 | 500 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K3 | WS10PT/WU10PT | | | | | | | | | | | 150 |
| | WK05CT | | | | | | | | | | | 240 |
| | WK15CT | | | | | | | | | | | 215 |
| | WK20CT | | | | | | | | | | | 210 |

## Zalecenia dotyczące prędkości skrawania • N • Metryczne

Stopy aluminium o niskiej zawartości krzemu
(stopy hipoeutektyczne <12,2% Si) i stopy magnezu

Szybkość — m/min

| grupa materiałowa | gatunek | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N1 | WU10HT | | | | | | | | | | | 488 |

Stopy aluminium o niskiej zawartości krzemu
(stopy hipoeutektyczne <12,2% Si) i stopy magnezu

Szybkość — m/min

| grupa materiałowa | gatunek | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2250 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N2 | WU10HT | | | | | | | | | | | 488 |

Stopy aluminium o wysokiej zawartości krzemu
(hipereutektyczne >12,2% Si) i stopy magnezu

Szybkość — m/min

| grupa materiałowa | gatunek | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N3 | WU10HT | | | | | | | | | | | 488 |
| | WU05PT | | | | | | | | | | | 550 |

Na bazie miedzi, mosiądzu i cynku dla zakresu skrawalności
70–100

Szybkość — m/min

| grupa materiałowa | gatunek | 250 | 500 | 750 | 1000 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|
| N4 | WU10HT | | | | | 259 |
| | WU05PT | | | | | 275 |

Nylon, tworzywa sztuczne, gumy, fenoplasty, żywice, włókno szklane i szkło

Szybkość — m/min

| grupa materiałowa | gatunek | 250 | 500 | 750 | 1000 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|
| N5 | WU10HT | | | | | 170 |
| | WU05PT | | | | | 170 |

Kompozyty węglowe i grafitowe:
Stopy powlekane, Kevlar i grafit (280–400 HB) (30–43 HRC)

Szybkość — m/min

| grupa materiałowa | gatunek | 250 | 500 | 750 | 1000 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|
| N6 | WU05PT | | | | | 200 |

MMC (kompozyty o osnowie metalowej na bazie aluminium)

Szybkość — m/min

| grupa materiałowa | gatunek | 250 | 500 | 750 | 1000 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|
| N7 | WU10HT | | | | | 180 |

Stopy cyny, odlew: ASTM 823, stopy 1, 2, 3, 11

Szybkość — m/min

| grupa materiałowa | gatunek | 250 | 500 | 750 | 1000 | Parametry wyjściowe m/min |
|---|---|---|---|---|---|---|
| N8 | WU05PT | | | | | 215 |

## Zalecenia dotyczące prędkości skrawania • S • Metryczne

Stopy żaroodporne na bazie żelaza (135–320 HB) (≤ 34 HRC) — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 15 | 45 | 75 | 105 | 140 | 170 | 200 | 230 | 290 | 310 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S1 | WU10HT | | | | | | | | | | | 30 |
| | WS10PT/WU10PT | | | | | | | | | | | 55 |
| | WS25PT/WU25PT | | | | | | | | | | | 40 |
| | WM15CT | | | | | | | | | | | 55 |
| | WM25CT/WM35CT | | | | | | | | | | | 40 |

Stopy żarowytrzymałe na bazie kobaltu (150–425 HB) (≤ 45 HRC) — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 15 | 45 | 75 | 105 | 140 | 170 | 200 | 230 | 290 | 310 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S2 | WU10HT | | | | | | | | | | | 35 |
| | WS10PT/WU10PT | | | | | | | | | | | 60 |
| | WS25PT/WU25PT | | | | | | | | | | | 30 |
| | WM15CT | | | | | | | | | | | 60 |
| | WM25CT/WM35CT | | | | | | | | | | | 30 |

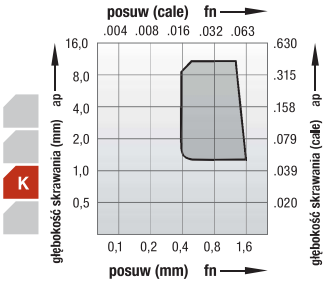
Stopy żaroodporne na bazie niklu (140–475 HB) (≤ 48 HRC) — szybkość skrawania — m/min — Parametry wyjściowe

| grupa materiałowa | gatunek | 15 | 45 | 75 | 105 | 140 | 170 | 200 | 230 | 290 | 310 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S3 | WU10HT | | | | | | | | | | | 40 |
| | WS10PT/WU10PT | | | | | | | | | | | 70 |
| | WS25PT/WU25PT | | | | | | | | | | | 40 |
| | WM15CT | | | | | | | | | | | 70 |
| | WM25CT/WM35CT | | | | | | | | | | | 40 |

Tytan i stopy tytanu (110–450 HB) (≤ 48 HRC) — szybkość skrawania — m/min — Parametry wyjściowe

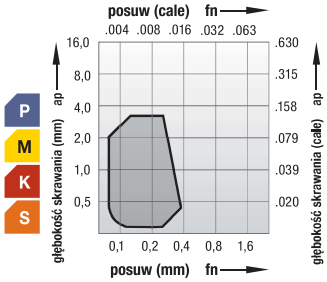
| grupa materiałowa | gatunek | 15 | 45 | 75 | 105 | 140 | 170 | 200 | 230 | 290 | 310 | m/min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S4 | WU10HT | | | | | | | | | | | 45 |
| | WM15CT | | | | | | | | | | | 70 |
| | WM25CT/WM35CT | | | | | | | | | | | 55 |

## Płytki negatywowe



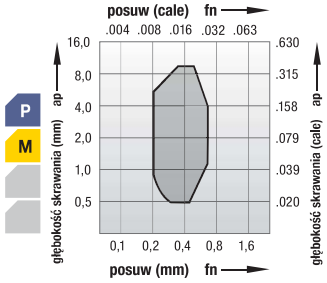
### ..MA

Geometria z płaską powierzchnią natarcia do obróbki żeliwa. Zastosowanie w obróbce od wykańczającej do zgrubnej.



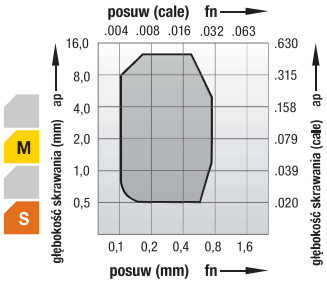
### FF

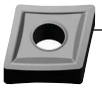
Obróbka dokładna zapewniająca gładkie, precyzyjnie wykończone powierzchnie. Bardzo dobre łamanie wiórów, zwłaszcza przy niewielkich głębokościach skrawania.



### MR

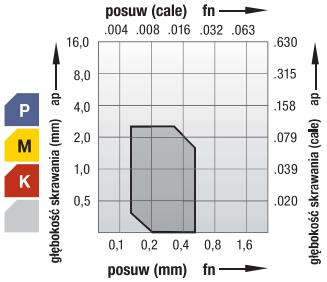
Do średniodokładnej lub zgrubnej obróbki stali i trudnych w obróbce wysokostopowych materiałów tytanowych lub aluminiowych. Wysoka wytrzymałość na duże odkształcenia pod wpływem wiórów.



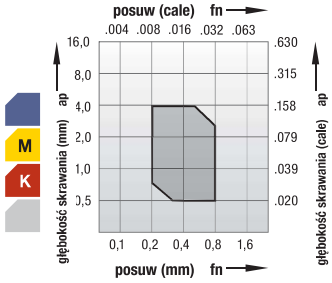
### .NMP

Do średniodokładnej obróbki skrawaniem ciągliwych materiałów, na przykład stopów na bazie chromu lub niklu. Ogranicza tendencje przywierania obrabianego materiału do płytki.



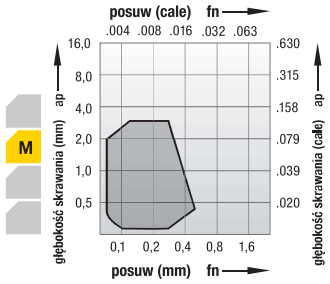
### FW

Geometria typu Wiper do obróbki wykańczającej w celu zapewnienia wysokiej jakości powierzchni obrobionej przy wysokich wartościach posuwu. Doskonały wybór do wysokowydajnej obróbki wykańczającej.



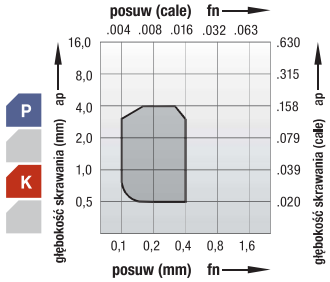
### MW

Geometria typu Wiper do lekkiego i średniodokładnego toczenia z wysokimi wartościami posuwu. Wartość posuwu dwukrotnie wyższa niż w przypadku krawędzi z pełnym promieniem naroża, zapewniająca tę samą jakość powierzchni obrobionej.



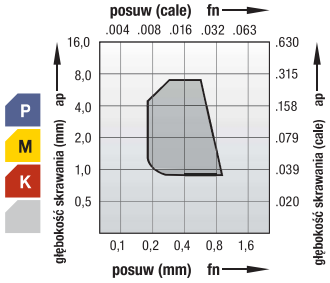
### CT

Przeznaczona do obróbki kształtowej. Podczas gdy zastosowanie innych geometrii skutkuje powstawaniem długich wiórów, unikalne rozłożenie sił skrawania zapewnia w tym przypadku efektywne łamanie wióra.



### ML

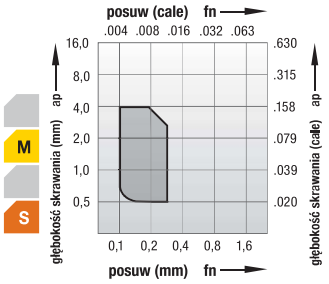
Do obróbki dokładnej lub średniodokładnej z negatywową, stabilną krawędzią skrawającą.



### RH

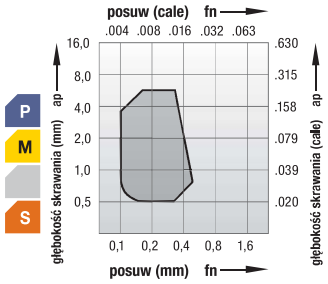
Do obróbki średniodokładnej i zgrubnej. Doskonała efektywność formowania wióra. Krawędź o dużej wytrzymałości przeznaczona do obróbki przerywanej i skrawania kutej warstwy wierzchniej lub naskórka odlewniczego. Preferowane do obróbki wszystkich rodzajów żeliwa, np. żeliwa szarego, ciągliwego i sferoidalnego.

## Płytki negatywowe



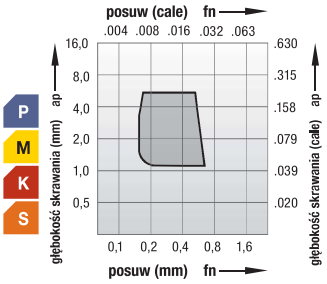
### UF

Do obróbki dokładnej z pozytywową krawędzią skrawającą, pozwalającą zmniejszyć siły skrawania i zapewnić doskonałą jakość powierzchni obrobionej.



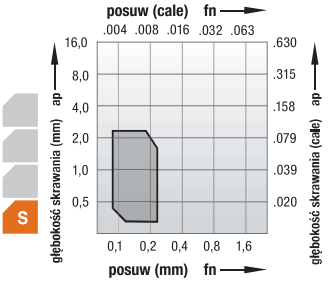
### UM

Do toczenia średniodokładnego. Łamacz wióra do obróbki lekkiej. Do zastosowań skutkujących powstawaniem wiórów o zróżnicowanym przekroju, na przykład toczenia kształtowego. Duża dokładność wymiarów. Do obróbki miękkich stali i stali nierdzewnych.



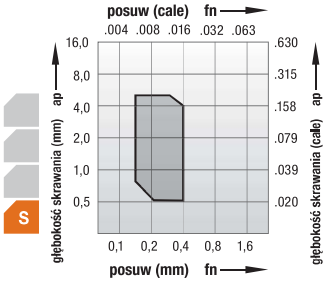
### UR

Geometria do obróbki zgrubnej z ciągłym formowaniem wióra i udoskonalonym doprowadzaniem chłodziwa, zapewniającymi większą trwałość narzędzia. Pozytywowa geometria pozwala zmniejszyć siły skrawania i zwiększyć odporność na powstawanie głębokich wrębów na powierzchni przyłożenia. Idealnie nadaje się do obróbki stali nierdzewnej i ciągłej obróbki stali węglowych.



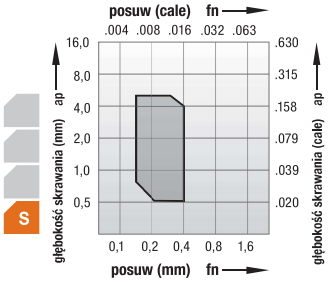
### FS

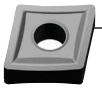
Do obróbki wykańczającej. Szlifowanie po obwodzie z dodatnim kątem natarcia idealnie sprawdzające się przy obróbce stopów żarowytrzymałych. Mikrowykończenie szlifowania po obwodzie zapewnia niewielkie zaokrąglenie krawędzi skrawającej, co gwarantuje lepszą spójność i niezawodność ostrza.



### MS

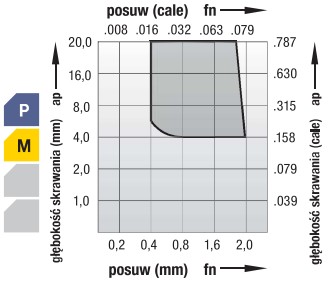
Do obróbki średniodokładnej materiałów żarowytrzymałych. Zwiększona wytrzymałość dzięki mikrowykończeniu przygotowania ostrza.



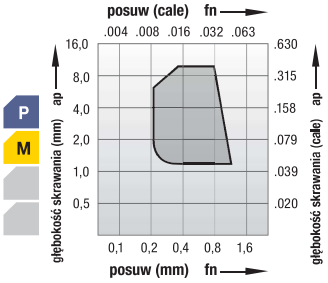
### .NGP

Do średniodokładnej obróbki skrawaniem ciągliwych materiałów, na przykład stopów na bazie chromu lub niklu. Ogranicza tendencje przywierania obrabianego materiału do płytki.



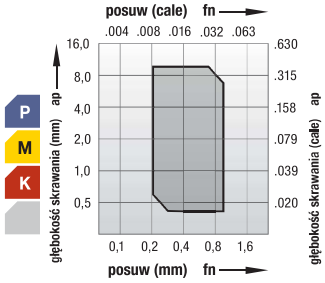
### SR

Geometria A do ciężkiej obróbki zgrubnej. Geometria SR oferuje wytrzymałą krawędź skrawającą umożliwiającą obróbkę zgrubną przy dużych obciążeniach skrawania. Umożliwia uzyskanie wysokiej wydajności obróbki.



### 65

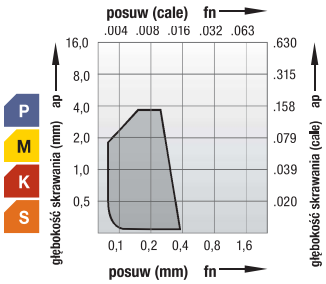
Geometria do toczenia zgrubnego z łamaczem wióra w zakresie obróbki średniodokładnej. Dodatni kąt natarcia obniża siły skrawania, zmniejszając tym samym zapotrzebowanie mocy. Przeznaczona do stosowania do obróbki stali niskociągliwych i nierdzewnych.



### -RU

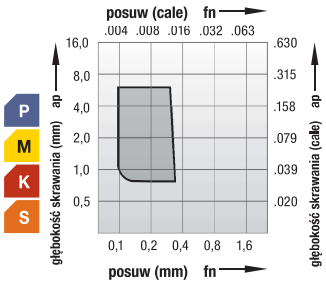
Dodatnia geometria zapewniająca gładkie skrawanie. Dodatnia powierzchnia typu T-land z kątem natarcia do niższych sił skrawania, z większą odpornością na DOCN. Szlifowanie gniazda po powlekaniu dla zapewnienia pewnej powierzchni osadzenia. Odpowiednia wytrzymałość krawędzi do obróbki przerywanej, kucia powierzchni i odlewów.

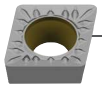
## Płytki pozytywowe



### MU

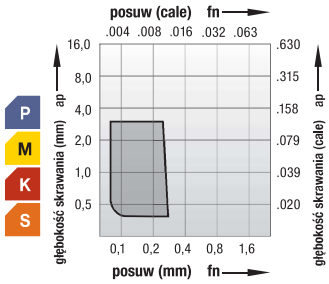
Uniwersalna geometria do obróbki średniodokładnej o lekkiej obróbki dzięki zastosowaniu geometrii pozytywowej. Uniwersalny zakres zastosowań, w tym toczenie niestabilnych elementów oraz operacje wytaczania.



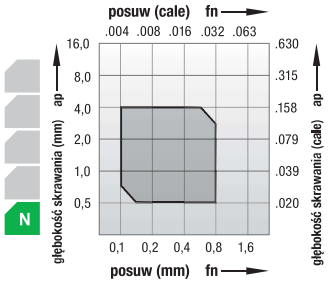
### MP

Do toczenia średniodokładnego lub zgrubnego z obniżonymi siłami skrawania i udoskonalonym łamaniem wióra przy wysokich wartościach posuwu. Odpowiednie do zastosowań wymagających dużej wydajności obróbki i wrzecion.



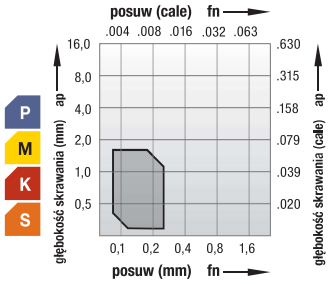
### FP

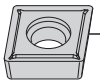
Do toczenia dokładnego lub średniodokładnego z optymalnym formowaniem wióra w szerokim zakresie warunków skrawania i materiałów.



### -AL

Do ekonomicznej obróbki aluminium, metali nieżelaznych i tworzyw sztucznych. Niezwykle ostre krawędzie skrawające skutkują optymalną jakością obrobionych elementów przy zastosowaniu niskich sił skrawania i formowaniu krótkich wiórów.



### 1P

Preferowane do lekkiej obróbki dokładnej. Mniejsze siły skrawania i mniejszy pobór mocy dzięki dodatniemu kątowi natarcia. Dobre parametry łamacza wióra w szerokim zakresie zastosowań.

