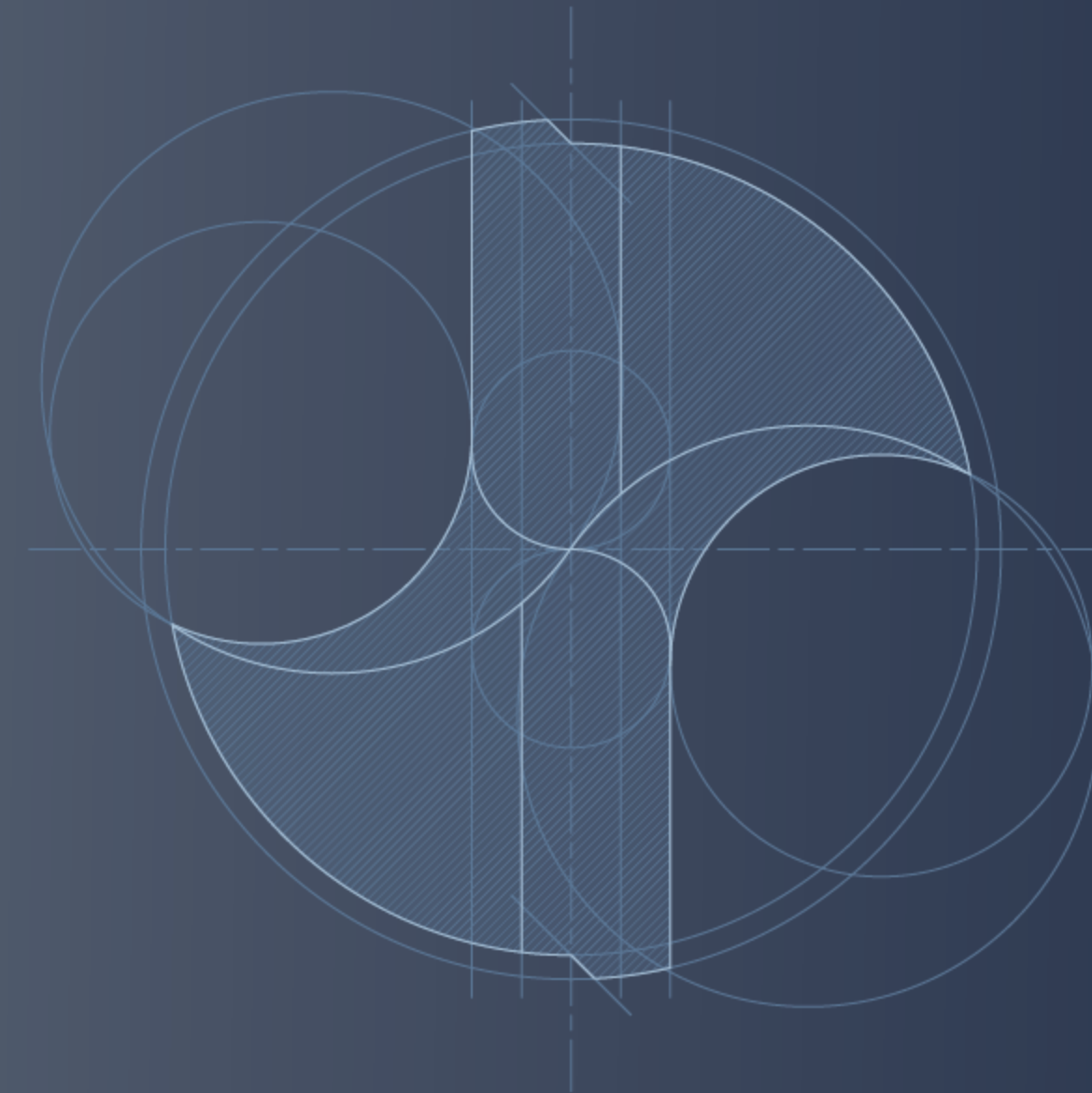


# PRODUCT 2022 CATALOG



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MILLING

TURNING

DRILLING

[WWW.SWISSBLUE-TECH.COM](http://WWW.SWISSBLUE-TECH.COM)



# PRODUCT

[www.SwissBlue-Tech.com](http://www.SwissBlue-Tech.com)

# CATALOG

**2022**

# THE COMPANY

## SWISS PRODUCER

*All our products are designed and developed in Switzerland... and more  
Than 75% of our line is also produced in Switzerland.*