## P Toczenie stali

**Wał korbowy/wałek rozrządu**
*Obróbka zgrubna i wykańczająca*

**Korbowód**
*Wytaczanie*

**Przekładnie**
*Obróbka zgrubna i wykańczająca*

**Wały wejściowe/zdawcze**

## M Toczenie stali nierdzewnej

**Turbosprężarka**
*Obróbka zgrubna i wykańczająca*

**Kołnierze**
*Obróbka zgrubna i wykańczająca*

**Obudowy łożysk**
*Obróbka zgrubna i wykańczająca*

**Korpus zaworu**
*Obróbka zgrubna i wykańczająca*

## K Toczenie żeliwa

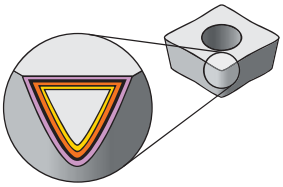
**Wkładka cylindra**
*Obróbka zgrubna i wykańczająca*

**Blok silnika**

**Bęben hamulcowy i tarcza**

**Piasta**
*Obróbka zgrubna i wykańczająca*

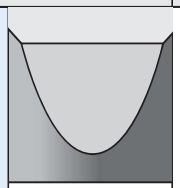
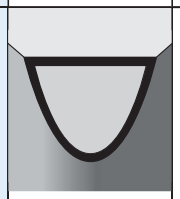
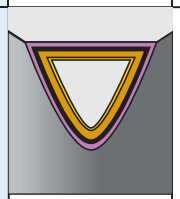
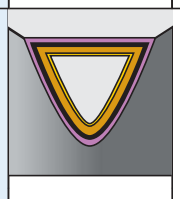
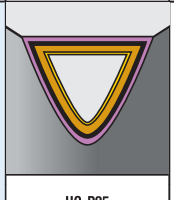
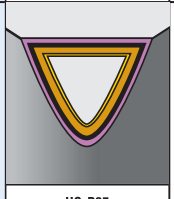
## Gatunki i ich opisy



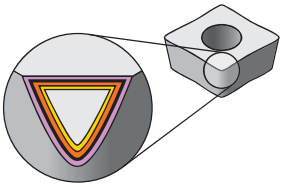
Powłoki umożliwiające stosowanie wysokich prędkości skrawania zostały opracowane pod kątem zastosowań od ciężkiej obróbki zgrubnej po obróbkę wykańczającą.

| | |
|---|---|
| P | Stal |
| M | Stal nierdzewna |
| K | Żeliwo |
| N | Materiały nieżelazne |
| S | Stopy żarowytrzymałe |
| H | Materiały hartowane |

odporność na zużycie ⟷ ciągliwość

| Gatunek | Powłoka | Opis gatunku | | 05 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TTR |  HW-P35 | Węglik spiekany niepowlekany. Wytrzymały gatunek do toczenia średniodokładnego i zgrubnego stali. Nadaje się do obróbki przerywanej i obróbki w niekorzystnych warunkach. | P | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WP20TT |  HT-P05 | Cermetal niepowlekany. Gatunek o wysokiej odporności na zużycie odpowiedni do toczenia wykańczającego stali podczas obróbki ciągłej. Zapewnia doskonałą jakość powierzchni obrobionej. | P | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WP05CT |  HC-P10 | **Skład:** Wzbogacone kobaltem podłoże odporne na odkształcenia z grubą powłoką MTCVD TiCN-$Al_2O_3$.<br>**Zastosowanie:** Do wysokiej produktywności toczenia stali i stali nierdzewnych PH podczas obróbki ciągłej lub lekko przerywanej. Ten gatunek stanowi doskonałe połączenie ciągliwości i odporności na zużycie podczas obróbki z wysoką prędkością skrawania podczas najszybszej produkcji części stalowych. Unikalne połączenie podłoża i powłoki powoduje, że jest to idealny gatunek do obróbki zgrubnej żeliwa, gdzie wymagana jest odporność na wykruszanie. | P | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WP15CT |  HC-P15 | Węglik powlekany. MT-CVD/CVD — TiN-TiCN-$Al_2O_3$-ZrCN. Dobra równowaga między odpornością na zużycie a właściwościami wytrzymałościowymi. Wysokowydajna obróbka skrawaniem lekka i lekko przerywana. Do stali. | P | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WP25CT |  HC-P25 | Węglik powlekany. MT-CVD/CVD — TiN-TiCN-$Al_2O_3$-TiOCN. Dobra ciągliwość. Doskonały pierwszy wybór do obróbki stali i bardzo wydajnego usuwania metalu we wszystkich operacjach obróbki przerywanej, poza najtrudniejszymi warunkami. | P | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WP35CT |  HC-P35 | Węglik powlekany. MT-CVD/CVD — TiN-TiCN-$Al_2O_3$-TiOCN. Sprawdzony we wszystkich operacjach obróbki zgrubnej i ciężkiej, na mokro lub na sucho, przy obróbce przerywanej i ciągłej. | P | | | | | | | | | |
| | | | M | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

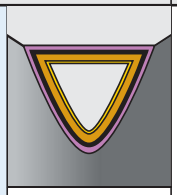
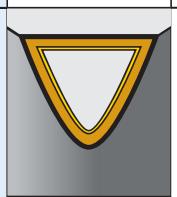
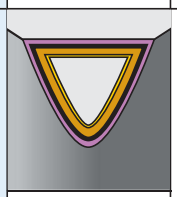
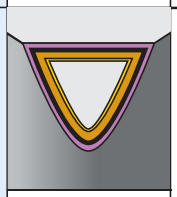
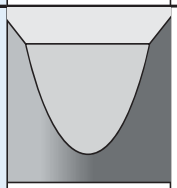
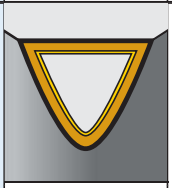
## Gatunki i ich opisy



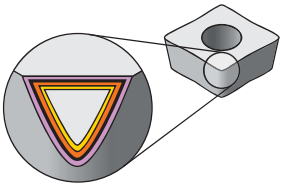
Powłoki umożliwiające stosowanie wysokich prędkości skrawania zostały opracowane pod kątem zastosowań od ciężkiej obróbki zgrubnej po obróbkę wykańczającą.

| | |
|---|---|
| P | Stal |
| M | Stal nierdzewna |
| K | Żeliwo |
| N | Materiały nieżelazne |
| S | Stopy żarowytrzymałe |
| H | Materiały hartowane |

odporność na zużycie ← → ciągliwość

| Gatunek | Powłoka | Opis gatunku | | 05 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WM15CT |  HC-M15 | Węglik powlekany. MT-CVD/CVD — TiN-TiCN-$Al_2O_3$-TiOCN. Wysoki stopień odporności na zużycie oraz dobra odporność na powstawanie głębokich wrębów na powierzchni przyłożenia zapewniają długą trwałość narzędzia stosowanego do toczenia dokładnego i średniodokładnego. | P | | | | ■ | ■ | | | | |
| | | | M | | ■ | ■ | ■ | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | S | | ■ | ■ | ■ | | | | | |
| | | | | | | | | | | | | |
| WM20CT |  HC-K15 | Wielowarstwowy gatunek węglika powlekanego z powłoką TiN-TiCN-$Al_2O_3$ na substracie odpornym na zużycie. Nadaje się do obróbki ogólnej/średniodokładnej stali nierdzewnej przy średnich prędkościach skrawania i posuwach. Substrat oferuje bardzo dobrą ciągliwość i wysoką odporność powłoki na zużycie, zapewniając wydajność nawet podczas obróbki przerywanej przy dużej trwałości narzędzia. | P | | | | ■ | ■ | | | | |
| | | | M | | | ■ | ■ | ■ | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WM25CT |  HC-M25 | Węglik powlekany. MT-CVD/CVD — TiN-TiCN-$Al_2O_3$-TiOCN. Dobra równowaga odporności na zużycie i wytrzymałości. Obróbka lekka i średnia. Do austenitycznej stali nierdzewnej. | P | | | | | | | ■ | ■ | |
| | | | M | | | | ■ | ■ | ■ | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | S | | | | ■ | ■ | ■ | | | |
| | | | | | | | | | | | | |
| WM35CT |  HC-M35 | Węglik powlekany. MT-CVD/CVD — TiN-TiCN-$Al_2O_3$-TiOCN. Dobra równowaga wytrzymałości i odporności na zużycie. Do obróbki średniej i zgrubnej oraz obróbce lekkiej i mocno przerywanej. | P | | | | | | | | ■ | ■ |
| | | | M | | | | | | ■ | ■ | ■ | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | S | | | | | | ■ | ■ | ■ | |
| | | | | | | | | | | | | |
| THM |  HW-K15 | Węglik spiekany niepowlekany. Wyjątkowa równowaga ciągliwości, odporności na zużycie oraz stabilności krawędzi skrawającej. Nadaje się do toczenia lekkiego i średniego w obróbce ciągłej i lekko przerywanej materiałów, takich jak żeliwo i metale nieżelazne. | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | K | | ■ | ■ | ■ | | | | | |
| | | | N | | ■ | ■ | ■ | | | | | |
| | | | S | | ■ | ■ | ■ | | | | | |
| | | | | | | | | | | | | |
| WK05CT |  HC-K05 | Węglik powlekany. MT-CVD/CVD — TiN-TiCN-$Al_2O_3$. Zwiększona odporność na zużycie, dająca dłuższą trwałość narzędzia przy dużych prędkościach skrawania. Zwiększona odporność krawędzi na powstawanie głębokich wrębów na powierzchni przyłożenia, nawet przy obróbce przerywanej. Maksymalna odporność na zużycie zapewniająca dużą trwałość narzędzia przy wysokich prędkościach skrawania podczas wykańczającej do średniodokładnej obróbki skrawaniem. | P | ■ | | | | | | | | |
| | | | | | | | | | | | | |
| | | | K | ■ | ■ | ■ | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

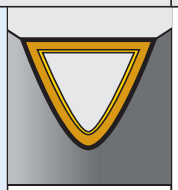
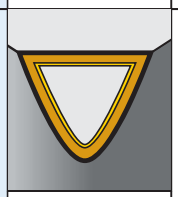
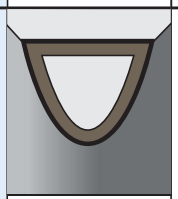
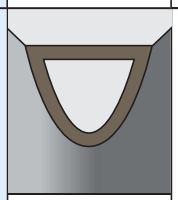
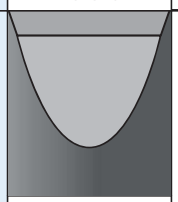
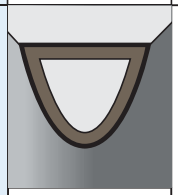
## Gatunki i ich opisy



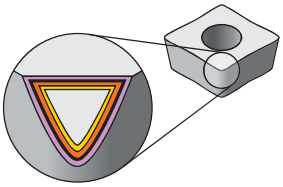
Powłoki umożliwiające stosowanie wysokich prędkości skrawania zostały opracowane pod kątem zastosowań od ciężkiej obróbki zgrubnej po obróbkę wykańczającą.

| | |
|---|---|
| P | Stal |
| M | Stal nierdzewna |
| K | Żeliwo |
| N | Materiały nieżelazne |
| S | Stopy żarowytrzymałe |
| H | Materiały hartowane |

odporność na zużycie ←→ ciągliwość

| Gatunek | Powłoka | Opis gatunku | | 05 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WK15CT |  HC-M20 | **Skład:** Wielowarstwowa powłoka ze średniej grubości warstwami MTCVD TiCN-$Al_2O_3$ nałożonymi na substrat z węglika spiekanego o wysokiej odporności na odkształcenia. **Zastosowanie:** Zaprojektowany do obróbki skrawaniem żeliwa szarego i sferoidalnego z dużą prędkością skrawania. Struktura substratu i powłoki wraz z obróbką po nałożeniu powłoki zapewnia niebywale dużą trwałość narzędzia, szczególnie podczas skrawania żeliwa sferoidalnego i szarego o podwyższonej wytrzymałości na rozciąganie w sytuacjach, gdy stałość wymiarowa przedmiotu obrabianego i trwałość narzędzia mają zasadnicze znaczenie. Doskonały zarówno w przypadku obróbki ciągłej jak i ze zmienną głębokością skrawania. | P | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WK20CT |  HC-K20 | Węglik powlekany. MT-CVD/CVD — TiN-TiCN-$Al_2O_3$. Pierwszy wybór do obróbki skrawaniem wszystkich żeliw szarych i sferoidalnych, obróbki lekkiej i ciężkiej, obróbki płynnej lub przerywanej oraz obróbki na mokro i na sucho. | P | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WS10PT |  HC-S10 | Udoskonalona powłoka PVD na bardzo odpornym na odkształcenia, niestopowym podłożu z węglika spiekanego. Nowa, ulepszona powłoka zwiększa stabilność krawędzi skrawającej przy zastosowaniu szerokiego zakresu prędkości skrawania i wartości posuwu. Gatunek WS10PT™ doskonale nadaje się do wykańczającej i ogólnej obróbki skrawaniem większości materiałów w szerokim zakresie szybkości skrawania i wartości posuwu. Znakomicie sprawdza się w obróbce większości stali, stali nierdzewnych, żeliw, materiałów nieżelaznych oraz nadstopów dzięki zwiększonej ciągliwości krawędzi skrawających oraz wyższych prędkości skrawania i wartości posuwu. | P | | | | | | | | | |
| | | | M | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | N | | | | | | | | | |
| | | | S | | | | | | | | | |
| | | | H | | | | | | | | | |
| WS25PT |  HC-S25 | Zaawansowany gatunek PVD z twardą powłoką AlTiN na niestopowym, drobnoziarnistym podłożu. Nowa, ulepszona powłoka zwiększa stabilność krawędzi skrawającej przy zastosowaniu szerokiego zakresu prędkości skrawania i wartości posuwu. Gatunek WS25PT™ doskonale nadaje się do ogólnej obróbki skrawaniem większości stali, stali nierdzewnych, stopów żarowytrzymałych, tytanu, żelaza i materiałów nieżelaznych z zastosowaniem średnich prędkości skrawania i szerokiego zakresu wartości posuwu. Odznacza się udoskonaloną ciągliwością krawędzi na potrzeby obróbki przerywanej oraz możliwością stosowania wysokich wartości posuwu. | P | | | | | | | | | |
| | | | M | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | N | | | | | | | | | |
| | | | S | | | | | | | | | |
| | | | | | | | | | | | | |
| WU10HT |  HW-N10 | Węglik spiekany niepowlekany. Substrat mikrocząstek o wysokiej odporności na zużycie. Nadaje się do toczenia wykańczającego aluminium i wszystkich rodzajów materiałów nieżelaznych, stali nierdzewnej i stopów żarowytrzymałych z odpowiednim przygotowaniem ostrza. Stosowane głównie w skrawaniu ciągłym. | | | | | | | | | | |
| | | | M | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | N | | | | | | | | | |
| | | | S | | | | | | | | | |
| | | | | | | | | | | | | |
| WU05PT |  HC-N05 | Węglik powlekany. Gatunek powlekany PVD AlTiN z drobnocząsteczkowym substratem i powłoką o wysokiej odporności na zużycie. Nadaje się do toczenia wykańczającego aluminium i innych materiałów nieżelaznych, a także stali, stali nierdzewnej i stopów żarowytrzymałych z niezawodnością podczas skrawania ciągłego z odpowiednim przygotowaniem ostrza. | P | | | | | | | | | |
| | | | M | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | N | | | | | | | | | |
| | | | S | | | | | | | | | |
| | | | | | | | | | | | | |

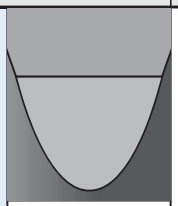
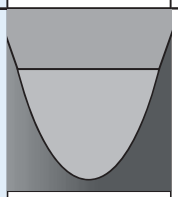
## Gatunki i ich opisy



Powłoki umożliwiające stosowanie wysokich prędkości skrawania zostały opracowane pod kątem zastosowań od ciężkiej obróbki zgrubnej po obróbkę wykańczającą.

| | |
|---|---|
| P | Stal |
| M | Stal nierdzewna |
| K | Żeliwo |
| N | Materiały nieżelazne |
| S | Stopy żarowytrzymałe |
| H | Materiały hartowane |

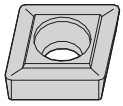
odporność na zużycie ← → ciągliwość

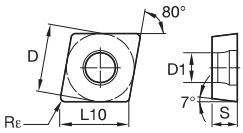
| Gatunek | Powłoka | Opis gatunku | | 05 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WU10PT |  HC-P10 | Gatunek WU10PT doskonale nadaje się do wykańczającej i ogólnej obróbki większości materiałów przy zastosowaniu wysokich prędkości skrawania. Doskonały do obróbki skrawaniem z dużymi prędkościami skrawania większości stali, stali nierdzewnych, żeliw i nadstopów w stabilnych warunkach. | P | | | | | | | | | |
| | | | M | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | S | | | | | | | | | |
| | | | H | | | | | | | | | |
| WU25PT |  HC-P25 | Gatunek z zaawansowaną powłoką PVD Al TiN na twardym, niestopowym, wyjątkowo drobnoziarnistym podłożu. Przeznaczony do ogólnego stosowania w obróbce skrawaniem większości stali, stali nierdzewnych, stopów żarowytrzymałych, stopów tytanu, i żeliw. | P | | | | | | | | | |
| | | | M | | | | | | | | | |
| | | | K | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | S | | | | | | | | | |
| | | | | | | | | | | | | |

widia.com

WIDIA™

## CCMT • Obróbka średniodokładna



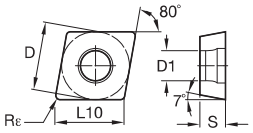



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCMT060202 | 6,35 | 6,45 | 2,38 | 0,2 | 2,80 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2031658 | - | - | - | - |
| CCMT060204 | 6,35 | 6,45 | 2,38 | 0,4 | 2,80 | - | - | - | - | - | - | - | - | 6671876 | - | - | - | - | - | - | 2031666 | 2031668 | - | - | - |
| CCMT090304 | 9,53 | 9,67 | 3,18 | 0,4 | 4,40 | - | - | - | 6128252 | - | - | - | - | 6671877 | - | - | - | - | - | - | 2031693 | 2031695 | - | - | - |
| CCMT090308 | 9,53 | 9,67 | 3,18 | 0,8 | 4,40 | - | - | - | 6128253 | - | - | - | - | - | - | - | - | - | - | - | 2031706 | 2027339 | - | - | - |
| CCMT09T304 | 9,53 | 9,67 | 3,97 | 0,4 | 4,40 | - | - | - | - | - | - | - | - | 6613610 | - | - | - | - | - | - | 2031723 | - | - | - | - |
| CCMT09T308 | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2599478 | - | - | - | - |
| CCMT09T308 | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | - | - | - | - | - | - | - | - | 6613604 | - | - | - | - | - | - | 2027432 | - | - | - | - |
| CCMT120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2581348 | - | - | - | - |
| CCMT120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2027472 | - | - | - | - |

## CCMT-FP • Obróbka wykańczająca pozytywna

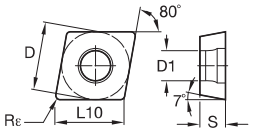



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCMT060202FP | 6,35 | 6,45 | 2,38 | 0,2 | 2,80 | - | 4169857 | 4170140 | - | - | 4168778 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CCMT060204FP | 6,35 | 6,45 | 2,38 | 0,4 | 2,80 | - | 4169858 | 4170141 | - | 4168738 | 4168779 | - | - | - | 4170032 | 5684337 | 5684340 | - | - | 6208108 | - | - | - | - | - |
| CCMT060208FP | 6,35 | 6,45 | 2,38 | 0,8 | 2,80 | - | - | 4170142 | - | - | 4168780 | - | - | - | - | 5684342 | 5684344 | - | - | - | - | - | - | - | - |
| CCMT09T302FP | 9,53 | 9,67 | 3,97 | 0,2 | 4,40 | - | - | 4170293 | - | - | 4168781 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CCMT09T304FP | 9,53 | 9,67 | 3,97 | 0,4 | 4,40 | - | 4169860 | 4170294 | - | - | 4168782 | - | - | - | 4170084 | 5684341 | 5684343 | - | - | - | - | - | - | - | - |
| CCMT09T308FP | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | - | 4169861 | 4170295 | - | 4168741 | 4168783 | - | - | - | 4170085 | - | 5684338 | - | - | - | - | - | - | - | - |
| CCMT120404FP | 12,70 | 12,90 | 4,76 | 0,4 | 5,50 | - | - | 4170296 | - | - | 4168784 | - | - | - | 4170086 | - | - | - | - | - | - | - | - | - | - |
| CCMT120408FP | 12,70 | 12,90 | 4,76 | 0,8 | 5,50 | - | 4169993 | 4170297 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CCMT-MP • Obróbka średniodokładna pozytywna