## FULL RANGE

*We make a full range of cutting tools, made of Sub micron and over micron  
grades combined with Latest CVD Alumina coating and Patented PVD  
coatings.*

## 25 YEARS EXPERIENCE

*Our team of Industry Experts have been developing Grades and products  
all over the world. We have designed and produced cutting tools in: Israel,  
Switzerland and Korea.*

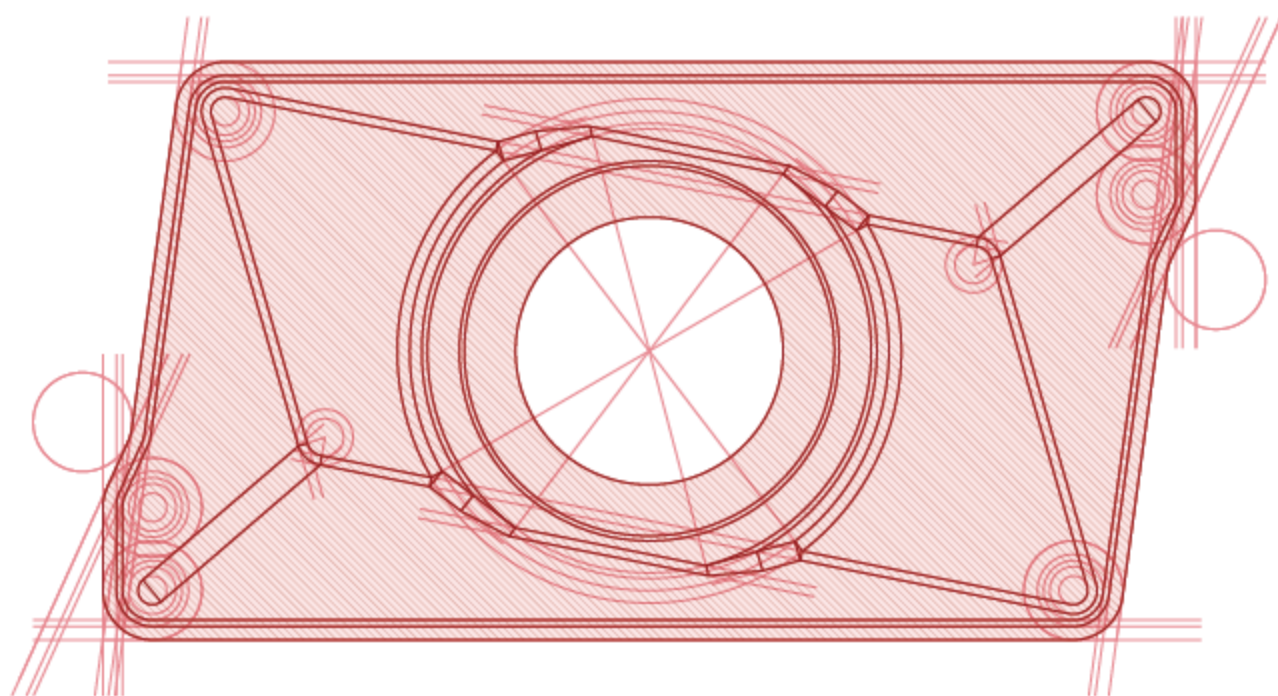
## HIGHEST QUALITY

*We keep the highest quality standards, as you might expect from a swiss  
producer....but our prices are uniquely affordable.*



MOUDON, SWITZERLAND

# MILLING



APKT

Pg.007

APMT

Pg.009

LNMU

Pg.011

OFMT

Pg.013

RDMT/W

Pg.015

RPMT/W

Pg.017

SDMT

Pg.019

SEKN/R

Pg.021

SEKT

Pg.023

SNMX

Pg.025

SPKN/R

Pg.027

SPMT

Pg.029

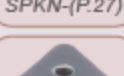
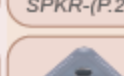
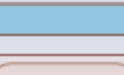
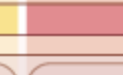
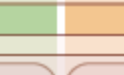
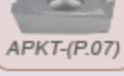
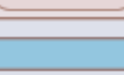
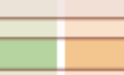
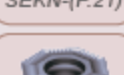
TPKN/R

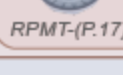
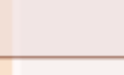
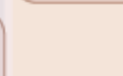
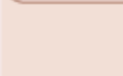
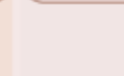
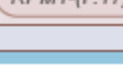
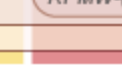
Pg.031