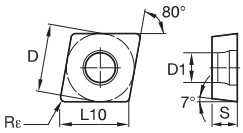



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCMT060204MP | 6,35 | 6,45 | 2,38 | 0,4 | 2,80 | - | 4170197 | 4170217 | - | - | 4168906 | - | - | - | 4170237 | 5684351 | - | - | - | 6208252 | - | - | - | - | - |
| CCMT09T304MP | 9,53 | 9,67 | 3,97 | 0,4 | 4,40 | - | 4170198 | 4170218 | - | - | 4168907 | - | - | - | 4170238 | 5684352 | - | - | - | - | - | - | - | - | - |
| CCMT09T308MP | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | - | 4170199 | 4170219 | - | - | 4168908 | - | - | - | 4170239 | 5684350 | - | - | - | - | - | - | - | - | - |
| CCMT09T312MP | 9,53 | 9,67 | 3,97 | 1,2 | 4,40 | - | - | 4170220 | - | - | 4168909 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CCMT120408MP | 12,70 | 12,90 | 4,76 | 0,8 | 5,50 | - | 4170200 | 4170221 | - | - | 4168910 | - | - | 6730909 | 4170240 | 5684349 | - | - | - | - | - | - | - | - | - |
| CCMT120412MP | 12,70 | 12,90 | 4,76 | 1,2 | 5,50 | - | - | 4170222 | - | - | 4168911 | - | - | 6730910 | 4170241 | - | - | - | - | - | - | - | - | - | - |

## CCMT-MU • Obróbka średniodokładna uniwersalna

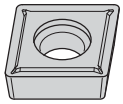


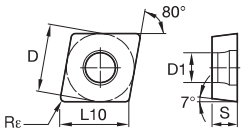

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCMT060208MU | 6,35 | 6,45 | 2,38 | 0,8 | 2,80 | - | - | - | - | - | 5623159 | - | - | - | 5623158 | - | - | - | - | - | - | - | - | 6942279 | 6868872 |
| CCMT090304MU | 9,53 | 9,67 | 3,18 | 0,4 | 4,40 | - | - | 5623420 | - | - | 5623421 | - | - | - | 6208257 | - | - | - | - | - | - | - | - | - | - |
| CCMT090308MU | 9,53 | 9,67 | 3,18 | 0,8 | 4,40 | - | 5623425 | 5623424 | - | - | 5623423 | - | - | - | 6208258 | - | - | - | - | - | - | - | - | - | - |
| CCMT09T3041P | 9,53 | 9,67 | 3,97 | 0,4 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6869663 | - |
| CCMT09T304MU | 9,53 | 9,67 | 3,97 | 0,4 | 4,40 | - | 5623431 | 5623430 | - | - | 5623427 | - | 5623429 | - | 5623432 | 5623428 | 5623426 | - | - | - | - | - | - | 6942280 | 6868873 |
| CCMT09T3081P | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6869664 | - |
| CCMT09T308MU | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | - | 5623434 | 5623436 | 5623439 | - | 5623435 | - | - | - | 5623433 | 5623438 | 5623437 | - | - | - | - | - | - | 6942341 | 6868874 |
| CCMT120404MU | 12,70 | 12,90 | 4,76 | 0,4 | 5,50 | - | 6128256 | - | - | - | 6128254 | - | - | - | - | 6128258 | - | - | - | - | - | - | - | - | - |
| CCMT120408MU | 12,70 | 12,90 | 4,76 | 0,8 | 5,50 | - | 5623440 | 5623443 | - | - | 5623442 | - | - | - | 5623441 | - | 5623444 | - | - | - | - | - | - | - | - |

## CCMT-1P • Obróbka wykańczająca



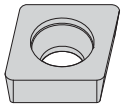


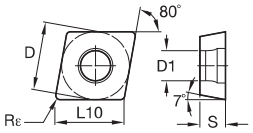

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | | ○ | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCMT0602041P | 6,35 | 6,45 | 2,38 | 0,4 | 2,80 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 6869661 | 6868825 |
| CCMT0602081P | 6,35 | 6,45 | 2,38 | 0,8 | 2,80 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 6869662 | 6868826 |
| CCMT09T3041P | 9,53 | 9,67 | 3,97 | 0,4 | 4,40 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | - | 6868827 |
| CCMT09T3081P | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | - | 6868828 |

## CCMW • Obróbka średniodokładna



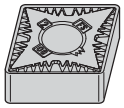


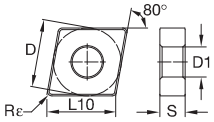

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCMW060202 | 6,35 | 6,45 | 2,38 | 0,2 | 2,80 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2031733 | - | - | - | - |
| CCMW060204 | 6,35 | 6,45 | 2,38 | 0,4 | 2,84 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2564221 | - | - | - | - |
| CCMW060204 | 6,35 | 6,45 | 2,38 | 0,4 | 2,84 | - | - | - | - | - | - | - | - | - | 4170368 | - | - | - | - | - | 2027507 | - | - | - | - |
| CCMW090302 | 9,53 | 9,67 | 3,18 | 0,2 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2031734 | - | - | - | - |
| CCMW090304 | 9,53 | 9,67 | 3,18 | 0,4 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2564211 | - | - | - | - |
| CCMW090304 | 9,53 | 9,67 | 3,18 | 0,4 | 4,45 | - | - | - | - | - | - | - | - | - | 4170369 | - | - | - | - | - | 2027509 | - | - | - | - |
| CCMW090308 | 9,53 | 9,67 | 3,18 | 0,8 | 4,45 | - | - | - | - | - | - | - | 4170466 | - | 4170370 | - | - | - | - | - | - | - | - | - | - |
| CCMW09T304 | 9,53 | 9,67 | 3,97 | 0,4 | 4,45 | - | - | - | - | - | - | - | 4170467 | - | 4170371 | - | - | - | - | - | 2027511 | - | - | - | - |
| CCMW09T308 | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2027512 | - | - | - | - |
| CCMW120404 | 12,70 | 12,90 | 4,76 | 0,4 | 5,50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2027524 | - | - | - | - |
| CCMW120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2564195 | - | - | - | - |
| CCMW120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,50 | - | - | - | - | - | - | - | - | - | 4170374 | - | - | - | - | - | 2027525 | - | - | - | - |

## CNGG-FS • Obróbka wykańczająca, ostre



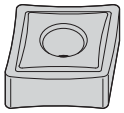


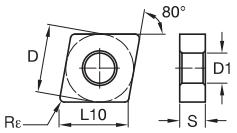

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNGG120401FS | 12,70 | 12,90 | 4,76 | 0,1 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548576 | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| CNGG120402FS | 12,70 | 12,90 | 4,76 | 0,2 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548575 | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| CNGG120404FS | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548577 | 5538204 | 5549945 | ' | ' | ' | ' | ' | ' | ' |
| CNGG120408FS | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548578 | 5538205 | 5549946 | ' | ' | ' | ' | ' | ' | ' |
| CNGG120412FS | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548579 | ' | ' | ' | ' | ' | ' | ' | ' | ' |

## CNGP • Obróbka średniodokładna



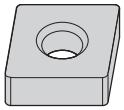


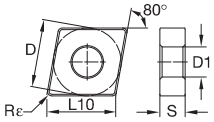

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNGP120401 | 12,70 | 12,90 | 4,76 | 0,1 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5549137 | - | - | - | - | - | - | - | - | - |
| CNGP120402 | 12,70 | 12,90 | 4,76 | 0,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5549138 | - | 5549206 | - | - | - | - | - | - | - |
| CNGP120404 | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5549139 | - | 5549207 | - | - | - | - | - | - | - |
| CNGP120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5549190 | - | 5549208 | - | - | - | - | - | - | - |

## CNMA • Obróbka zgrubna



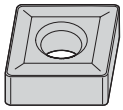


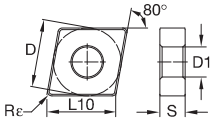

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMA120404 | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2559874 | - | - | - | - |
| CNMA120404 | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | 4171595 | - | 4171863 | - | - | - | - | - | - | - | - | - | - |
| CNMA120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2559845 | - | - | - | - |
| CNMA120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | 4171596 | 6287922 | 4171864 | - | - | - | - | - | - | - | - | - | - |
| CNMA120412 | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | 4171597 | 6287923 | 4171865 | - | - | - | - | - | - | - | - | - | - |
| CNMA120416 | 12,70 | 12,90 | 4,76 | 1,6 | 5,16 | - | - | - | - | - | - | - | 4171598 | - | 4171866 | - | - | - | - | - | - | - | - | - | - |
| CNMA160612 | 15,88 | 16,12 | 6,35 | 1,2 | 6,35 | - | - | - | - | - | - | - | 4171599 | - | 4171868 | - | - | - | - | - | - | - | - | - | - |
| CNMA160616 | 15,88 | 16,12 | 6,35 | 1,6 | 6,35 | - | - | - | - | - | - | - | - | - | 4171869 | - | - | - | - | - | - | - | - | - | - |
| CNMA190608 | 19,05 | 19,34 | 6,35 | 0,8 | 7,93 | - | - | - | - | - | - | - | - | - | 4171870 | - | - | - | - | - | - | - | - | - | - |
| CNMA190612 | 19,05 | 19,34 | 6,35 | 1,2 | 7,93 | - | - | - | - | - | - | - | 4171602 | - | 4171871 | - | - | - | - | - | - | - | - | - | - |
| CNMA190616 | 19,05 | 19,34 | 6,35 | 1,6 | 7,93 | - | - | - | - | - | - | - | - | - | 4171872 | - | - | - | - | - | - | - | - | - | - |

## CNMG • Obróbka zgrubna



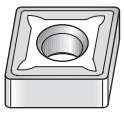


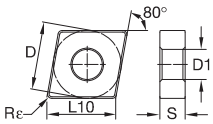

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120404 | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | 6613606 | ' | ' | ' | ' | ' | ' | 2559561 | ' | ' | ' | ' |
| CNMG120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2027567 | ' | ' | ' | ' |
| CNMG190612 | 19,05 | 19,34 | 6,35 | 1,2 | 7,93 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2559382 | ' | ' | ' | ' |

## CNMG-5 • Obróbka zgrubna



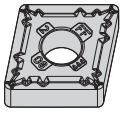


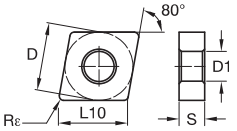

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120408-5 | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | 6287924 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| CNMG120412-5 | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | 6287925 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |

## CNMG-FF • Obróbka wykańczająca



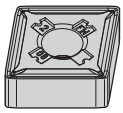


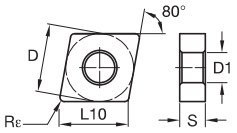

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120404FF | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | 4171025 | - | - | - | 4172345 | - | - | - | 4171318 | - | - | - | - | - | - | - | - | - | - |
| CNMG120408FF | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | 4171026 | - | - | - | 4172346 | - | - | - | 4171319 | - | - | - | - | - | - | - | - | - | - |
| CNMG120412FF | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | 4171027 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMG-FW • Krawędź typu Wiper do obróbki wykańczającej



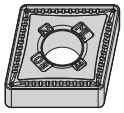


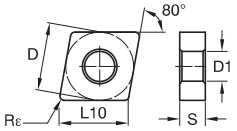

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120408FW | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | 4173103 | - | 4171681 | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMG-ML • Obróbka średniodokładna



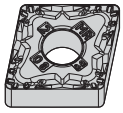


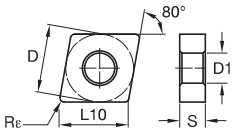

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120404ML | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | 4171059 | 4170458 | - | - | - | - | - | - | 4171390 | - | - | - | - | - | - | - | - | - | - |
| CNMG120408ML | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | 4171060 | 4170459 | - | - | - | - | 4171658 | - | 4171391 | - | - | - | - | - | - | - | - | - | - |
| CNMG120412ML | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | - | 4170460 | - | - | - | - | - | - | 4171392 | - | - | - | - | - | - | - | - | - | - |

## CNMG-MR • Średniodokładna obróbka zgrubna



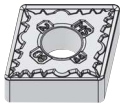


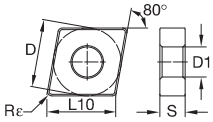

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120404MR | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | 4171130 | 4170546 | 4170043 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG120408MR | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | 4171131 | 4170547 | 4170044 | - | 4172955 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG120412MR | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | 4171132 | 4170548 | 4170045 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG120416MR | 12,70 | 12,90 | 4,76 | 1,6 | 5,16 | - | - | 5684353 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG160608MR | 15,88 | 16,12 | 6,35 | 0,8 | 6,35 | - | 4171134 | 4170549 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG160612MR | 15,88 | 16,12 | 6,35 | 1,2 | 6,35 | - | 4171135 | 4170550 | 4170046 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG160616MR | 15,88 | 16,12 | 6,35 | 1,6 | 6,35 | - | 4171136 | 4170551 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG190612MR | 19,05 | 19,34 | 6,35 | 1,2 | 7,93 | - | 4171137 | 4170552 | - | - | 4172961 | 4173136 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG190616MR | 19,05 | 19,34 | 6,35 | 1,6 | 7,93 | - | 4171138 | 4170563 | - | - | 4172962 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMG-MS • Średnio ostre



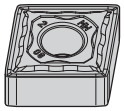


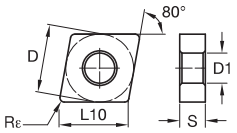

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120404MS | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908742 | 5908743 | 5908744 | - | - | - | - | - | - | - |
| CNMG120408MS | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908745 | 5908746 | 5908747 | - | - | - | - | - | - | - |
| CNMG120412MS | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908748 | 5908749 | - | - | - | - | - | - | - | - |
| CNMG120416MS | 12,70 | 12,90 | 4,76 | 1,6 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908751 | - | - | - | - | - | - | - | - | - |
| CNMG160608MS | 15,88 | 16,12 | 6,35 | 0,8 | 6,35 | - | - | - | - | - | - | - | - | - | - | 5908754 | 5908755 | 5908756 | - | - | - | - | - | - | - |
| CNMG160612MS | 15,88 | 16,12 | 6,35 | 1,2 | 6,35 | - | - | - | - | - | - | - | - | - | - | 5908757 | 5908758 | 5908759 | - | - | - | - | - | - | - |
| CNMG190608MS | 19,05 | 19,34 | 6,35 | 0,8 | 7,93 | - | - | - | - | - | - | - | - | - | - | 5908760 | 5908761 | 5908762 | - | - | - | - | - | - | - |
| CNMG190612MS | 19,05 | 19,34 | 6,35 | 1,2 | 7,93 | - | - | - | - | - | - | - | - | - | - | 5908763 | 5908764 | - | - | - | - | - | - | - | - |
| CNMG190616MS | 19,05 | 19,34 | 6,35 | 1,6 | 7,92 | - | - | - | - | - | - | - | - | - | - | 5908766 | 5908767 | - | - | - | - | - | - | - | - |

## CNMG-MW • Średnia krawędź typu Wiper



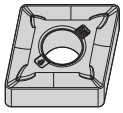


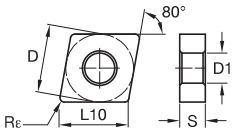

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120408MW | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | ● | ● | ● | ● | ● | 4173112 | ● | 4171682 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| CNMG120412MW | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | ● | ● | ● | ● | ● | 4173113 | ● | 4171684 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

## CNMG-RH • Obróbka zgrubna



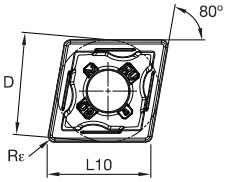



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120408RH | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | 4170979 | 4171504 | 5684356 | - | 4173035 | - | - | 6288264 | 4171903 | - | - | - | - | - | - | - | - | - | - |
| CNMG120412RH | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | 4170980 | 4171505 | 4171698 | - | 4173036 | - | - | 6288265 | 4171904 | - | - | - | - | - | - | - | - | - | - |
| CNMG120416RH | 12,70 | 12,90 | 4,76 | 1,6 | 5,16 | - | 4170981 | 4171506 | 4171699 | - | - | - | - | - | 4171905 | - | - | - | - | - | - | - | - | - | - |
| CNMG160608RH | 15,88 | 16,12 | 6,35 | 0,8 | 6,35 | - | 4170982 | 4171507 | 4171700 | - | 4173038 | - | - | - | 4171906 | - | - | - | - | - | - | - | - | - | - |
| CNMG160612RH | 15,88 | 16,12 | 6,35 | 1,2 | 6,35 | - | 4170983 | 4171508 | 4171701 | - | - | - | - | - | 4171907 | - | - | - | - | - | - | - | - | - | - |
| CNMG160616RH | 15,88 | 16,12 | 6,35 | 1,6 | 6,35 | - | 4170984 | 4171509 | 4171702 | - | - | - | - | - | 4171908 | - | - | - | - | - | - | - | - | - | - |
| CNMG190608RH | 19,05 | 19,34 | 6,35 | 0,8 | 7,93 | - | 4170985 | 4171510 | 4171703 | - | 4173041 | - | - | - | 4171909 | - | - | - | - | - | - | - | - | - | - |
| CNMG190612RH | 19,05 | 19,34 | 6,35 | 1,2 | 7,93 | - | 4170986 | 4171511 | 4171704 | - | 4173042 | - | - | - | 4171910 | - | - | - | - | - | - | - | - | - | - |
| CNMG190616RH | 19,05 | 19,34 | 6,35 | 1,6 | 7,93 | - | 4170987 | 4171512 | 4171705 | - | 4173043 | - | - | - | 4171911 | - | - | - | - | - | - | - | - | - | - |
| CNMG190624RH | 19,05 | 19,34 | 6,35 | 2,4 | 7,93 | - | - | 4171523 | 4171706 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMG-RU • Obróbka zgrubna uniwersalna

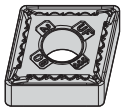


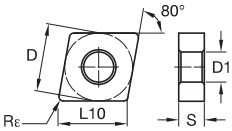

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120408RU | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | 6690250 | 6690247 | - | 6817522 | 6817756 | - | - | 6678403 | 6690253 | - | - | - | - | - | - | - | - | - | 6795793 |
| CNMG120412RU | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | 6690251 | 6690248 | - | 6817523 | 6817757 | - | - | 6678404 | 6690254 | - | - | - | - | - | - | - | - | - | 6795794 |

## CNMG-UF • Obróbka wykańczająca



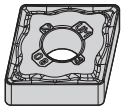


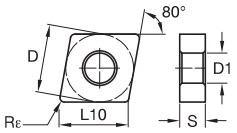

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120404UF | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | - | - | - | 4169353 | 4169379 | - | - | - | - | 5645600 | - | - | - | - | - | - | - | - | - |
| CNMG120408UF | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | - | - | - | 4169354 | 4169380 | - | - | - | - | 5645588 | - | - | - | - | - | - | - | - | - |
| CNMG120412UF | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | - | - | - | 4169355 | 4169381 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMG-UM • Obróbka średniodokładna



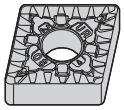


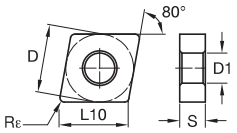

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120404UM | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | 4172380 | 4172410 | - | - | - | 5645217 | - | - | - | - | - | - | - | - | - |
| CNMG120408UM | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | 6496789 | - | 5645219 | - | 4172335 | 4172381 | 4172411 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG120412UM | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | 6496790 | - | - | - | - | 4172382 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMG-UR • Obróbka zgrubna uniwersalna



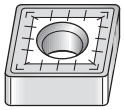


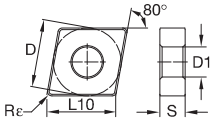

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ | |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ | |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | ○ | | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMG120404UR | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | - | 4170500 | - | 4169406 | 4169444 | 4169479 | - | - | - | 5578894 | 5578895 | - | - | - | - | - | - | 6942344 | 6867867 |
| CNMG120408UR | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | 4171093 | 4170501 | 4169960 | 4169407 | 4169445 | 4169480 | 5680086 | - | 5680085 | 5301400 | 5301402 | - | - | - | - | - | - | 6795798 | 6794449 |
| CNMG120412UR | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | 4171094 | 4170502 | 4169961 | 4169408 | 4169446 | 4169481 | - | - | 4171419 | 5301413 | 5301416 | - | - | - | - | - | - | 6942343 | 6790714 |
| CNMG120416UR | 12,70 | 12,90 | 4,76 | 1,6 | 5,16 | - | - | 4170503 | - | - | 4169447 | 4169482 | - | - | 4171420 | 5680089 | - | - | - | - | - | - | - | - | - |
| CNMG160608UR | 15,88 | 16,12 | 6,35 | 0,8 | 6,35 | - | 4171096 | 4170504 | - | 4169410 | 4169448 | 4169483 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMG160612UR | 15,88 | 16,12 | 6,35 | 1,2 | 6,35 | - | 4171097 | 4170505 | 4169962 | 4169411 | 4169449 | 4169484 | - | - | 4171422 | 5578898 | - | - | - | - | - | - | - | - | - |
| CNMG160616UR | 15,88 | 16,12 | 6,35 | 1,6 | 6,35 | - | 4171098 | 4170506 | - | - | 4169450 | 4169485 | - | - | 4171423 | 5578900 | 5578901 | - | - | - | - | - | - | - | - |
| CNMG190612UR | 19,05 | 19,34 | 6,35 | 1,2 | 7,93 | - | 4171099 | 4170507 | 4169964 | 4169412 | 4169451 | 4169486 | 5680088 | - | 4171424 | - | 5512536 | - | - | - | - | - | - | - | - |
| CNMG190616UR | 19,05 | 19,34 | 6,35 | 1,6 | 7,93 | - | - | 4170508 | - | 4169423 | 4169452 | 4169487 | - | - | - | - | 5579234 | - | - | - | - | - | - | - | - |

## CNMM-8 • Obróbka zgrubna



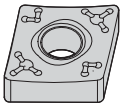


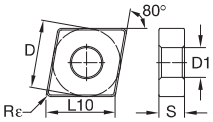

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMM1906168 | 19,05 | 19,34 | 6,35 | 1,6 | 7,93 | - | - | 5418451 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMM-65 • Obróbka zgrubna



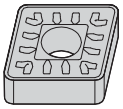


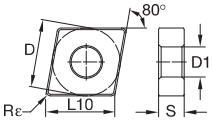

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMM12040865 | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | 5698348 | 5698349 | 5698360 | - | 5698347 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM12041265 | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | 5698362 | 5698363 | - | - | 5698361 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM16060865 | 15,88 | 16,12 | 6,35 | 0,8 | 6,35 | - | - | 5698366 | 5698367 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM16061265 | 15,88 | 16,12 | 6,35 | 1,2 | 6,35 | - | - | 5698370 | 5698371 | - | 5698368 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM16061665 | 15,88 | 16,12 | 6,35 | 1,6 | 6,35 | - | 5698372 | 5698373 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM19061265 | 19,05 | 19,34 | 6,35 | 1,2 | 7,93 | - | - | 5491016 | 5698376 | - | 5698374 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM19061665 | 19,05 | 19,34 | 6,35 | 1,6 | 7,93 | - | 5698378 | - | - | - | 5698377 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM19062465 | 19,05 | 19,34 | 6,35 | 2,4 | 7,93 | - | 5698410 | 5698411 | - | - | 5698379 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMM-SR • Obróbka zgrubna



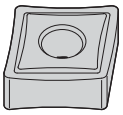


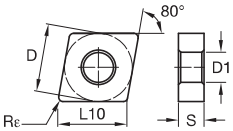

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMM190616SR | 19,05 | 19,34 | 6,35 | 1,6 | 7,93 | - | 5696643 | - | - | - | 5696642 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM190624SR | 19,05 | 19,34 | 6,35 | 2,4 | 7,93 | - | - | - | 5696644 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CNMM250924SR | 25,40 | 25,79 | 9,53 | 2,4 | 9,12 | - | 5696645 | 5696646 | 5696647 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CNMP • Obróbka średniodokładna



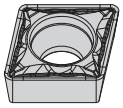


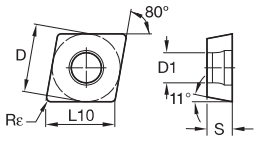

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CNMP120404 | 12,70 | 12,90 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | 4173552 | - | - | - | - | 4172439 | - | - | - | - | - | - | - | - | - |
| CNMP120408 | 12,70 | 12,90 | 4,76 | 0,8 | 5,16 | - | - | - | - | 4171586 | 4173653 | 4173682 | - | - | - | 4172440 | 4172614 | - | - | - | - | - | - | - | - |
| CNMP120412 | 12,70 | 12,90 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 4172441 | 4172615 | - | - | - | - | - | - | - | - |
| CNMP190612 | 19,05 | 19,34 | 6,35 | 1,2 | 7,93 | - | - | - | - | - | - | - | - | - | - | 4172483 | - | - | - | - | - | - | - | - | - |
| CNMP190616 | 19,05 | 19,34 | 6,35 | 1,6 | 7,93 | - | - | - | - | - | 4173657 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## CPMT-FP • Obróbka wykańczająca pozytywna



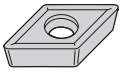


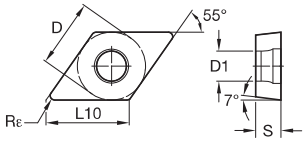

● pierwszy wybór
○ wybór alternatywny

| | | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPMT060204FP | 6,35 | 6,45 | 2,38 | 0,4 | 2,80 | - | 4170016 | 4170326 | - | - | 4168823 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CPMT09T308FP | 9,53 | 9,67 | 3,97 | 0,8 | 4,40 | - | 4170019 | 4170329 | - | - | - | - | - | - | 4170108 | - | - | - | - | - | - | - | - | - | - |

## DCMT • Obróbka średniodokładna



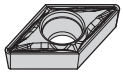


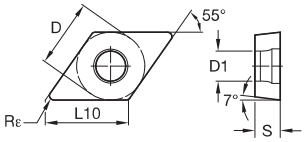

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCMT070204 | 6,35 | 7,75 | 2,38 | 0,4 | 2,80 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2027768 | - | - | - | - |
| DCMT11T304 | 9,53 | 11,63 | 3,97 | 0,4 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2027805 | 2027807 | - | - | - |
| DCMT11T308 | 9,53 | 11,63 | 3,97 | 0,8 | 4,45 | - | - | - | - | - | - | - | - | 6671913 | - | - | - | - | - | - | 2027843 | - | - | - | - |
| DCMT11T312 | 9,53 | 11,63 | 3,97 | 1,2 | 4,45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2027868 | - | - | - | - |
| DCMT150408 | 12,70 | 15,50 | 4,76 | 0,8 | 5,55 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2027908 | 2027910 | - | - | - |
| DCMT150412 | 12,70 | 15,50 | 4,76 | 1,2 | 5,55 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2027932 | - | - | - | - |

## DCMT-FP • Obróbka wykańczająca pozytywna



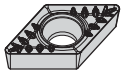


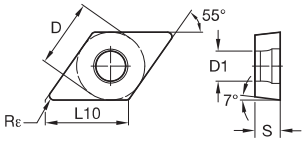

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCMT070202FP | 6,35 | 7,75 | 2,38 | 0,2 | 2,80 | - | - | 4170299 | - | - | 4168787 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCMT070204FP | 6,35 | 7,75 | 2,38 | 0,4 | 2,80 | - | 4169995 | 4170300 | - | - | 4168788 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCMT070208FP | 6,35 | 7,75 | 2,38 | 0,8 | 2,80 | - | - | 4170301 | - | - | 4168789 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCMT11T302FP | 9,53 | 11,63 | 3,97 | 0,2 | 4,40 | - | 4169996 | 4170302 | - | - | 4168790 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCMT11T304FP | 9,53 | 11,63 | 3,97 | 0,4 | 4,40 | - | 4169997 | 4170303 | - | 4168765 | 4168791 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCMT11T308FP | 9,53 | 11,63 | 3,97 | 0,8 | 4,40 | - | 4169998 | 4170304 | - | - | 4168792 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCMT150404FP | 12,70 | 15,50 | 4,76 | 0,4 | 5,50 | - | 4170000 | 4170306 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCMT150408FP | 12,70 | 15,50 | 4,76 | 0,8 | 5,50 | - | 4170001 | 4170307 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DCMT-MP • Obróbka średniodokładna pozytywna



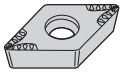


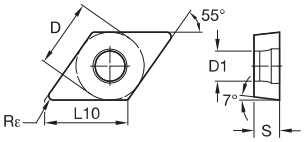

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCMT11T304MP | 9,53 | 11,63 | 3,97 | 0,4 | 4,40 | - | 4170201 | 4170223 | - | - | - | - | - | - | 4170242 | - | - | - | - | 6208110 | - | - | - | - | - |
| DCMT11T308MP | 9,53 | 11,63 | 3,97 | 0,8 | 4,40 | - | 4170202 | 4170224 | - | - | 4168912 | - | - | - | 4170243 | - | - | - | - | - | - | - | - | - | - |
| DCMT11T312MP | 9,53 | 11,63 | 3,97 | 1,2 | 4,40 | - | 4170213 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DCMT-MU • Obróbka średniodokładna uniwersalna



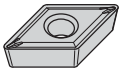


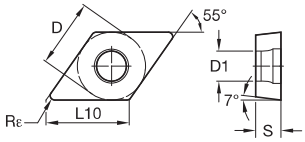

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCMT070204MU | 6,35 | 7,75 | 2,38 | 0,4 | 2,80 | - | 6128273 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6942342 | 6868876 |
| DCMT070208MU | 6,35 | 7,75 | 2,38 | 0,8 | 3,75 | - | - | - | - | - | 6128276 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DCMT11T308MU | 9,52 | 11,63 | 3,97 | 0,8 | 4,40 | - | 5623600 | - | - | - | 5623588 | - | - | - | 5623589 | 5623601 | 5623603 | - | - | - | - | - | - | 6869665 | 6868877 |
| DCMT11T304MU | 9,53 | 11,63 | 3,97 | 0,4 | 4,40 | - | 5623585 | 5623583 | - | - | 5623581 | - | - | - | 5623587 | 5623582 | 5623584 | - | - | - | - | - | - | 6869677 | 6863460 |
| DCMT150404MU | 12,70 | 15,50 | 4,76 | 0,4 | 5,50 | - | - | - | - | - | 6128281 | - | - | - | - | 6128282 | - | - | - | - | - | - | - | - | - |
| DCMT150408MU | 12,70 | 15,50 | 4,76 | 0,8 | 5,50 | - | 5623606 | 5623608 | - | - | 5623604 | - | - | - | 5623607 | 5623609 | 5623610 | - | - | - | - | - | - | - | - |
| DCMT150412MU | 12,70 | 15,50 | 4,76 | 1,2 | 5,55 | - | - | - | - | - | - | - | - | - | 5623612 | - | - | - | - | - | - | - | - | - | - |

## DCMT-1P • Obróbka wykańczająca



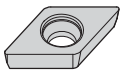


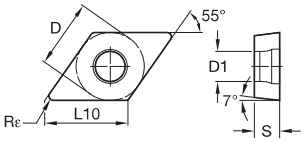

● pierwszy wybór
○ wybór alternatywny

| | | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCMT11T3041P | 9,53 | 11,63 | 3,97 | 0,4 | 4,40 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 6868829 |
| DCMT11T3081P | 9,53 | 11,63 | 3,97 | 0,8 | 4,40 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 6868830 |

## DCMW • Obróbka średniodokładna



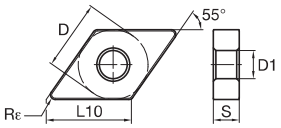



● pierwszy wybór
○ wybór alternatywny

| | | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCMW070204 | 6,35 | 7,75 | 2,38 | 0,4 | 2,80 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2027966 | ■ | ■ | ■ | ■ |
| DCMW11T304 | 9,53 | 11,63 | 3,97 | 0,4 | 4,40 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2027967 | ■ | ■ | ■ | ■ |
| DCMW150408 | 12,70 | 15,50 | 4,76 | 0,8 | 5,50 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2031737 | ■ | ■ | ■ | ■ |

## DNGG-FS • Obróbka wykańczająca, ostre

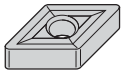


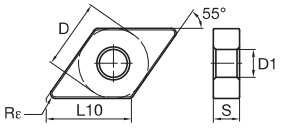

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNGG110402FS | 9,53 | 11,63 | 4,76 | 0,2 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5548670 | - | - | - | - | - | - | - | - | - |
| DNGG110404FS | 9,53 | 11,63 | 4,76 | 0,4 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5548671 | - | 5549948 | - | - | - | - | - | - | - |
| DNGG110408FS | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5548672 | - | 5549949 | - | - | - | - | - | - | - |
| DNGG150401FS | 12,70 | 15,50 | 4,76 | 0,1 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5548674 | - | - | - | - | - | - | - | - | - |
| DNGG150402FS | 12,70 | 15,50 | 4,76 | 0,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5548673 | - | - | - | - | - | - | - | - | - |
| DNGG150404FS | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5548675 | - | 5549992 | - | - | - | - | - | - | - |
| DNGG150408FS | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | - | - | 5549993 | - | - | - | - | - | - | - |
| DNGG150412FS | 12,70 | 15,50 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5548677 | - | 5549994 | - | - | - | - | - | - | - |
| DNGG150604FS | 12,70 | 15,50 | 6,35 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5548678 | 5538209 | 5549995 | - | - | - | - | - | - | - |
| DNGG150608FS | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5548679 | 5538230 | 5549996 | - | - | - | - | - | - | - |

## DNGP • Obróbka średniodokładna





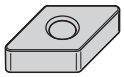

● pierwszy wybór
○ wybór alternatywny

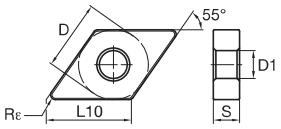
| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNGP150404 | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 5549193 | ● | ● | ● | ● | ● | ● | ● | ● | ● |

UWAGA: Jednostronne

## DNMA • Obróbka zgrubna



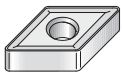


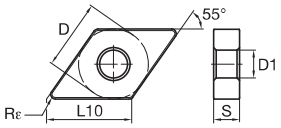

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMA110408 | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | ● | ● | ● | ● | ● | ● | ● | ● | ● | 4171873 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| DNMA150408 | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | ● | ● | ● | ● | ● | ● | ● | 4171635 | ● | 4171875 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| DNMA150412 | 12,70 | 15,50 | 4,76 | 1,2 | 5,16 | ● | ● | ● | ● | ● | ● | ● | 4171636 | ● | 4171876 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| DNMA150608 | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | ● | ● | ● | ● | ● | ● | ● | 4171637 | ● | 4171878 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| DNMA150612 | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | ● | ● | ● | ● | ● | ● | ● | 4171638 | ● | 4171879 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| DNMA150616 | 12,70 | 15,50 | 6,35 | 1,6 | 5,16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | 4171880 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

## DNMG • Obróbka zgrubna



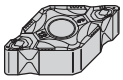


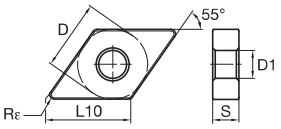

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG150608 | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2560240 | ' | ' | ' | ' |
| DNMG150608 | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | 6671912 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |

## DNMG-CT



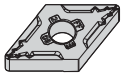


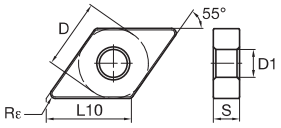

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG150608CT | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | ' | ' | ' | ' | ' | 4172700 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |

## DNMG-FF • Obróbka wykańczająca



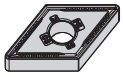


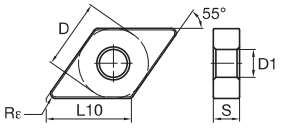

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG110404FF | 9,53 | 11,63 | 4,76 | 0,4 | 3,81 | - | 4171028 | - | - | - | - | - | - | - | 4171321 | - | - | - | - | - | - | - | - | - | - |
| DNMG110408FF | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | - | 4171029 | - | - | - | - | - | - | - | 4171322 | - | - | - | - | - | - | - | - | - | - |
| DNMG150404FF | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | - | 4171030 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150408FF | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | 4171031 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150604FF | 12,70 | 15,50 | 6,35 | 0,4 | 5,16 | - | 4171032 | - | - | - | - | - | - | - | 4171375 | - | - | - | - | - | - | - | - | - | - |
| DNMG150608FF | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | 4171043 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150612FF | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | 4171044 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMG-ML • Obróbka średniodokładna



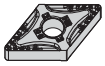


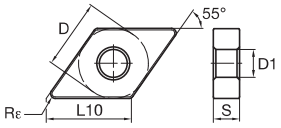

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG110404ML | 9,53 | 11,63 | 4,76 | 0,4 | 3,81 | - | 4171062 | 4170461 | - | - | - | - | 4171660 | - | 4171394 | - | - | - | - | - | - | - | - | - | - |
| DNMG110408ML | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | - | 4171063 | 4170462 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG110412ML | 9,53 | 11,63 | 4,76 | 1,2 | 3,81 | - | 4171064 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150404ML | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | - | 4171065 | 4170483 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150408ML | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | 4171066 | 4170484 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150412ML | 12,70 | 15,50 | 4,76 | 1,2 | 5,16 | - | 4171067 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150604ML | 12,70 | 15,50 | 6,35 | 0,4 | 5,16 | - | 4171068 | 4170485 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150608ML | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | 4171069 | 4170486 | - | - | - | - | - | - | 4171400 | - | - | - | - | - | - | - | - | - | - |
| DNMG150612ML | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | 4171070 | 4170487 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMG-MR • Obróbka zgrubna średniodokładna



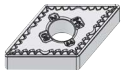


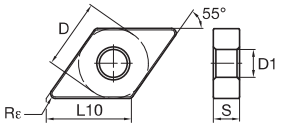

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG110408MR | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | - | 4171139 | 4170564 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150404MR | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | - | 4171140 | 4170565 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150408MR | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | 4171141 | 4170566 | 4170052 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150412MR | 12,70 | 15,50 | 4,76 | 1,2 | 5,16 | - | 4171142 | 4170567 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150604MR | 12,70 | 15,50 | 6,35 | 0,4 | 5,16 | - | 4171143 | 4170568 | 4170054 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150608MR | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | 4171144 | 4170569 | 4170055 | - | 4173023 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150612MR | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | 4171145 | 4170570 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMG-MS • Obróbka średniodokładna, ostre



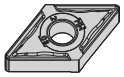


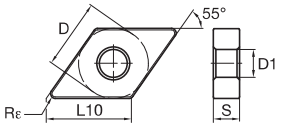

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG110408MS | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5908769 | 5908770 | 5908781 | - | - | - | - | - | - | - |
| DNMG150404MS | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908782 | 5908783 | - | - | - | - | - | - | - | - |
| DNMG150408MS | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908785 | 5908787 | - | - | - | - | - | - | - | - |
| DNMG150412MS | 12,70 | 15,50 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908789 | 5908790 | - | - | - | - | - | - | - | - |
| DNMG150604MS | 12,70 | 15,50 | 6,35 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908792 | 5908793 | 5908794 | - | - | - | - | - | - | - |
| DNMG150608MS | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908795 | 5908796 | 5908797 | - | - | - | - | - | - | - |
| DNMG150612MS | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908798 | 5908799 | 5908800 | - | - | - | - | - | - | - |