WNMX

Pg.033

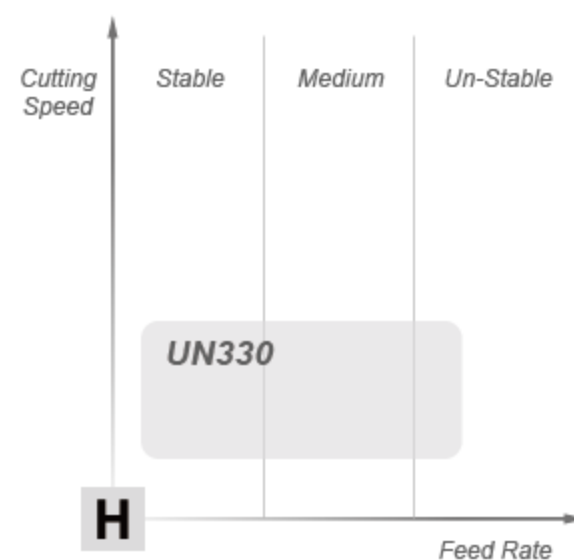
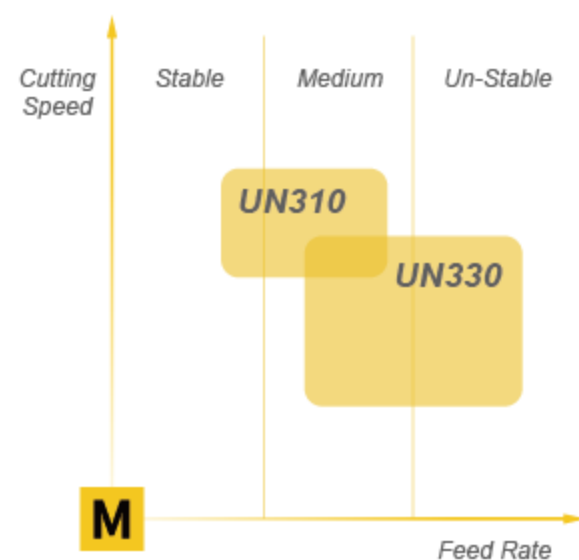
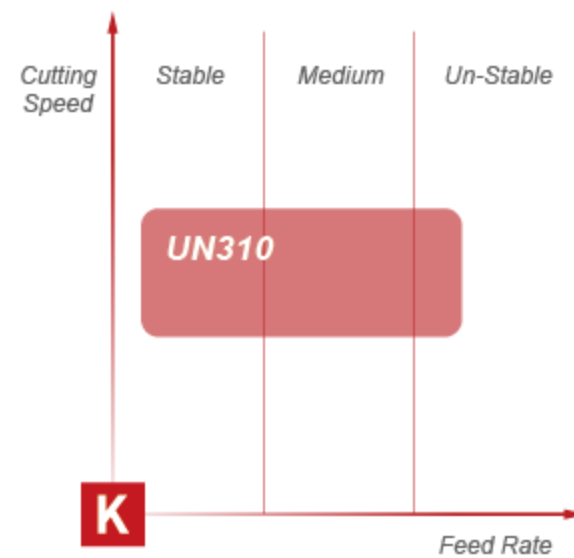
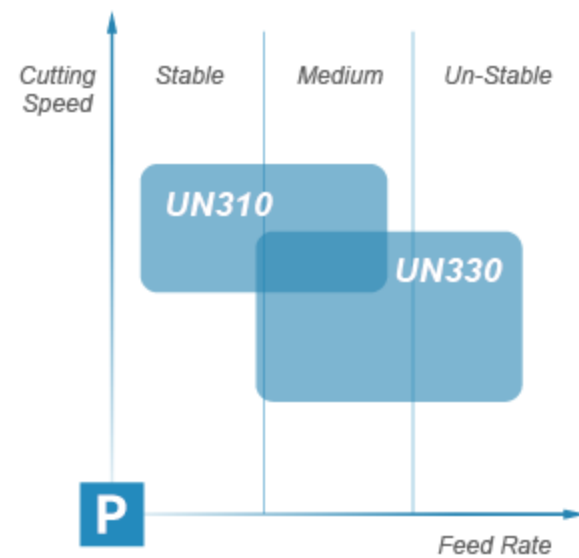
# SELECTION GUIDE