## DNMG-MW • Średnia krawędź typu Wiper



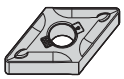


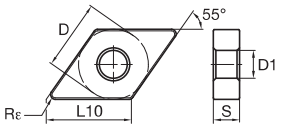

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG150408MW | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | 4173114 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150608MW | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | - | - | - | - | - | - | 4171691 | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMG-RH • Obróbka zgrubna



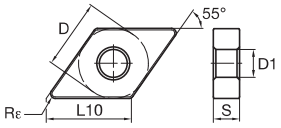



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG150408RH | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | - | 4171524 | 4171707 | - | - | - | - | - | 4171912 | - | - | - | - | - | - | - | - | - | - |
| DNMG150608RH | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | 4170991 | 4171526 | 4171709 | - | - | - | - | 6730880 | 4171914 | - | - | - | - | - | - | - | - | - | - |
| DNMG150612RH | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | 4170992 | 4171527 | 4171710 | - | - | - | - | 6730901 | 4171915 | - | - | - | - | - | - | - | - | - | - |
| DNMG150616RH | 12,70 | 15,50 | 6,35 | 1,6 | 5,16 | - | - | 4171528 | 4171711 | - | - | - | - | - | 4171916 | - | - | - | - | - | - | - | - | - | - |
| DNMG190612RH | 15,88 | 19,38 | 6,35 | 1,2 | 6,35 | - | 4170994 | 4171529 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMG-UF • Obróbka wykańczająca

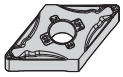


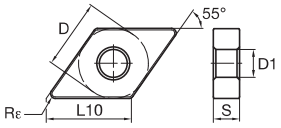

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG110404UF | 9,53 | 11,63 | 4,76 | 0,4 | 3,81 | - | - | - | - | 4169356 | 4169382 | - | - | - | - | 5645603 | - | - | - | - | - | - | - | - | - |
| DNMG110408UF | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | - | - | - | - | 4169357 | 4169383 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150404UF | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | - | - | - | - | 4169358 | 4169384 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150408UF | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | - | - | - | 4169359 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150604UF | 12,70 | 15,50 | 6,35 | 0,4 | 5,16 | - | - | - | - | 4169361 | 4169387 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150608UF | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | - | - | - | 4169362 | 4169388 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150612UF | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | - | - | - | 4169363 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMG-UM • Obróbka średniodokładna



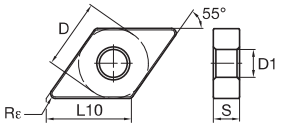



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG110404UM | 9,53 | 11,63 | 4,76 | 0,4 | 3,81 | - | - | - | - | - | 4172383 | 4172413 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG110408UM | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | - | - | - | - | 4172338 | 4172384 | 4172414 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150404UM | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | 4172386 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150408UM | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | - | - | - | 4172341 | 4172387 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150604UM | 12,70 | 15,50 | 6,35 | 0,4 | 5,16 | - | - | - | - | - | 4172389 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150608UM | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | - | - | - | 4172364 | 4172390 | 4172420 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150612UM | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | - | - | - | - | 4172391 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150616UM | 12,70 | 15,50 | 6,35 | 1,6 | 5,16 | - | - | - | - | - | 4172392 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMG-UR • Obróbka zgrubna uniwersalna

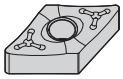


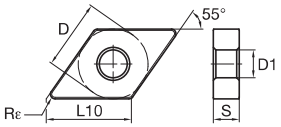

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMG110408UR | 9,53 | 11,63 | 4,76 | 0,8 | 3,81 | - | 4171101 | 4170509 | - | 4169424 | 4169453 | 4169488 | - | - | - | - | - | - | - | - | - | - | - | 6942345 | 6867868 |
| DNMG110412UR | 9,53 | 11,63 | 4,76 | 1,2 | 3,81 | - | 4171102 | 4170510 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMG150408UR | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | 4171103 | 4170511 | - | - | 4169454 | - | - | - | 4171428 | - | 5579271 | - | - | - | - | - | - | - | - |
| DNMG150412UR | 12,70 | 15,50 | 4,76 | 1,2 | 5,16 | - | - | 4170512 | - | - | - | - | - | - | - | - | 5579292 | - | - | - | - | - | - | - | - |
| DNMG150608UR | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | 4171105 | 4170513 | 4169969 | 4169427 | 4169456 | 4169492 | - | - | 4171431 | - | 5579276 | - | - | - | - | - | - | 6942346 | 6867869 |
| DNMG150612UR | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | 4171106 | 4170514 | - | - | 4169457 | 4169493 | 5680172 | - | 4171432 | - | - | - | - | - | - | - | - | 6942347 | 6867870 |
| DNMG150616UR | 12,70 | 15,50 | 6,35 | 1,6 | 5,16 | - | - | 4170515 | - | - | - | 4169494 | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMM-65 • Obróbka zgrubna



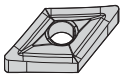


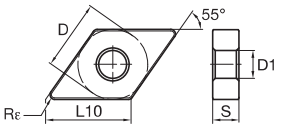

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMM15060865 | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | 5698413 | 5698414 | 5698415 | - | 5698412 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMM15061265 | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | 5698417 | 5494773 | - | - | 5698416 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DNMM15061665 | 12,70 | 15,50 | 6,35 | 1,6 | 5,16 | - | 5698418 | 5698419 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## DNMP • Obróbka średniodokładna



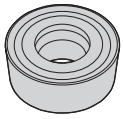


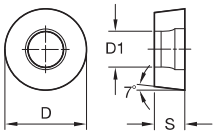

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DNMP150404 | 12,70 | 15,50 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 4172484 | - | - | - | - | - | - | - | - | - |
| DNMP150408 | 12,70 | 15,50 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 4172485 | - | - | - | - | - | - | - | - | - |
| DNMP150604 | 12,70 | 15,50 | 6,35 | 0,4 | 5,16 | - | - | - | - | - | 4173661 | - | - | - | - | 4172486 | - | - | - | - | - | - | - | - | - |
| DNMP150608 | 12,70 | 15,50 | 6,35 | 0,8 | 5,16 | - | - | - | - | - | 4173662 | - | - | - | - | 4172487 | 4172616 | - | - | - | - | - | - | - | - |
| DNMP150612 | 12,70 | 15,50 | 6,35 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 4172488 | 4172617 | - | - | - | - | - | - | - | - |

## RCMT • Obróbka średniodokładna



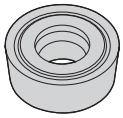


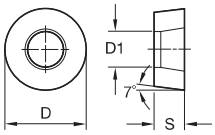

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | S | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RCMT0602M0 | 6,00 | 2,38 | 2,80 | - | 4169975 | 4170536 | - | - | - | - | - | - | 4170478 | - | - | - | - | - | 2028115 | - | - | - | - |
| RCMT0803M0 | 8,00 | 3,18 | 3,40 | - | 4169976 | 4170537 | - | - | - | - | - | - | 4170479 | - | - | - | - | - | 2028129 | - | - | - | - |
| RCMT10T3M0 | 10,00 | 3,97 | 4,40 | - | 4169977 | 4170538 | 4170752 | - | - | - | - | - | 4170480 | - | - | - | - | - | 2028143 | 2028145 | - | - | - |
| RCMT1204M0 | 12,00 | 4,76 | 4,40 | - | 4169978 | 4170539 | 4170803 | - | - | - | - | - | 4170481 | - | - | - | - | - | 2028157 | - | - | - | - |
| RCMT1606M0 | 16,00 | 6,35 | 5,50 | - | 4169979 | - | 4170804 | - | - | - | - | - | 4170482 | - | - | - | - | - | - | - | - | - | - |

## RCMX • Obróbka zgrubna



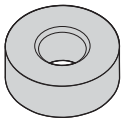


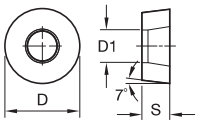

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | S | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RCMX2006M0 | 20,00 | 6,35 | 6,50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2563657 | - | - | - |
| RCMX2006M0T | 20,00 | 6,35 | 6,50 | - | 4169980 | 4170541 | 4170805 | - | - | - | - | - | 4170543 | - | - | - | - | - | - | - | - | - | - |
| RCMX2507M0T | 25,00 | 7,94 | 7,40 | - | 4169981 | - | 4170806 | - | - | - | - | - | 4170544 | - | - | - | - | - | - | 2028196 | - | - | - |
| RCMX3209M0 | 32,00 | 9,53 | 11,85 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2563606 | - | - | - |
| RCMX3209M0T | 32,00 | 9,53 | 9,50 | - | 4169982 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## RNMA • Obróbka zgrubna



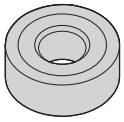


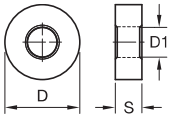

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | S | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RNMA120400 | 12,70 | 4,76 | 5,16 | - | - | - | - | - | - | - | 4171639 | - | 4171881 | - | - | - | - | - | - | - | - | - | - |

## RNMG-RH • Obróbka zgrubna



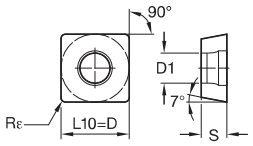



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | S | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RNMG090300RH | 9,53 | 3,18 | 3,81 | - | - | 4171530 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| RNMG120400RH | 12,70 | 4,76 | 5,16 | - | 4170996 | 4171531 | 4171713 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| RNMG190600RH | 19,05 | 6,35 | 7,93 | - | - | 4171532 | 4171714 | - | - | - | - | - | 4171917 | - | - | - | - | - | - | - | - | - | - |

## SCMT • Obróbka średniodokładna

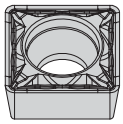


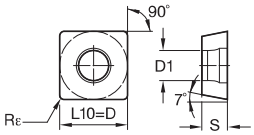

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SCMT090304 | 9,53 | 9,53 | 3,18 | 0,4 | 4,45 | ' | ' | ' | 6128305 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2028225 | ' | ' | ' |
| SCMT090308 | 9,53 | 9,53 | 3,18 | 0,8 | 4,40 | ' | ' | ' | 6128306 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| SCMT09T304 | 9,53 | 9,53 | 3,97 | 0,4 | 4,45 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2028255 | ' | ' | ' | ' |
| SCMT09T308 | 9,53 | 9,53 | 3,97 | 0,8 | 4,40 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2028270 | 2028272 | ' | ' | ' |
| SCMT120408 | 12,70 | 12,70 | 4,76 | 0,8 | 5,50 | ' | ' | ' | 6128307 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2028286 | 2028289 | ' | ' | ' |
| SCMT150512 | 15,88 | 15,88 | 5,56 | 1,2 | 5,50 | ' | ' | ' | 6128308 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2028306 | 2028307 | ' | ' | ' |

## SCMT-FP • Obróbka wykańczająca pozytywna



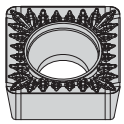


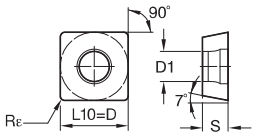

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SCMT09T308FP | 9,53 | 9,53 | 3,97 | 0,8 | 4,40 | - | - | 4170309 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SCMT120408FP | 12,70 | 12,70 | 4,76 | 0,8 | 5,50 | - | - | 4170311 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SCMT-MP • Obróbka średniodokładna pozytywna



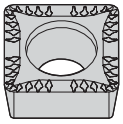


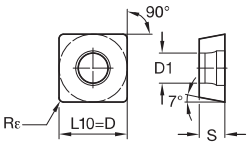

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SCMT09T304MP | 9,53 | 9,53 | 3,97 | 0,4 | 4,40 | - | - | 4170226 | - | - | - | - | - | 6730906 | 4170244 | - | - | - | - | - | - | - | - | - | - |
| SCMT09T308MP | 9,53 | 9,53 | 3,97 | 0,8 | 4,40 | - | - | 4170227 | - | - | 4168914 | - | - | 6730907 | 4170245 | - | - | - | - | - | - | - | - | - | - |
| SCMT120404MP | 12,70 | 12,70 | 4,76 | 0,4 | 5,50 | - | - | 4170228 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SCMT120408MP | 12,70 | 12,70 | 4,76 | 0,8 | 5,50 | - | 4170215 | 4170229 | - | - | - | - | - | 6730908 | 4170247 | - | - | - | - | - | - | - | - | - | - |
| SCMT120412MP | 12,70 | 12,70 | 4,76 | 1,2 | 5,50 | - | - | 4170230 | - | - | 4168917 | - | - | - | 4170248 | - | - | - | - | - | - | - | - | - | - |

## SCMT-MU • Obróbka średniodokładna uniwersalna



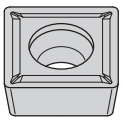


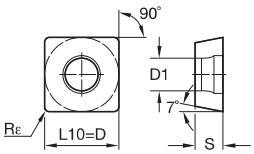

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SCMT090308MU | 9,53 | 9,53 | 3,18 | 0,8 | 4,40 | - | 5623446 | - | - | - | - | - | - | - | 5623445 | - | - | - | - | - | - | - | - | - | - |
| SCMT09T304MU | 9,53 | 9,53 | 3,97 | 0,4 | 4,40 | - | - | - | - | - | 5623447 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SCMT09T308MU | 9,53 | 9,53 | 3,97 | 0,8 | 4,40 | - | 5623461 | 5623464 | 5623462 | - | 5623448 | - | - | - | 5623449 | 5623460 | 6127251 | - | - | - | - | - | - | - | 6868880 |
| SCMT120408MU | 12,70 | 12,70 | 4,76 | 0,8 | 5,50 | - | - | 6127255 | - | - | 6127252 | - | - | - | - | - | - | - | - | - | - | - | - | - | 6868882 |
| SCMT120412MU | 12,70 | 12,70 | 4,76 | 1,2 | 5,50 | - | - | - | - | - | - | - | - | - | - | - | 6127256 | - | - | - | - | - | - | - | - |

## SCMT-1P • Obróbka wykańczająca



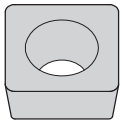


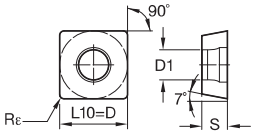

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SCMT1204081P | 12,70 | 12,70 | 4,76 | 0,8 | 5,50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6868861 |

## SCMW • Obróbka średniodokładna



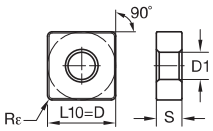



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SCMW090304 | 9,53 | 9,53 | 3,18 | 0,4 | 4,40 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2028308 | ' | ' | ' | ' |
| SCMW09T308 | 9,53 | 9,53 | 3,97 | 0,8 | 4,40 | ' | ' | ' | ' | ' | ' | ' | ' | ' | 4170379 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| SCMW120408 | 12,70 | 12,70 | 4,76 | 0,8 | 5,50 | ' | ' | ' | ' | ' | ' | ' | ' | ' | 4170380 | ' | ' | ' | ' | ' | 2028310 | ' | ' | ' | ' |

## SNGG-FS • Obróbka wykańczająca, ostre

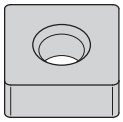


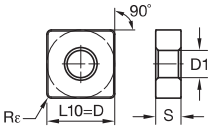

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNGG120408FS | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548680 | ' | 5549997 | ' | ' | ' | ' | ' | ' | ' |

## SNMA • Obróbka zgrubna



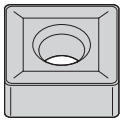


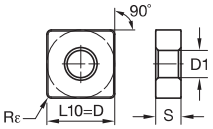

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMA120408 | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | 4171640 | 6287926 | 4171882 | - | - | - | - | - | 2028371 | - | - | - | - |
| SNMA120412 | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | 4171641 | 6287927 | 4171883 | - | - | - | - | - | - | - | - | - | - |
| SNMA120416 | 12,70 | 12,70 | 4,76 | 1,6 | 5,16 | - | - | - | - | - | - | - | - | - | 4171884 | - | - | - | - | - | - | - | - | - | - |
| SNMA150608 | 15,88 | 15,88 | 6,35 | 0,8 | 6,35 | - | - | - | - | - | - | - | - | - | 4171885 | - | - | - | - | - | - | - | - | - | - |
| SNMA150612 | 15,88 | 15,88 | 6,35 | 1,2 | 6,35 | - | - | - | - | - | - | - | - | - | 4171886 | - | - | - | - | - | - | - | - | - | - |
| SNMA150616 | 15,88 | 15,88 | 6,35 | 1,6 | 6,35 | - | - | - | - | - | - | - | 4171644 | - | 4171887 | - | - | - | - | - | - | - | - | - | - |
| SNMA190612 | 19,05 | 19,05 | 6,35 | 1,2 | 7,93 | - | - | - | - | - | - | - | 4171645 | - | 4171888 | - | - | - | - | - | - | - | - | - | - |
| SNMA190616 | 19,05 | 19,05 | 6,35 | 1,6 | 7,93 | - | - | - | - | - | - | - | 4171646 | - | 4171889 | - | - | - | - | - | - | - | - | - | - |
| SNMA250724 | 25,40 | 25,40 | 7,94 | 2,4 | 9,12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2559949 | - | - | - | - |
| SNMA250724 | 25,40 | 25,40 | 7,94 | 2,4 | 9,12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2559959 | - | - | - |

## SNMG • Obróbka zgrubna



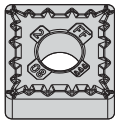


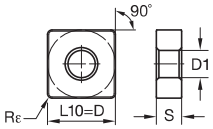

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG120408 | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2559247 | - | - | - | - |
| SNMG120408 | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | 6613608 | - | - | - | - | - | - | - | - | - | - | - |
| SNMG190612 | 19,05 | 19,05 | 6,35 | 1,2 | 7,93 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2559191 | - | - | - | - |
| SNMG250724 | 25,40 | 25,40 | 7,94 | 2,4 | 9,12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2559116 | - | - | - |
| SNMG250924 | 25,40 | 25,40 | 9,53 | 2,4 | 9,12 | - | - | - | 5091303 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMG-FF • Obróbka wykańczająca



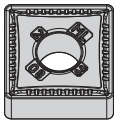


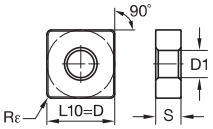

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG090308FF | 9,53 | 9,53 | 3,18 | 0,8 | 3,81 | - | 4171046 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG120404FF | 12,70 | 12,70 | 4,76 | 0,4 | 5,16 | - | 4171047 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG120408FF | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | 4171048 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG120412FF | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | 4171049 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMG-ML • Obróbka średniodokładna



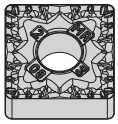


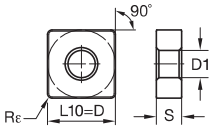

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | | |
| H | | | | | | | | | | | | | | | | | | | | ○ | | | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG090304ML | 9,53 | 9,53 | 3,18 | 0,4 | 3,81 | - | 4171071 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG090308ML | 9,53 | 9,53 | 3,18 | 0,8 | 3,81 | - | 4171072 | 4170488 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG120404ML | 12,70 | 12,70 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | 4171403 | - | - | - | - | - | - | - | - | - | - |
| SNMG120408ML | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | 4171073 | 4170489 | - | - | - | - | - | - | 4171404 | - | - | - | - | - | - | - | - | - | - |
| SNMG120412ML | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | 4171074 | 4170490 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMG-MR • Obróbka zgrubna średniodokładna



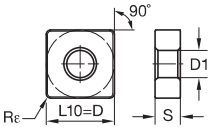



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG120408MR | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | 4171146 | 4170571 | 4170057 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG120412MR | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | - | 5684355 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG120416MR | 12,70 | 12,70 | 4,76 | 1,6 | 5,16 | - | - | - | - | - | - | 4173142 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG150612MR | 15,88 | 15,88 | 6,35 | 1,2 | 6,35 | - | 4171147 | - | - | - | 4173029 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG190612MR | 19,05 | 19,05 | 6,35 | 1,2 | 7,93 | - | 4171148 | 4170572 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMG-MS • Obróbka średniodokładna, ostre

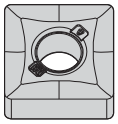


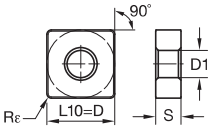

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG120408MS | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908847 | 5908848 | 5908849 | - | - | - | - | - | - | - |
| SNMG120412MS | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908850 | 5908921 | - | - | - | - | - | - | - | - |
| SNMG120416MS | 12,70 | 12,70 | 4,76 | 1,6 | 5,16 | - | - | - | - | - | - | - | - | - | - | 6219754 | - | - | - | - | - | - | - | - | - |
| SNMG150612MS | 15,88 | 15,88 | 6,35 | 1,2 | 6,35 | - | - | - | - | - | - | - | - | - | - | - | 5908923 | 5908924 | - | - | - | - | - | - | - |
| SNMG190612MS | 19,05 | 19,05 | 6,35 | 1,2 | 7,93 | - | - | - | - | - | - | - | - | - | - | 5908925 | 5908926 | - | - | - | - | - | - | - | - |
| SNMG190616MS | 19,05 | 19,05 | 6,35 | 1,6 | 7,94 | - | - | - | - | - | - | - | - | - | - | 6219756 | - | - | - | - | - | - | - | - | - |

## SNMG-RH • Obróbka zgrubna



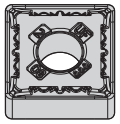


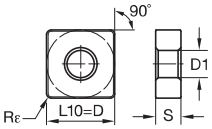

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG120408RH | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | 4170998 | 4171533 | 4171715 | - | - | - | - | - | 4171918 | - | - | - | - | - | - | - | - | - | - |
| SNMG120412RH | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | 4170999 | 4171534 | 4171716 | - | - | - | - | - | 4171919 | - | - | - | - | - | - | - | - | - | - |
| SNMG120416RH | 12,70 | 12,70 | 4,76 | 1,6 | 5,16 | - | 4171000 | 4171535 | - | - | - | - | - | - | 4171920 | - | - | - | - | - | - | - | - | - | - |
| SNMG150608RH | 15,88 | 15,88 | 6,35 | 0,8 | 6,35 | - | 4171001 | 4171536 | - | - | - | - | - | - | 4171921 | - | - | - | - | - | - | - | - | - | - |
| SNMG150612RH | 15,88 | 15,88 | 6,35 | 1,2 | 6,35 | - | 4171002 | 4171537 | 4171719 | - | - | - | - | - | 4171922 | - | - | - | - | - | - | - | - | - | - |
| SNMG150616RH | 15,88 | 15,88 | 6,35 | 1,6 | 6,35 | - | 4171003 | 4171538 | 4171720 | - | - | - | - | - | 4171923 | - | - | - | - | - | - | - | - | - | - |
| SNMG190608RH | 19,05 | 19,05 | 6,35 | 0,8 | 7,93 | - | - | 4171539 | 4171721 | - | 4173055 | - | - | - | 4171924 | - | - | - | - | - | - | - | - | - | - |
| SNMG190612RH | 19,05 | 19,05 | 6,35 | 1,2 | 7,93 | - | 4171005 | 4171540 | 4171722 | - | 4173056 | - | - | - | 4171925 | - | - | - | - | - | - | - | - | - | - |
| SNMG190616RH | 19,05 | 19,05 | 6,35 | 1,6 | 7,93 | - | - | - | 4171723 | - | 4173057 | - | - | - | 4171926 | - | - | - | - | - | - | - | - | - | - |

## SNMG-UF • Obróbka wykańczająca



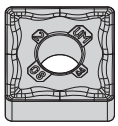


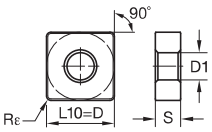

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG120404UF | 12,70 | 12,70 | 4,76 | 0,4 | 5,16 | - | - | - | - | 4169364 | 4169390 | - | - | - | - | 5645610 | - | - | - | - | - | - | - | - | - |
| SNMG120408UF | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | 4169391 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMG-UM • Obróbka średniodokładna



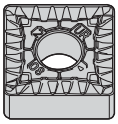


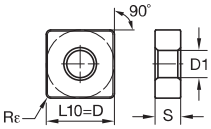

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG120404UM | 12,70 | 12,70 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | 4172393 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG120408UM | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | - | - | - | 4172367 | 4172394 | 4172424 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMG120412UM | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | 4172395 | 4172425 | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMG-UR • Obróbka zgrubna uniwersalna



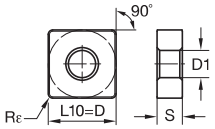



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMG120408UR | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | 4171108 | 4170516 | 4169989 | 4169429 | 4169458 | 4169495 | - | - | 4171434 | - | - | - | - | - | - | - | - | 6942348 | 6867891 |
| SNMG120412UR | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | 4171109 | 4170517 | 4169990 | 4169430 | 4169459 | 4169496 | - | - | - | - | 5579350 | - | - | - | - | - | - | 5384941 | 6867892 |
| SNMG120416UR | 12,70 | 12,70 | 4,76 | 1,6 | 5,16 | - | 4171110 | - | - | - | 4169460 | 4169497 | - | - | 4171436 | 5680174 | 5680173 | - | - | - | - | - | - | - | - |
| SNMG150612UR | 15,88 | 15,88 | 6,35 | 1,2 | 6,35 | - | 4171111 | 4170518 | 4169991 | - | 4169461 | 4169498 | - | - | 4171437 | - | 5579352 | - | - | - | - | - | - | - | - |
| SNMG150616UR | 15,88 | 15,88 | 6,35 | 1,6 | 6,35 | - | - | 4170519 | - | - | 4169462 | 4169499 | - | - | 4171438 | - | - | - | - | - | - | - | - | - | - |
| SNMG190612UR | 19,05 | 19,05 | 6,35 | 1,2 | 7,93 | - | 4171113 | 4170520 | - | 4169433 | 4169463 | 4169500 | - | - | - | - | 5512538 | - | - | - | - | - | - | - | - |
| SNMG190616UR | 19,05 | 19,05 | 6,35 | 1,6 | 7,93 | - | 4171114 | 4170521 | - | - | 4169464 | 4169501 | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMM-8 • Obróbka zgrubna

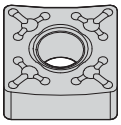


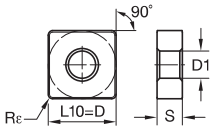

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMM2507248 | 25,40 | 25,40 | 7,94 | 2,4 | 9,12 | - | 5429112 | 5429111 | 5370813 | - | 5429116 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMM-65 • Obróbka zgrubna



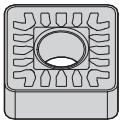


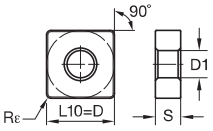

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMM12040865 | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | - | 5696554 | 5696555 | - | 5696553 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMM12041265 | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | - | 5696557 | - | - | 5696556 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMM15061665 | 15,88 | 15,88 | 6,35 | 1,6 | 6,35 | - | - | 5696559 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMM19061265 | 19,05 | 19,05 | 6,35 | 1,2 | 7,93 | - | 5696611 | 5696612 | 5696613 | - | 5696610 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMM19061665 | 19,05 | 19,05 | 6,35 | 1,6 | 7,93 | - | 5696615 | - | - | - | 5696614 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMM19062465 | 19,05 | 19,05 | 6,35 | 2,4 | 7,93 | - | - | 5696617 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMM-SR • Obróbka zgrubna



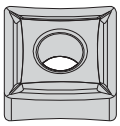


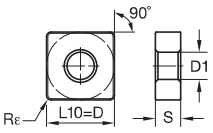

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMM190616SR | 19,05 | 19,05 | 6,35 | 1,6 | 7,93 | - | 5478876 | 5478877 | - | - | 5696648 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMM190624SR | 19,05 | 19,05 | 6,35 | 2,4 | 7,93 | - | 5696680 | 5696681 | - | - | 5696649 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMM250724SR | 25,40 | 25,40 | 7,94 | 2,4 | 9,12 | - | - | 5429119 | 5946214 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| SNMM250924SR | 25,40 | 25,40 | 9,53 | 2,4 | 9,12 | - | 5382277 | 5382390 | 5373074 | - | 5402173 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SNMP • Obróbka średniodokładna



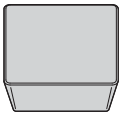


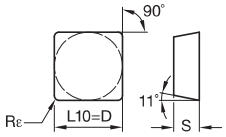

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNMP120408 | 12,70 | 12,70 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | 4173664 | - | - | - | - | 4172489 | 4172618 | - | - | - | - | - | - | - | - |
| SNMP120412 | 12,70 | 12,70 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | - | 4172619 | - | - | - | - | - | - | - | - |
| SNMP150612 | 15,88 | 15,88 | 6,35 | 1,2 | 6,35 | - | - | - | - | - | - | - | - | - | - | - | 4172621 | - | - | - | - | - | - | - | - |

## SPGN/SPG • Obróbka średniodokładna



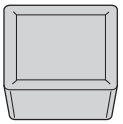


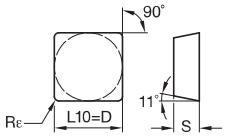

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPGN090308 | 9,53 | 9,53 | 3,18 | 0,8 | - | - | - | - | - | - | - | - | - | 4170943 | - | - | - | - | - | - | - | - | - | - |

## SPMR • Obróbka średniodokładna



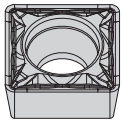


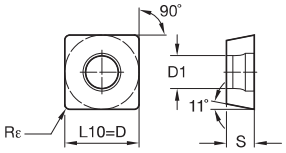

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPMR120308 | 12,70 | 12,70 | 3,18 | 0,8 | - | 4170854 | - | 4170652 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## SPMT-FP • Obróbka wykańczająca pozytywna



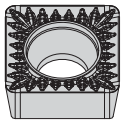


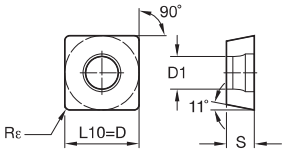

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | ○ | | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPMT09T308FP | 9,53 | 9,53 | 3,97 | 0,8 | 4,40 | - | - | - | - | - | - | - | - | - | 4170111 | - | - | - | - | - | - | - | - | - | - |

## SPMT-MP • Obróbka średniodokładna pozytywna



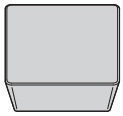


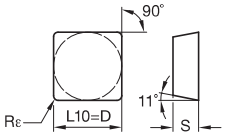

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | ○ | | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPMT09T308MP | 9,53 | 9,53 | 3,97 | 0,8 | 4,40 | - | - | - | - | - | - | - | - | - | 4170269 | - | - | - | - | - | - | - | - | - | - |
| SPMT120408MP | 12,70 | 12,70 | 4,76 | 0,8 | 5,50 | - | - | 4170262 | - | - | - | - | - | - | 4170270 | - | - | - | - | - | - | - | - | - | - |

## SPUN/SPU • Obróbka średniodokładna



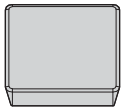


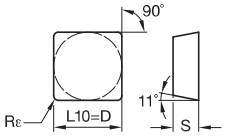

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPUN090308 | 9,53 | 9,53 | 3,18 | 0,8 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2028543 | ■ | ■ | ■ | ■ |
| SPUN120304 | 12,70 | 12,70 | 3,18 | 0,4 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2028547 | ■ | ■ | ■ | ■ |
| SPUN120308 | 12,70 | 12,70 | 3,18 | 0,8 | ■ | 4170857 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 4170950 | ■ | ■ | ■ | ■ | ■ | 2028555 | ■ | ■ | ■ | ■ |
| SPUN120312 | 12,70 | 12,70 | 3,18 | 1,2 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2561927 | ■ | ■ | ■ | ■ |
| SPUN120312 | 12,70 | 12,70 | 3,18 | 1,2 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2028560 | ■ | ■ | ■ | ■ |
| SPUN120412 | 12,70 | 12,70 | 4,76 | 1,2 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2028562 | ■ | ■ | ■ | ■ |
| SPUN150412 | 15,88 | 15,88 | 4,76 | 1,2 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2028565 | 2028567 | ■ | ■ | ■ |
| SPUN190412 | 19,05 | 19,05 | 4,76 | 1,2 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2028568 | ■ | ■ | ■ | ■ |
| SPUN190416 | 19,05 | 19,05 | 4,76 | 1,6 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2561892 | ■ | ■ | ■ | ■ |

## SPUN-T/SPU-T • Obróbka średniodokładna



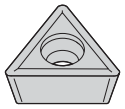


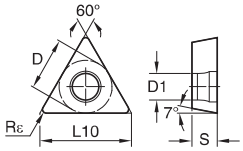

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPUN250620T | 25,40 | 25,40 | 6,35 | 2,0 | - | 4170858 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TCMT • Obróbka średniodokładna



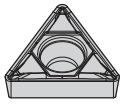


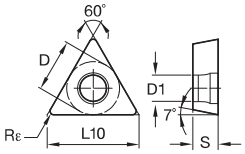

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMT110202 | 6,35 | 11,00 | 2,38 | 0,2 | 2,80 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2028579 | - | - | - | - |
| TCMT110204 | 6,35 | 11,00 | 2,38 | 0,4 | 2,80 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2028587 | 2028589 | - | - | - |
| TCMT16T304 | 9,53 | 16,50 | 3,97 | 0,4 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2028607 | - | - | - | - |
| TCMT16T308 | 9,53 | 16,50 | 3,97 | 0,8 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2028624 | 2028627 | - | - | - |
| TCMT220408 | 12,70 | 22,00 | 4,76 | 0,8 | 5,50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2028660 | - | - | - | - |

## TCMT-FP • Obróbka wykańczająca pozytywna



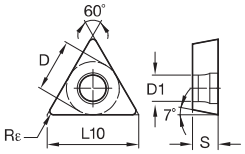



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMT110202FP | 6,35 | 11,00 | 2,38 | 0,2 | 2,90 | - | - | - | - | - | 4168800 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TCMT110204FP | 6,35 | 11,00 | 2,38 | 0,4 | 2,80 | - | 4170006 | 4170313 | - | - | 4168801 | - | - | - | 4170097 | - | - | - | - | 6208107 | - | - | - | - | - |
| TCMT110208FP | 6,35 | 11,00 | 2,38 | 0,8 | 2,80 | - | 4170007 | - | - | - | - | - | - | - | 4170098 | - | - | - | - | - | - | - | - | - | - |
| TCMT16T304FP | 9,53 | 16,50 | 3,97 | 0,4 | 4,40 | - | 4170008 | 4170315 | - | - | - | - | - | - | 4170099 | - | - | - | - | - | - | - | - | - | - |
| TCMT16T308FP | 9,53 | 16,50 | 3,97 | 0,8 | 4,40 | - | - | 4170316 | - | - | - | - | - | - | 4170100 | - | - | - | - | - | - | - | - | - | - |
| TCMT220408FP | 12,70 | 22,00 | 4,76 | 0,8 | 5,50 | - | - | 4170317 | - | - | 4168806 | - | - | - | 4170102 | - | - | - | - | - | - | - | - | - | - |

## TCMT-MP • Obróbka średniodokładna pozytywna

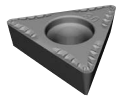


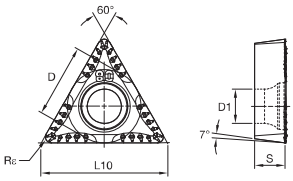

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMT110208MP | 6,35 | 11,00 | 2,38 | 0,8 | 2,80 | - | - | 4170231 | - | - | - | - | - | 6730905 | 4170249 | - | - | - | - | - | - | - | - | - | - |
| TCMT16T304MP | 9,53 | 16,50 | 3,97 | 0,4 | 4,40 | - | - | 4170232 | - | 4168904 | 4168918 | - | - | - | 4170250 | - | - | - | - | - | - | - | - | - | - |
| TCMT16T308MP | 9,53 | 16,50 | 3,97 | 0,8 | 4,40 | - | 4170216 | 4170233 | - | - | 4168919 | - | - | 6730904 | 4170251 | - | - | - | - | - | - | - | - | - | - |
| TCMT16T312MP | 9,53 | 16,50 | 3,97 | 1,2 | 4,40 | - | - | 4170234 | - | - | - | - | - | - | 4170252 | - | - | - | - | - | - | - | - | - | - |

## TCMT-MU • Obróbka średniodokładna uniwersalna



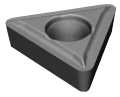


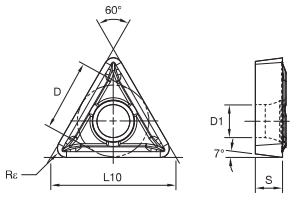

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMT16T304MU | 9,53 | 13,89 | 3,97 | 0,4 | 4,40 | - | 5623614 | 5623615 | - | - | 5623613 | - | - | - | 5623616 | - | 5623617 | - | - | - | - | - | - | - | - |
| TCMT16T308MU | 9,53 | 16,50 | 3,97 | 0,8 | 4,40 | - | 5623621 | 5623620 | - | - | 5623619 | - | - | - | 5623618 | 5623622 | - | - | - | - | - | - | - | 6869671 | 6868884 |
| TCMT220412MU | 12,70 | 22,00 | 4,76 | 1,2 | 5,50 | - | - | - | 6128327 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TCMT-1P • Obróbka wykańczająca



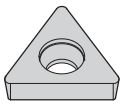


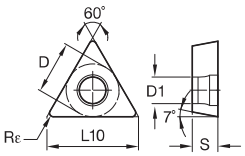

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMT1102041P | 6,35 | 11,00 | 2,38 | 0,4 | 2,80 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 6868862 |
| TCMT1102081P | 6,35 | 11,00 | 2,38 | 0,8 | 2,80 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 6868863 |
| TCMT16T3041P | 9,53 | 16,50 | 3,97 | 0,4 | 4,40 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 6868865 |

## TCMW • Obróbka średniodokładna



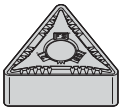


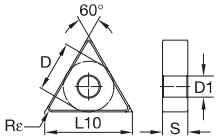

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCMW110204 | 6,35 | 11,00 | 2,38 | 0,4 | 2,85 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 4170476 | ■ | 4170381 | ■ | ■ | ■ | ■ | ■ | 2028668 | ■ | ■ | ■ | ■ |
| TCMW16T304 | 9,53 | 16,50 | 3,97 | 0,4 | 4,45 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2028670 | ■ | ■ | ■ | ■ |

## TNGG-FS • Obróbka wykańczająca, ostre



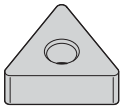


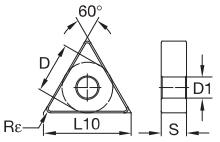

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNGG160404FS | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5548681 | 5538231 | 5549998 | - | - | - | - | - | - | - |
| TNGG220408FS | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5548682 | - | - | - | - | - | - | - | - | - |

## TNMA • Obróbka zgrubna



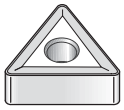


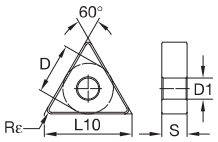

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMA160408 | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2560136 | - | - | - | - |
| TNMA160408 | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | 4171647 | 6287930 | 4171890 | - | - | - | - | - | - | - | - | - | - |
| TNMA160412 | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | - | - | - | - | - | - | - | 6287951 | 4171891 | - | - | - | - | - | - | - | - | - | - |
| TNMA220408 | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | 4171649 | - | 4171893 | - | - | - | - | - | - | - | - | - | - |
| TNMA220412 | 12,70 | 22,00 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | 4172230 | - | 4171894 | - | - | - | - | - | - | - | - | - | - |
| TNMA220416 | 12,70 | 22,00 | 4,76 | 1,6 | 5,16 | - | - | - | - | - | - | - | - | - | 4171895 | - | - | - | - | - | - | - | - | - | - |
| TNMA270616 | 15,88 | 27,50 | 6,35 | 1,6 | 6,35 | - | - | - | - | - | - | - | - | - | 4171896 | - | - | - | - | - | - | - | - | - | - |