|                                                                                                          |                    | P                                                                                                  | M                                                                                                  | K                                                                                                  | N                                                                                                  | S                                                                                                   | H                                                                                                    |
|----------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                                                                                                          |                    | UN330<br>UN310                                                                                     | UN330                                                                                              | UN330<br>UN310                                                                                     | UN310                                                                                              | UN330                                                                                               | UN330                                                                                                |
| <br>SHOULDER<br>MILLING | Light<br>Machining | <br>APKT10-(P.07) | <br>APKT10-(P.07) | <br>APKT10-(P.07) | <br>APKT10-(P.07) | <br>APKT10-(P.07) | <br>APKT10-(P.07) |
|                                                                                                          |                    | <br>APMT11-(P.09) |                                                                                                    | <br>APMT11-(P.09) |                                                                                                    |                                                                                                     |                                                                                                      |
|                                                                                                          | Heavy<br>Machining | <br>APKT16-(P.07) | <br>APKT10-(P.07) | <br>APKT16-(P.07) | <br>APKT16-(P.07) | <br>APKT16-(P.07) | <br>APKT16-(P.07) |
|                                                                                                          |                    | <br>APMT16-(P.09) |                                                                                                    | <br>APMT16-(P.09) |                                                                                                    |                                                                                                     |                                                                                                      |
|                                                                                                          |                    | <br>SPKN-(P.27)   | <br>SPKR-(P.27)   | <br>SPKN-(P.27)   |                                                                                                    |                                                                                                     |                                                                                                      |
|                                                                                                          |                    | <br>TPKN-(P.31)   | <br>TPKR-(P.31)   | <br>TPKN-(P.31)   |                                                                                                    |                                                                                                     |                                                                                                      |
|                                                                                                          | Heavy<br>Machining | <br>APKT-(P.07)  | <br>APKT-(P.07)  | <br>APKT-(P.07)  | <br>APKT-(P.07)  | <br>APKT-(P.07)  | <br>APKT-(P.07)  |
|                                                                                                          |                    | <br>SPMT-(P.29) | <br>SPMT-(P.29) | <br>SPMT-(P.29) |                                                                                                    |                                                                                                     |                                                                                                      |
|                                                                                                          | Light<br>Machining | <br>SEKT-(P.23) | <br>SEKT-(P.23) | <br>SEKT-(P.23) | <br>SEKT-(P.23) | <br>SEKT-(P.23) | <br>SEKT-(P.23) |
|                                                                                                          |                    | <br>SEKN-(P.21) | <br>SEKR-(P.21) | <br>SEKN-(P.21) |                                                                                                    |                                                                                                     |                                                                                                      |
|                                                                                                          |                    | <br>OFMT-(P.13) | <br>OFMT-(P.13) | <br>OFMT-(P.13) |                                                                                                    |                                                                                                     |                                                                                                      |
|                                                                                                          |                    | <br>SEKT-(P.23) | <br>SEKT-(P.23) | <br>SEKT-(P.23) | <br>SEKT-(P.23) | <br>SEKT-(P.23) | <br>SEKT-(P.23) |
|                                                                                                          |                    | <br>SEKN-(P.21) | <br>SEKR-(P.21) | <br>SEKN-(P.21) |                                                                                                    |                                                                                                     |                                                                                                      |
|                                                                                                          | Heavy<br>Machining | <br>SNMX-(P.25) |                                                                                                    | <br>SNMX-(P.25) |                                                                                                    |                                                                                                     |                                                                                                      |