## TNMG • Obróbka zgrubna



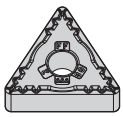


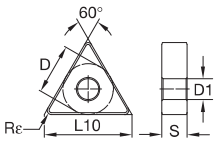

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160404 | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2559750 | - | - | - | - |
| TNMG160404 | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | - | - | - | - | - | - | - | 6671911 | - | - | - | - | - | - | - | - | - | - | - |
| TNMG160408 | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2039543 | - | - | - | - |
| TNMG160408 | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | - | 6617524 | - | - | - | - | - | - | - | - | - | - | - |
| TNMG160412 | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | - | - | - | - | - | - | - | 6671880 | - | - | - | - | - | - | - | - | - | - | - |

## TNMG-FF • Obróbka wykańczająca



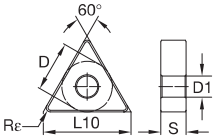



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160404FF | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | 4171050 | - | - | - | 4172691 | - | - | - | 4171385 | - | - | - | - | - | - | - | - | - | - |
| TNMG160408FF | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | 4171051 | - | - | - | - | - | - | - | 4171386 | - | - | - | - | - | - | - | - | - | - |
| TNMG160412FF | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | 4171052 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TNMG-ML • Obróbka średniodokładna

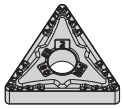


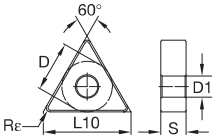

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160404ML | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | 4171075 | 4170491 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG160408ML | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | 4171076 | 4170492 | - | - | - | - | 4171672 | - | 4171410 | - | - | - | - | - | - | - | - | - | - |
| TNMG160412ML | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | 4171077 | 4170493 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG220404ML | 12,70 | 22,00 | 4,76 | 0,4 | 5,16 | - | 5684348 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG220408ML | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | 4171078 | 4170494 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TNMG-MR • Obróbka zgrubna średniodokładna



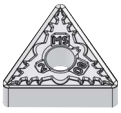


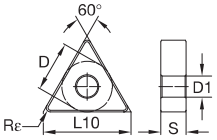

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160404MR | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | 4171150 | 4170573 | 4170059 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG160408MR | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | 4171151 | 4170574 | 4170060 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG160412MR | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | 4171152 | 4170575 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG220404MR | 12,70 | 22,00 | 4,76 | 0,4 | 5,16 | - | 4171153 | 4170576 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG220408MR | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | 4171154 | 4170577 | 4170063 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG220412MR | 12,70 | 22,00 | 4,76 | 1,2 | 5,16 | - | 4171155 | 4170578 | 4170064 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG220416MR | 12,70 | 22,00 | 4,76 | 1,6 | 5,16 | - | - | 4170579 | 4170065 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TNMG-MS • Obróbka średniodokładna, ostre



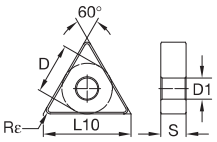



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160404MS | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5908927 | 5908928 | 5908929 | - | - | - | - | - | - | - |
| TNMG160408MS | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5908930 | 5908931 | 5908932 | - | - | - | - | - | - | - |
| TNMG220404MS | 12,70 | 22,00 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908933 | 5908934 | 5908935 | - | - | - | - | - | - | - |
| TNMG220408MS | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908936 | 5908937 | 5908938 | - | - | - | - | - | - | - |
| TNMG220412MS | 12,70 | 22,00 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | - | - | - | - | 5908940 | - | - | - | - | - | - | - | - |
| TNMG270608MS | 15,88 | 27,50 | 6,35 | 0,8 | 6,35 | - | - | - | - | - | - | - | - | - | - | - | 5908942 | 5908943 | - | - | - | - | - | - | - |

## TNMG-RH • Obróbka zgrubna

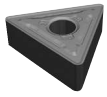


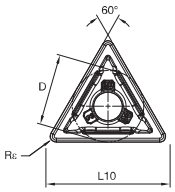

● pierwszy wybór
○ wybór alternatywny

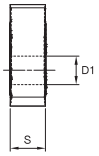
| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160408RH | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | 4171007 | 4171542 | 4171724 | - | 4173058 | - | - | 6673946 | 4171927 | - | - | - | - | - | - | - | - | - | - |
| TNMG160412RH | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | - | 4171543 | 4171725 | - | - | - | - | - | 4171928 | - | - | - | - | - | - | - | - | - | - |
| TNMG220408RH | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | 4171009 | 4171544 | 4171726 | - | - | - | - | - | 4171929 | - | - | - | - | - | - | - | - | - | - |
| TNMG220412RH | 12,70 | 22,00 | 4,76 | 1,2 | 5,16 | - | 4171010 | 4171545 | 4171727 | - | - | - | - | - | 4171930 | - | - | - | - | - | - | - | - | - | - |
| TNMG220416RH | 12,70 | 22,00 | 4,76 | 1,6 | 5,16 | - | - | - | 4171728 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG270612RH | 15,88 | 27,50 | 6,35 | 1,2 | 6,35 | - | - | 4171547 | 4171729 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG270616RH | 15,88 | 27,50 | 6,35 | 1,6 | 6,35 | - | - | 4171548 | 4171730 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG330924RH | 19,05 | 33,00 | 9,53 | 2,4 | 7,93 | - | - | 4171549 | 4171731 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TNMG-RU • Obróbka zgrubna uniwersalna





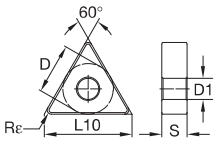




● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160408RU | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | 6776800 | 6776799 | - | 6817524 | 6777051 | - | - | 6746845 | 6817450 | - | - | - | - | - | - | - | - | - | 6795795 |
| TNMG160412RU | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | 6776936 | 6776935 | - | 6817525 | 6776937 | - | - | 6746846 | 6817521 | - | - | - | - | - | - | - | - | - | 6791846 |

## TNMG-UF • Obróbka wykańczająca

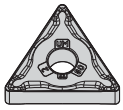


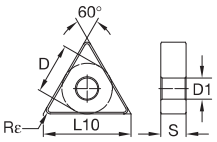

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160404UF | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | - | - | - | 4169367 | 4169393 | - | - | - | - | 5432605 | - | - | - | - | - | - | - | - | - |
| TNMG160408UF | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | - | - | - | 4169368 | 4169394 | - | - | - | - | 5432606 | - | - | - | - | - | - | - | - | - |
| TNMG220404UF | 12,70 | 22,00 | 4,76 | 0,4 | 5,16 | - | - | - | - | 4169370 | 4169396 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG220408UF | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | 4169397 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TNMG-UM • Obróbka średniodokładna



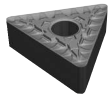


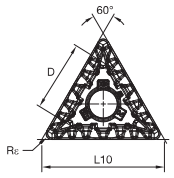

● pierwszy wybór
○ wybór alternatywny

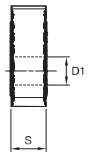
| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160404UM | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | ■ | ■ | ■ | ■ | 4172369 | 4172396 | ■ | ■ | ■ | ■ | 5550226 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| TNMG160408UM | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | ■ | ■ | ■ | ■ | 4172370 | 4172397 | 4172427 | ■ | ■ | ■ | 5550228 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| TNMG160412UM | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | ■ | ■ | ■ | ■ | ■ | 4172398 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| TNMG160416UM | 9,53 | 16,50 | 4,76 | 1,6 | 3,81 | ■ | ■ | ■ | ■ | ■ | 4172399 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| TNMG220404UM | 12,70 | 22,00 | 4,76 | 0,4 | 5,16 | ■ | ■ | ■ | ■ | ■ | 4172400 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| TNMG220408UM | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | ■ | ■ | ■ | ■ | ■ | 4172401 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| TNMG220412UM | 12,70 | 22,00 | 4,76 | 1,2 | 5,16 | ■ | ■ | ■ | ■ | ■ | 4172402 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

## TNMG-UR • Obróbka zgrubna uniwersalna





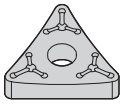



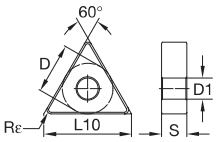

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMG160408UR | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | 4171115 | 4170522 | 4170035 | 4169434 | 4169465 | - | - | - | 4171441 | - | 5579395 | - | - | - | - | - | - | - | - |
| TNMG160412UR | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | 4171116 | 4170523 | - | - | 4169466 | - | - | - | - | - | 5680175 | - | - | - | - | - | - | 6791842 | 6791845 |
| TNMG160416UR | 9,53 | 16,50 | 4,76 | 1,6 | 3,81 | - | 4171117 | - | - | - | - | - | - | - | 4171443 | - | - | - | - | - | - | - | - | - | - |
| TNMG220408UR | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | 4171118 | 4170524 | 4170036 | 4169435 | 4169468 | 4169503 | - | - | 4171444 | - | - | - | - | - | - | - | - | - | - |
| TNMG220412UR | 12,70 | 22,00 | 4,76 | 1,2 | 5,16 | - | - | 4170525 | - | - | 4169469 | 4169504 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG220416UR | 12,70 | 22,00 | 4,76 | 1,6 | 5,16 | - | 4171120 | - | - | - | 4169470 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG270612UR | 15,88 | 27,50 | 6,35 | 1,2 | 6,35 | - | - | 4170527 | - | - | 4169471 | 4169506 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMG270616UR | 15,88 | 27,50 | 6,35 | 1,6 | 6,35 | - | 4171122 | 4170528 | - | - | 4169472 | 4169507 | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TNMM-65 • Obróbka zgrubna



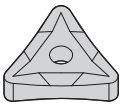


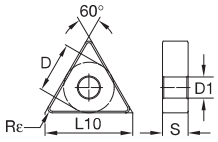

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMM16040865 | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | - | 5696618 | 5696619 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMM22040865 | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | 5696621 | 5696622 | 5696623 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TNMM22041265 | 12,70 | 22,00 | 4,76 | 1,2 | 5,16 | - | - | 5696625 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TNMP • Obróbka średniodokładna



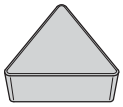


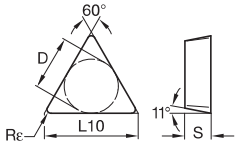

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TNMP160404 | 9,53 | 16,50 | 4,76 | 0,4 | 3,81 | - | - | - | - | - | 4173670 | 4173709 | - | - | - | 4172491 | - | - | - | - | - | - | - | - | - |
| TNMP160408 | 9,53 | 16,50 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | 4173671 | 4173710 | - | - | - | 4172492 | 4172623 | - | - | - | - | - | - | - | - |
| TNMP160412 | 9,53 | 16,50 | 4,76 | 1,2 | 3,81 | - | - | - | - | - | 4173672 | - | - | - | - | - | 4172624 | - | - | - | - | - | - | - | - |
| TNMP220404 | 12,70 | 22,00 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 4172494 | - | - | - | - | - | - | - | - | - |
| TNMP220408 | 12,70 | 22,00 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | 4173674 | - | - | - | - | 4172495 | 4172625 | - | - | - | - | - | - | - | - |

## TPGN/TPG • Obróbka średniodokładna



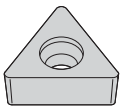


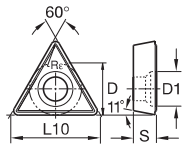

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPGN110304 | 6,35 | 11,00 | 3,18 | 0,4 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2015100 | ■ | ■ | ■ | ■ |
| TPGN110308 | 6,35 | 11,00 | 3,18 | 0,8 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 4170952 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| TPGN160308 | 9,53 | 16,50 | 3,18 | 0,8 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 4170953 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

## TPGA • Obróbka średniodokładna



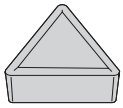


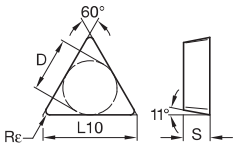

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPGA110204 | 6,35 | 11,00 | 2,38 | 0,4 | 3,40 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2015081 | ■ | ■ | ■ | ■ |
| TPGA110208 | 6,35 | 11,00 | 2,38 | 0,8 | 3,40 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 2031786 | ■ | ■ | ■ | ■ |

## TPMR • Obróbka średniodokładna



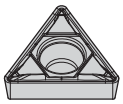


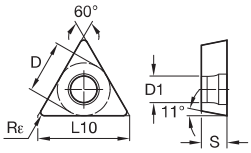

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPMR110304 | 6,35 | 11,00 | 3,18 | 0,4 | - | 4170859 | - | 4170784 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TPMR110308 | 6,35 | 11,00 | 3,18 | 0,8 | - | 4170860 | - | 4170785 | - | - | - | - | - | 4170954 | - | - | - | - | - | - | - | - | - | - |
| TPMR160304 | 9,53 | 16,50 | 3,18 | 0,4 | - | 4170861 | - | 4170786 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TPMR160308 | 9,53 | 16,50 | 3,18 | 0,8 | - | 4170862 | - | 4170787 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TPMR160312 | 9,53 | 16,50 | 3,18 | 1,2 | - | 4170863 | - | 4170788 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TPMT-FP • Obróbka wykańczająca pozytywna



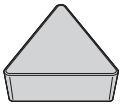


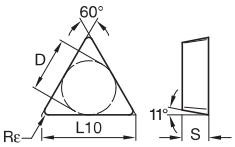

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPMT110204FP | 6,35 | 11,00 | 2,38 | 0,4 | 2,80 | - | - | - | - | - | - | - | - | - | 4170113 | - | - | - | - | - | - | - | - | - | - |
| TPMT16T308FP | 9,53 | 16,50 | 3,97 | 0,8 | 4,40 | - | - | - | - | - | 4168837 | - | - | - | 4170116 | - | - | - | - | - | - | - | - | - | - |
| TPMT220408FP | 12,70 | 22,00 | 4,76 | 0,8 | 5,50 | - | - | 4170340 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## TPUN/TPU • Obróbka średniodokładna



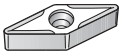


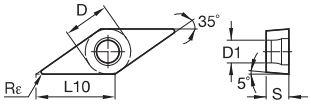

● pierwszy wybór
○ wybór alternatywny

| | | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TPUN110304 | 6,35 | 11,00 | 3,18 | 0,4 | - | 4170864 | - | 4170789 | - | - | - | - | - | - | - | - | - | - | - | 2028806 | - | - | - | - |
| TPUN110308 | 6,35 | 11,00 | 3,18 | 0,8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2028814 | - | - | - | - |
| TPUN160304 | 9,53 | 16,50 | 3,18 | 0,4 | - | 4170866 | 4170645 | - | - | - | - | - | - | 4170958 | - | - | - | - | - | 2028821 | 2562937 | - | - | - |
| TPUN160308 | 9,53 | 16,50 | 3,18 | 0,8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2562781 | - | - | - | - |
| TPUN160308 | 9,53 | 16,50 | 3,18 | 0,8 | - | 4170867 | 4170646 | - | - | - | - | - | - | 4170959 | - | - | - | - | - | 2028830 | 2028832 | - | - | - |
| TPUN160312 | 9,53 | 16,50 | 3,18 | 1,2 | - | - | - | - | - | - | - | - | - | 4170960 | - | - | - | - | - | 2028833 | - | - | - | - |
| TPUN220408 | 12,70 | 22,00 | 4,76 | 0,8 | - | 4170868 | - | 4170790 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TPUN220408 | 12,70 | 22,00 | 4,76 | 0,8 | - | - | 4170648 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TPUN220412 | 12,70 | 22,00 | 4,76 | 1,2 | - | - | 4170649 | 4170791 | - | - | - | - | - | 4170961 | - | - | - | - | - | 2028843 | 2028847 | - | - | - |

## VBMT • Obróbka średniodokładna



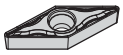


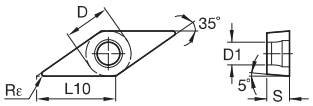

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VBMT160404 | 9,53 | 16,66 | 4,76 | 0,4 | 4,45 | - | 4169983 | 4170553 | 4170807 | - | - | - | - | - | - | - | - | - | - | - | 2028860 | - | - | - | - |
| VBMT160408 | 9,53 | 16,61 | 4,76 | 0,8 | 4,40 | - | 4169984 | 4170554 | 4170808 | - | - | - | - | 6671879 | - | - | - | - | - | - | 2028870 | - | - | - | - |
| VBMT160412 | 9,53 | 16,61 | 4,76 | 1,2 | 4,40 | - | 4169985 | - | - | - | - | - | - | - | - | - | - | - | - | - | 2028876 | - | - | - | - |

## VBMT-FP • Obróbka wykańczająca pozytywna



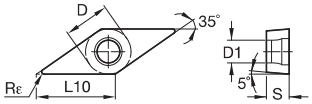



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VBMT110302FP | 6,35 | 11,07 | 3,18 | 0,2 | 2,80 | - | - | 4170318 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VBMT110304FP | 6,35 | 11,07 | 3,18 | 0,4 | 2,80 | - | 4170012 | 4170319 | - | - | 4168807 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VBMT110308FP | 6,35 | 11,07 | 3,18 | 0,8 | 2,80 | - | - | 4170320 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VBMT160402FP | 9,53 | 16,61 | 4,76 | 0,2 | 4,40 | - | - | 4170321 | - | - | 4168809 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VBMT160404FP | 9,53 | 16,61 | 4,76 | 0,4 | 4,40 | - | 4170013 | 4170322 | - | 4168776 | 4168810 | - | - | - | 4170103 | - | - | - | - | - | - | - | - | - | - |
| VBMT160408FP | 9,53 | 16,61 | 4,76 | 0,8 | 4,40 | - | 4170014 | 4170323 | - | - | 4168811 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## VBMT-MP • Obróbka średniodokładna pozytywna

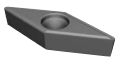


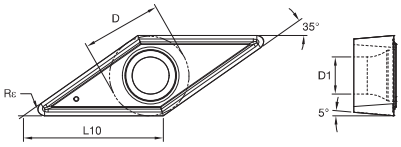

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VBMT160404MP | 9,53 | 16,61 | 4,76 | 0,4 | 4,40 | - | - | 4170235 | - | - | 4168921 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VBMT160408MP | 9,53 | 16,61 | 4,76 | 0,8 | 4,40 | - | - | 4170236 | - | - | 4168922 | - | - | - | 4170254 | - | - | - | - | - | - | - | - | - | - |

## VBMT-1P • Obróbka wykańczająca



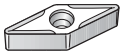


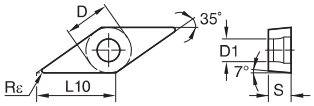

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VBMT1604041P | 9,53 | 16,61 | 4,76 | 0,4 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6869672 | 6868867 |
| VBMT1604081P | 9,53 | 16,61 | 4,76 | 0,8 | 4,40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6869673 | 6868868 |

## VCMT • Obróbka średniodokładna



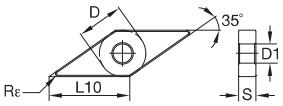



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCMT16T304 | 9,53 | 16,61 | 3,97 | 0,4 | 4,40 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 2563826 | ' | ' | ' | ' |
| VCMT16T308 | 9,53 | 16,61 | 3,97 | 0,8 | 4,40 | ' | ' | ' | ' | ' | ' | ' | ' | 6672411 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |