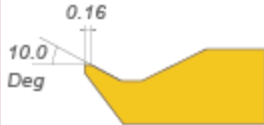
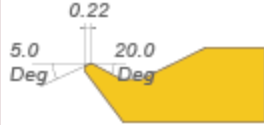
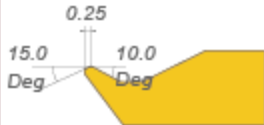
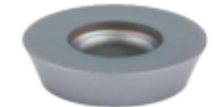
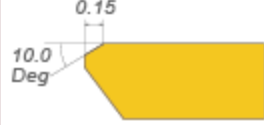
|                                                                                                                |                    | P                                                                                                    | M                                                                                                    | K                                                                                                    | N     | S                                                                                                    | H                                                                                                    |
|----------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                                                                                                                |                    | UN330<br>UN310                                                                                       | UN330                                                                                                | UN330<br>UN310                                                                                       | UN310 | UN330                                                                                                | UN330                                                                                                |
| <br>HIGH<br>FEED<br>MILLING | Light<br>Machining | <br>LNMU-(P.11)   | <br>LNMU-(P.11)   | <br>LNMU-(P.11)   |       |                                                                                                      |                                                                                                      |
|                                                                                                                |                    | <br>WNMX-(P.33)   |                                                                                                      | <br>WNMX-(P.33)   |       |                                                                                                      |                                                                                                      |
|                                                                                                                | Heavy<br>Machining | <br>SDMT-(P.19)   | <br>SDMT-(P.19)   | <br>SDMT-(P.19)   |       |                                                                                                      |                                                                                                      |
|                                                                                                                |                    | <br>WNMX-(P.33)   |                                                                                                      | <br>WNMX-(P.33)   |       |                                                                                                      |                                                                                                      |
|                                                                                                                | Light<br>Machining | <br>RDMT-(P.15)   | <br>RDMT-(P.15)   | <br>RDMW-(P.15)   |       | <br>RDMT-(P.15)   | <br>RDMT-(P.15)   |
|                                                                                                                |                    | <br>RPMT-(P.17)   |                                                                                                      | <br>RPMW-(P.17)   |       |                                                                                                      |                                                                                                      |
|                                                                                                                | Heavy<br>Machining | <br>RDMT-(P.15)  | <br>RDMT-(P.15)  | <br>RDMW-(P.15)  |       | <br>RDMT-(P.15)  | <br>RDMT-(P.15)  |
|                                                                                                                |                    | <br>RPMT-(P.17) |                                                                                                      | <br>RPMW-(P.17) |       |                                                                                                      |                                                                                                      |
|                                                                                                                | Light<br>Machining | <br>RDMT-(P.15) | <br>RDMT-(P.15) | <br>RDMW-(P.15) |       | <br>RDMT-(P.15) | <br>RDMT-(P.15) |
|                                                                                                                |                    | <br>RPMT-(P.17) |                                                                                                      | <br>RPMW-(P.17) |       |                                                                                                      |                                                                                                      |

## GRADES

| GRADE                 | ISO |   |     | Features & Applications                                                            |
|-----------------------|-----|---|-----|------------------------------------------------------------------------------------|
| UN310                 | P05 | - | P15 | For high wear resistance, and Extended tool life                                   |
|                       | M15 | - | M25 | Also For high speed milling                                                        |
|                       | K10 | - | K20 | Stable conditions, low vibrations, and low depth of cut                            |
|                       |     |   |     | In most applications should be used without coolant                                |
| Sub micron PVD coated |     |   |     |                                                                                    |
| UN330                 | P15 | - | P30 | For General Milling machining                                                      |
|                       | M20 | - | M40 | Aplicable for Alloy Steel, Stainless steel, hardened material and Aerospace (HRSA) |
|                       | S20 | - | S35 | Extremely versatile grade for all conditions of cutting                            |
|                       | H10 |   | H20 | In most applications should be used without coolant                                |
| Sub micron PVD Coated |     |   |     |                                                                                    |



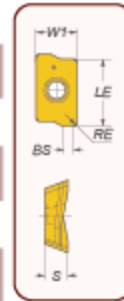
## CHIP BREAKERS

| Chip Breaker name and Geometry | Applications and Features                                                             |                                                                                       |                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PF                             |    |    | <ul style="list-style-type: none"> <li>Sharp chip breaker</li> <li>For finishing operations</li> <li>Also adopted for sticky material and Stainless steel</li> <li>in APKT, "Athens line", with original cutters create true 90 walls</li> </ul>                                                                                |
| PM                             |    |    | <ul style="list-style-type: none"> <li>Semi Finishing chip breaker for General machining</li> <li>First choice for stable machining and light-Mid. cutting pressure</li> <li>Smooth cutting due to positive chip breaker angles</li> <li>in APKT, "Athens line", with original cutters create true 90 walls</li> </ul>          |
| (STD)                          |    |    | <ul style="list-style-type: none"> <li>Mid. cutting conditions - chip breaker for General machining</li> <li>First choice for Un-stable machining with reasonable cutting pressure</li> <li>Smooth cutting due to positive chip breaker angles</li> <li>Is not intended to create 90 deg walls in shoulder machining</li> </ul> |
| PR                             |  |  | <ul style="list-style-type: none"> <li>Roughing. chip breaker mostly used in high-feed machining</li> <li>First choice for very Un-stable machining or for thick casting "skin"</li> <li>Tough and reinforced cutting edge and chip breaker angles</li> </ul>                                                                   |
| (W)                            |  |  | <ul style="list-style-type: none"> <li>Flat top insert design</li> <li>used mostly for high hardness die&amp; Mold applications</li> <li>Also adopted for cast iron machining</li> <li>Tough and reinforced cutting edge</li> </ul>                                                                                             |

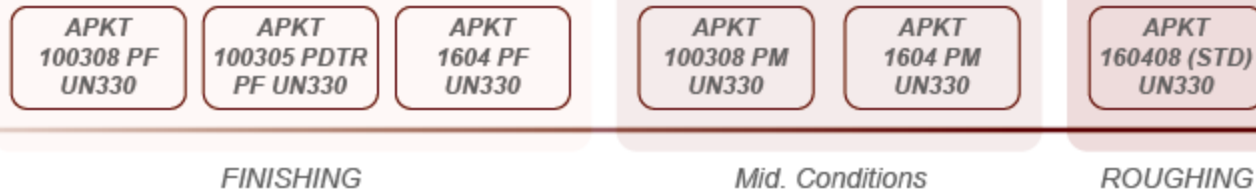


## FAMILY

|            |                     |       | W1   | LE    | RE   | S    | BS   |
|------------|---------------------|-------|------|-------|------|------|------|
| 2100000140 | APKT 100308 PDTR PF | UN330 | 6.72 | 11.05 | 0.80 | 3.52 | 1.00 |
| 2100000100 | APKT 100308 PDTR PM | UN330 | 6.72 | 11.05 | 0.80 | 3.52 | 1.00 |
| 2100000200 | APKT 100305 PDTR PF | UN330 | 6.70 | 10.95 | 0.50 | 3.50 | 0.90 |
| 2100000184 | APKT 1604 PDTR PF   | UN330 | 9.40 | 16.00 | 0.80 | 4.76 | 1.80 |
| 2100000182 | APKT 1604 PDTR PM   | UN330 | 9.40 | 16.00 | 0.80 | 4.76 | 1.80 |
| 2100000102 | APKT 160408 PDTR    | UN330 | 9.52 | 17.00 | 0.80 | 5.30 | 1.60 |



## PRODUCT - LINE UP



## Chip Breakers

## PF

- Sharp Chip-breaker
- for Finishing and sticky material
- **Recommended Feed (Fz) : 0.15 (mm/tooth)**

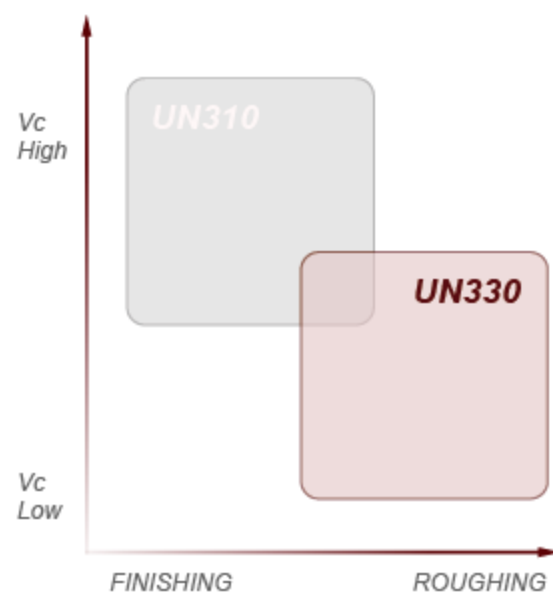
## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

## (STD)

- Mid & Roughing conditions Chip-Breaker
- for General-tough or unstable machining conditions
- **Recommended Feed (Fz) : 0.28 (mm/tooth)**

## GRADES



## UN330

- Sub Micron Substrate & Hyper Pulsed PVD coating.
- General Purpose MILLING Applications.
- Where a good balance of wear resistance and toughness is required.
- First Choice for Milling in all condition.