## VNGG-FS • Obróbka wykańczająca, ostre

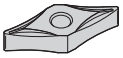


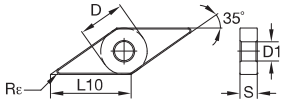

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNGG160401FS | 9,53 | 16,61 | 4,76 | 0,1 | 3,81 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548684 | ' | 5550000 | ' | ' | ' | ' | ' | ' | ' |
| VNGG160402FS | 9,53 | 16,61 | 4,76 | 0,2 | 3,81 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548683 | ' | 5549999 | ' | ' | ' | ' | ' | ' | ' |
| VNGG160404FS | 9,53 | 16,61 | 4,76 | 0,4 | 3,81 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548685 | ' | 5550001 | ' | ' | ' | ' | ' | ' | ' |
| VNGG160408FS | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548686 | 5538233 | 5550002 | ' | ' | ' | ' | ' | ' | ' |

## VNGP • Obróbka średniodokładna



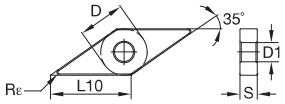



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNGP160401 | 9,53 | 16,61 | 4,76 | 0,1 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5549195 | - | 5549211 | - | - | - | - | - | - | - |
| VNGP160402 | 9,53 | 16,61 | 4,76 | 0,2 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5549196 | - | - | - | - | - | - | - | - | - |
| VNGP220408 | 12,70 | 22,14 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | - | - | 5549212 | - | - | - | - | - | - | - |

## VNMA • Obróbka zgrubna

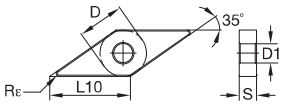



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMA160408 | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | 4171652 | - | 4171897 | - | - | - | - | - | - | - | - | - | - |

## VNMG • Obróbka średniodokładna

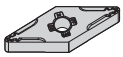


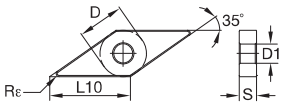

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMG12T304 | 7,14 | 12,45 | 3,97 | 0,4 | 3,60 | - | - | - | - | - | - | - | - | - | - | 5095163 | 5095164 | - | - | - | - | - | - | 6942277 | 6867907 |
| VNMG12T308 | 7,14 | 12,45 | 3,97 | 0,8 | 3,60 | - | - | - | - | - | - | - | - | - | 4170965 | 5095165 | 5095166 | - | - | - | - | - | - | 6942278 | 6867908 |

## VNMG-FF • Obróbka wykańczająca



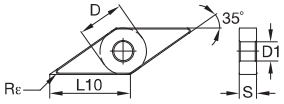



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMG160404FF | 9,53 | 16,61 | 4,76 | 0,4 | 3,81 | - | 4171053 | - | - | - | 4172694 | - | - | - | - | 5684334 | - | - | - | - | - | - | - | - | - |
| VNMG160408FF | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | - | 4171054 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## VNMG-ML • Obróbka średniodokładna

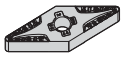


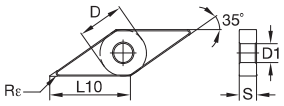

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMG160404ML | 9,53 | 16,61 | 4,76 | 0,4 | 3,81 | - | 4171079 | 4170495 | - | - | - | - | - | - | 4171413 | - | - | - | - | - | - | - | - | - | - |
| VNMG160408ML | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | - | 4171080 | 4170496 | - | - | - | - | - | - | 4171414 | - | - | - | - | - | - | - | - | - | - |

## VNMG-MR • Obróbka zgrubna średniodokładna



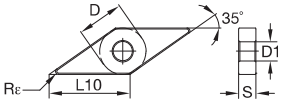



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMG160408MR | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | - | 4171157 | 4170580 | 4170066 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## VNMG-MS • Obróbka średniodokładna, ostre

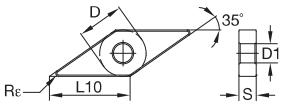



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMG160404MS | 9,53 | 16,61 | 4,76 | 0,4 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5908944 | 5908945 | 5908946 | - | - | - | - | - | - | - |
| VNMG160408MS | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5908947 | 5908948 | 5908949 | - | - | - | - | - | - | - |
| VNMG220404MS | 12,70 | 22,14 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908950 | 5908961 | 5908962 | - | - | - | - | - | - | - |
| VNMG220408MS | 12,70 | 22,14 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908963 | 5908964 | 5908965 | - | - | - | - | - | - | - |

## VNMG-RH • Obróbka zgrubna

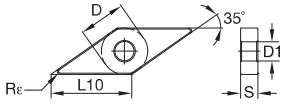



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMG160408RH | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | - | - | 4171550 | 4171732 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VNMG220408RH | 12,70 | 22,14 | 4,76 | 0,8 | 5,16 | - | - | 4171551 | 4171733 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VNMG220412RH | 12,70 | 22,14 | 4,76 | 1,2 | 5,16 | - | 4171017 | 4171552 | 4171734 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## VNMG-UF • Obróbka wykańczająca

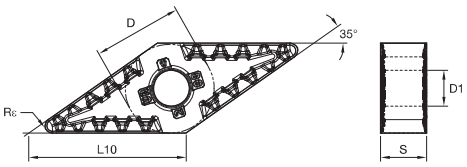



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMG160404UF | 9,53 | 16,61 | 4,76 | 0,4 | 3,81 | - | - | - | - | 4169372 | 4169398 | - | - | - | - | 5645616 | - | - | - | - | - | - | - | - | - |
| VNMG160408UF | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | - | 5645618 | - | - | 4169373 | 4169399 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## VNMG-UR • Obróbka zgrubna uniwersalna

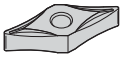


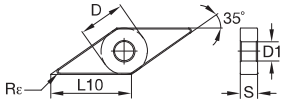

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMG160408UR | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | - | 4171123 | 4170529 | - | 4169439 | 4169473 | 4169508 | - | - | 4171449 | - | - | - | - | - | - | - | - | 6942349 | 6867893 |
| VNMG160412UR | 9,53 | 16,61 | 4,76 | 1,2 | 3,81 | - | 4171124 | 4170530 | - | - | 4169474 | - | - | - | 4171450 | 5680176 | - | - | - | - | - | - | - | 6942350 | 6867894 |

## VNMP • Obróbka średniodokładna



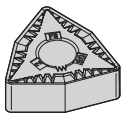


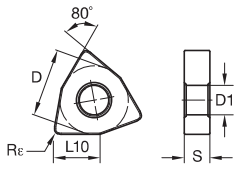

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VNMP160404 | 9,53 | 16,61 | 4,76 | 0,4 | 3,81 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 4172497 | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| VNMP160408 | 9,53 | 16,61 | 4,76 | 0,8 | 3,81 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 4172498 | ' | ' | ' | ' | ' | ' | ' | ' | ' |

## WNGG-FS • Obróbka wykańczająca, ostre



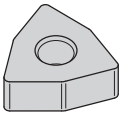


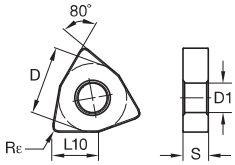

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNGG080404FS | 12,70 | 8,69 | 4,76 | 0,4 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548687 | 5538234 | 5550003 | ' | ' | ' | ' | ' | ' | ' |
| WNGG080408FS | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | 5548688 | ' | 5550004 | ' | ' | ' | ' | ' | ' | ' |

## WNMA • Obróbka zgrubna



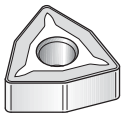


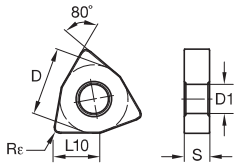

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMA060408 | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | 4171653 | - | 4171898 | - | - | - | - | - | - | - | - | - | - |
| WNMA060412 | 9,53 | 6,52 | 4,76 | 1,2 | 3,81 | - | - | - | - | - | - | - | - | - | 4171899 | - | - | - | - | - | - | - | - | - | - |
| WNMA080408 | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | 4171654 | 6288267 | 4171900 | - | - | - | - | - | - | - | - | - | - |
| WNMA080412 | 12,70 | 8,69 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | - | - | 4171655 | 6288268 | 4171901 | - | - | - | - | - | - | - | - | - | - |
| WNMA080416 | 12,70 | 8,69 | 4,76 | 0,6 | 5,16 | - | - | - | - | - | - | - | - | - | 4171902 | - | - | - | - | - | - | - | - | - | - |

## WNMG-5 • Obróbka zgrubna



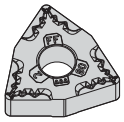


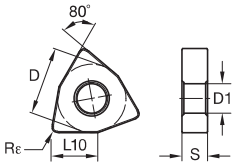

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG080408-5 | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | 6613603 | - | - | - | - | - | - | - | - | - | - | - |

## WNMG-FF • Obróbka wykańczająca



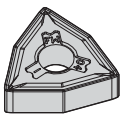


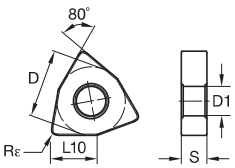

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | ○ | | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG060404FF | 9,53 | 6,52 | 4,76 | 0,4 | 3,81 | ■ | 4171055 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 4171388 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| WNMG060408FF | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | ■ | 4171056 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 4171389 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| WNMG080404FF | 12,70 | 8,69 | 4,76 | 0,4 | 5,16 | ■ | 4171057 | ■ | ■ | ■ | 4172697 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| WNMG080408FF | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | ■ | 4171058 | ■ | ■ | ■ | 4172698 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

## WNMG-FW • Krawędź typu Wiper do obróbki wykańczającej



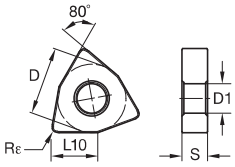



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | ○ | | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG060408FW | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | ■ | 5623511 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| WNMG080408FW | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | ■ | 5623515 | ■ | ■ | ■ | 4173110 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

## WNMG-ML • Obróbka średniodokładna

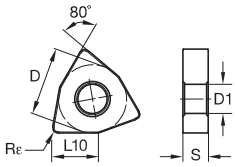



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG060404ML | 9,53 | 6,52 | 4,76 | 0,4 | 3,81 | - | 4171081 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG060408ML | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | - | 4171082 | 4170497 | - | - | - | - | 4171677 | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080404ML | 12,70 | 8,69 | 4,76 | 0,4 | 5,16 | - | 4171083 | 4170498 | - | - | - | - | 4171678 | - | 4171417 | - | - | - | - | - | - | - | - | - | - |
| WNMG080408ML | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | 4171084 | 4170499 | - | - | - | - | 4171679 | - | 4171418 | - | - | - | - | - | - | - | - | - | - |

## WNMG-MR • Obróbka zgrubna średniodokładna

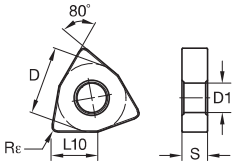



● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG080408MR | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | 4171158 | 4170581 | 4170067 | - | 4173033 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080412MR | 12,70 | 8,69 | 4,76 | 1,2 | 5,16 | - | 4171159 | 4170582 | 4170068 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080416MR | 12,70 | 8,69 | 4,76 | 1,6 | 5,16 | - | 4171160 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## WNMG-MS • Obróbka średniodokładna, ostre

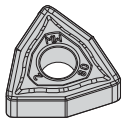


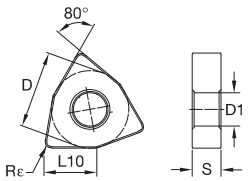

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | ○ | | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG060408MS | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | - | - | - | - | - | - | - | - | - | - | 5908966 | 5908967 | 5908968 | - | - | - | - | - | - | - |
| WNMG080404MS | 12,70 | 8,69 | 4,76 | 0,4 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908969 | 5908970 | 5908971 | - | - | - | - | - | - | - |
| WNMG080408MS | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 5908972 | 5908973 | 5908974 | - | - | - | - | - | - | - |

## WNMG-MW • Średnia krawędź typu Wiper



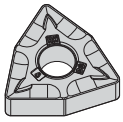


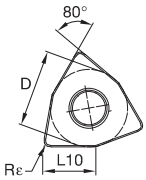

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● | |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● | |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ | |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ | |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● | |
| H | | | | | | | | | | | | | | | | | | | | ○ | | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG080408MW | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | 4173118 | - | 4171695 | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080412MW | 12,70 | 8,69 | 4,76 | 1,2 | 5,16 | - | - | - | - | - | 4173119 | - | 4171697 | - | - | - | - | - | - | - | - | - | - | - | - |

## WNMG-RH • Obróbka zgrubna



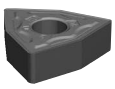


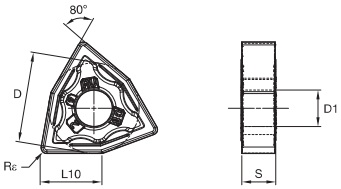

● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG060408RH | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | - | 4171018 | 4171553 | - | - | - | - | - | 6673948 | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080408RH | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | 4171019 | 4171554 | 4171736 | - | 4173064 | - | - | 6290495 | 4171932 | - | - | - | - | - | - | - | - | - | - |
| WNMG080412RH | 12,70 | 8,69 | 4,76 | 1,2 | 5,16 | - | 4171020 | 4171555 | 4171737 | - | 4173065 | - | - | 6288269 | 4171933 | - | - | - | - | - | - | - | - | - | - |
| WNMG080416RH | 12,70 | 8,69 | 4,76 | 1,6 | 5,16 | - | - | 4171556 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## WNMG-RU • Obróbka zgrubna uniwersalna



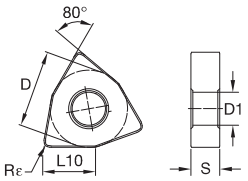



● pierwszy wybór
○ wybór alternatywny

| | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG080408RU | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | 6696886 | 6696887 | - | 6711599 | 6817758 | - | - | 6696885 | 6583558 | - | - | - | - | - | - | - | - | - | 6819328 |
| WNMG080412RU | 12,70 | 8,69 | 4,76 | 1,2 | 5,16 | - | 6690252 | 6690249 | - | 6817526 | 6817759 | - | - | 6678405 | 6690255 | - | - | - | - | - | - | - | - | - | 6819329 |

## WNMG-UF • Obróbka wykańczająca

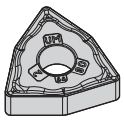


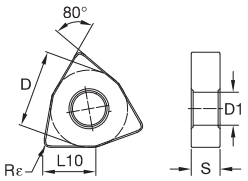

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | | ● | ● |
| M | | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG060404UF | 9,53 | 6,52 | 4,76 | 0,4 | 3,81 | ' | ' | ' | ' | 4169374 | 4169400 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| WNMG060408UF | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | ' | ' | ' | ' | ' | 4169401 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| WNMG080404UF | 12,70 | 8,69 | 4,76 | 0,4 | 5,16 | ' | ' | ' | ' | 4169376 | 4169402 | ' | ' | ' | ' | 5645619 | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| WNMG080408UF | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | ' | ' | ' | ' | 4169377 | 4169403 | ' | ' | ' | ' | 5645623 | ' | ' | ' | ' | ' | ' | ' | ' | ' |
| WNMG080412UF | 12,70 | 8,69 | 4,76 | 1,2 | 5,16 | ' | ' | ' | ' | 4169378 | 4169404 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |

## WNMG-UM • Obróbka średniodokładna



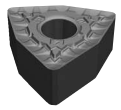


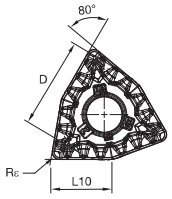

● pierwszy wybór
○ wybór alternatywny

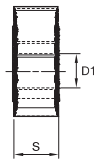
| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | | ● | | ● | ● |
| M | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG060404UM | 9,53 | 6,52 | 4,76 | 0,4 | 3,81 | - | - | - | - | 4172375 | 4172403 | 4172432 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG060408UM | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | - | - | - | - | 4172376 | 4172404 | 4172433 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG060412UM | 9,53 | 6,52 | 4,76 | 1,2 | 3,81 | - | - | - | - | - | 4172405 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080404UM | 12,70 | 8,69 | 4,76 | 0,4 | 5,16 | - | - | - | - | 4172377 | 4172406 | 4172435 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080408UM | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | 6496991 | - | 5645270 | - | 4172378 | 4172407 | 4172436 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080412UM | 12,70 | 8,69 | 4,76 | 1,2 | 5,16 | 6496992 | - | - | - | - | 4172408 | - | - | - | - | 5645269 | - | - | - | - | - | - | - | - | - |

## WNMG-UR • Obróbka zgrubna uniwersalna





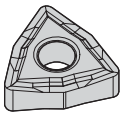



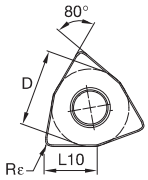

● pierwszy wybór
○ wybór alternatywny

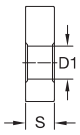
| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMG060408UR | 9,53 | 6,52 | 4,76 | 0,8 | 3,81 | - | 4171125 | 4170531 | - | 4169441 | 4169475 | - | - | - | 4171451 | 5680178 | - | - | - | - | - | - | - | 6942361 | 6867895 |
| WNMG060412UR | 9,53 | 6,52 | 4,76 | 1,2 | 3,81 | - | 4171126 | 4170532 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| WNMG080408UR | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | 4171127 | 4170533 | 4170040 | 4169442 | 4169476 | 4169509 | 5680179 | - | 4171453 | - | - | - | - | - | - | - | - | 6942362 | 6867896 |
| WNMG080412UR | 12,70 | 8,69 | 4,76 | 1,2 | 5,16 | - | 4171128 | 4170534 | 4170041 | - | 4169477 | 4169510 | - | - | 4171454 | 5579420 | - | - | - | - | - | - | - | 6942363 | 6867897 |
| WNMG080416UR | 12,70 | 8,69 | 4,76 | 1,6 | 5,16 | - | - | - | - | - | 4169478 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

## WNMP • Obróbka średniodokładna





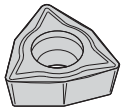



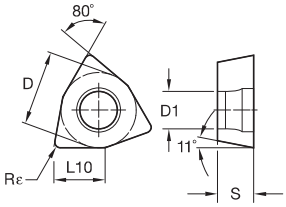

● pierwszy wybór
○ wybór alternatywny

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WNMP080408 | 12,70 | 8,69 | 4,76 | 0,8 | 5,16 | - | - | - | - | - | - | - | - | - | - | 4172499 | - | - | - | - | - | - | - | - | - |

## WPMT-FP • Obróbka wykańczająca pozytywna






● pierwszy wybór
○ wybór alternatywny

| | | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ● | | ● | | ● | ● |
| M | | | | | ○ | ● | ● | ● | | | | ● | ● | | ○ | | | | ● | ● | ● |
| K | | ○ | ○ | ○ | | | | | ● | ● | ● | ○ | ○ | | ○ | | ● | | | ○ | ○ |
| N | | | | | | | | | | | | ○ | ○ | ● | ● | | ○ | | | ○ | ○ |
| S | | | | | | | ○ | | | | | ● | ● | | ○ | | ○ | | ○ | ● | ● |
| H | | | | | | | | | | | | | | | | | | | | ○ | |

| oznaczenie katalogowe ISO | D | L10 | S | Rε | D1 | WP05CT | WP15CT | WP25CT | WP35CT | WM15CT | WM25CT | WM35CT | WK05CT | WK15CT | WK20CT | WS10PT | WS25PT | WU10HT | WU05PT | WP20TT | THM | TTR | WM20CT | WU10PT | WU25PT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WPMT06T308FP | 9,53 | 6,52 | 3,97 | 0,8 | 4,40 | ' | ' | 4170342 | ' | ' | 4168840 | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' | ' |