## Cutting Conditions

## APKT 100308 PDTR PF UN330

| (P)<br>STEEL   | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|----------------|------------------------|------------------|
| Vc 130 - 190   | Vc 150 - 200           | Vc 150 - 220     |
| Fz 0.11 - 0.18 | Fz 0.13 - 0.21         | Fz 0.13 - 0.22   |
| Ap 0.5 - 9.0   | Ap 0.5 - 9.0           | Ap 0.5 - 9.0     |

CUTTER COMPATIBLE Iscar

## APKT 100308 PDTR PM UN330

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 130 - 190   | Vc 150 - 200    | Vc 150 - 220   |
| Fz 0.16 - 0.28 | Fz 0.17 - 0.26  | Fz 0.15 - 0.26 |
| Ap 0.5 - 9.0   | Ap 0.5 - 9.0    | Ap 0.5 - 9.0   |

CUTTER COMPATIBLE Iscar

## APKT 100305 PDTR PF UN330

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 130 - 190   | Vc 150 - 180    | Vc 150 - 220   |
| Fz 0.11 - 0.18 | Fz 0.12 - 0.18  | Fz 0.13 - 0.26 |
| Ap 0.3 - 8.0   | Ap 0.3 - 8.0    | Ap 0.3 - 8.0   |

CUTTER COMPATIBLE Iscar

## APKT 1604 PDTR PF UN330

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 130 - 190   | Vc 120 - 180    | Vc 130 - 220   |
| Fz 0.12 - 0.20 | Fz 0.12 - 0.18  | Fz 0.12 - 0.22 |
| Ap 0.5 - 15.0  | Ap 0.5 - 15.0   | Ap 0.5 - 15.0  |

CUTTER COMPATIBLE KORLOY, ZCC

## APKT 1604 PDTR PM UN330

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 130 - 190   | Vc 150 - 200    | Vc 150 - 220   |
| Fz 0.17 - 0.28 | Fz 0.19 - 0.29  | Fz 0.15 - 0.26 |
| Ap 0.5 - 15.0  | Ap 0.5 - 15.0   | Ap 0.5 - 15.0  |

CUTTER COMPATIBLE KORLOY, ZCC

## APKT 160408 PDTR (STD) UN330

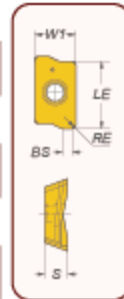
| STEEL          | STAINLESS STEEL | CAST IRON     |
|----------------|-----------------|---------------|
| Vc 130 - 190   | Vc 150 - 200    | Vc 150 - 220  |
| Fz 0.22 - 0.35 | Fz 0.24 - 0.35  | Fz 0.2 - 0.32 |
| Ap 0.5 - 15.0  | Ap 0.5 - 15.0   | Ap 0.5 - 15.0 |

CUTTER COMPATIBLE Iscar



## FAMILY

|            |                      |       | W1   | LE    | RE   | S    | BS   |
|------------|----------------------|-------|------|-------|------|------|------|
| 2100000104 | APMT 1135 PDTR PF    | UN330 | 6.21 | 11.27 | 0.80 | 3.52 | 1.00 |
| 2100000160 | APMT 1135 PDTR PM    | UN330 | 6.15 | 11.29 | 0.80 | 3.52 | 1.00 |
| 2100000188 | APMT 1135 PDTR PM    | UN310 | 6.15 | 11.29 | 0.80 | 3.52 | 1.00 |
| 2100000186 | APMT 1604 PDTR PF    | UN330 | 9.30 | 17.30 | 0.80 | 4.76 | 1.60 |
| 2100000106 | APMT 1604 PDTR (STD) | UN330 | 9.33 | 17.25 | 0.80 | 4.76 | 1.60 |
| 2100000190 | APMT 1604 PDTR (STD) | UN310 | 9.33 | 17.25 | 0.80 | 4.76 | 1.60 |



## PRODUCT - LINE UP

APMT  
1135 PF  
UN330APMT  
1604 PF  
UN330APMT  
1135 PM  
UN310APMT  
1135 PM  
UN330APMT  
1604 (STD)  
UN310APMT  
1604 (STD)  
UN330

FINISHING

Mid. Conditions

ROUGHING

## Chip Breakers

## PF

- Sharp Chip-breaker
- for Finishing and sticky material
- **Recommended Feed (Fz) : 0.15 (mm/tooth)**

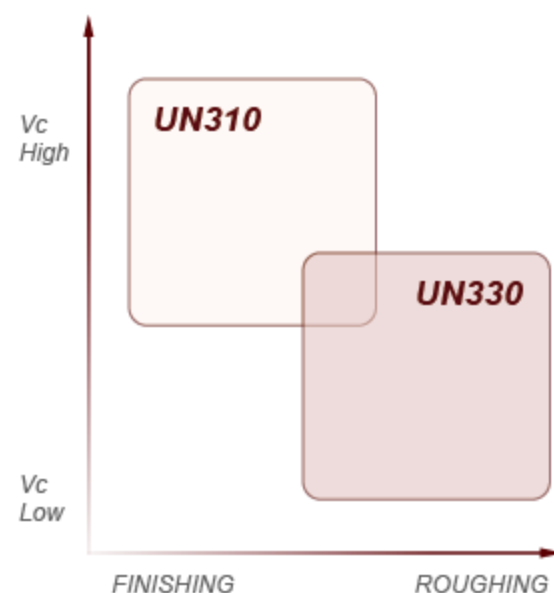
## (STD)

- Mid & Roughing conditions Chip-Breaker
- for General-tough or unstable machining conditions
- **Recommended Feed (Fz) : 0.28 (mm/tooth)**

## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

## GRADES



## UN310

- Sub Micron Substrate & Hyper Pulsed PVD coating
- Suitable for Medium to High Cutting Speed in MILLING Application with a focus on wear resistance
- An excellent option for Milling in stable condition.

## UN330

- Sub Micron Substrate & Hyper Pulsed PVD coating
- General Purpose MILLING Applications
- Where a good balance of wear resistance and toughness is required.
- First Choice for Milling in all condition

## Cutting Conditions

## APMT 1135 PDTR PF UN330

(P)  
STEEL

|    |             |
|----|-------------|
| Vc | 130 - 190   |
| Fz | 0.16 - 0.24 |
| Ap | 0.5 - 10.0  |

CUTTER COMPATIBLE

(M)  
STAINLESS STEEL

|    |             |
|----|-------------|
| Vc | 150 - 200   |
| Fz | 0.16 - 0.24 |
| Ap | 0.5 - 10.0  |

Mistubishi

(K)  
CAST IRON

|    |             |
|----|-------------|
| Vc | 150 - 220   |
| Fz | 0.16 - 0.24 |
| Ap | 0.5 - 10.0  |

## APMT 1135 PDTR PM UN330



## STEEL

|    |             |
|----|-------------|
| Vc | 130 - 190   |
| Fz | 0.22 - 0.28 |
| Ap | 0.5 - 10.0  |

CUTTER COMPATIBLE

## STAINLESS STEEL

|    |             |
|----|-------------|
| Vc | 150 - 200   |
| Fz | 0.24 - 0.30 |
| Ap | 0.5 - 10.0  |

Mistubishi

## CAST IRON

|    |             |
|----|-------------|
| Vc | 150 - 220   |
| Fz | 0.20 - 0.28 |
| Ap | 0.5 - 10.0  |

## APMT 1135 PDTR PM UN310

## STEEL

|    |             |
|----|-------------|
| Vc | 130 - 190   |
| Fz | 0.22 - 0.28 |
| Ap | 0.5 - 10.0  |

CUTTER COMPATIBLE

## STAINLESS STEEL

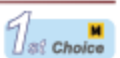
|    |             |
|----|-------------|
| Vc | 130 - 180   |
| Fz | 0.24 - 0.30 |
| Ap | 0.5 - 10.0  |

Mistubishi

## CAST IRON

|    |             |
|----|-------------|
| Vc | 130 - 220   |
| Fz | 0.20 - 0.28 |
| Ap | 0.5 - 10.0  |

## APMT 1604 PDTR PF UN330



## STEEL

|    |             |
|----|-------------|
| Vc | 130 - 190   |
| Fz | 0.10 - 0.22 |
| Ap | 0.5 - 15.0  |

CUTTER COMPATIBLE

## STAINLESS STEEL

|    |             |
|----|-------------|
| Vc | 150 - 200   |
| Fz | 0.12 - 0.20 |
| Ap | 0.5 - 15.0  |

Mistubishi

## CAST IRON

|    |             |
|----|-------------|
| Vc | 150 - 220   |
| Fz | 0.08 - 0.22 |
| Ap | 0.5 - 15.0  |

## APMT 1604 PDTR (STD) UN330



## STEEL

|    |             |
|----|-------------|
| Vc | 130 - 190   |
| Fz | 0.22 - 0.32 |
| Ap | 0.5 - 15.0  |

CUTTER COMPATIBLE

## STAINLESS STEEL

|    |             |
|----|-------------|
| Vc | 150 - 200   |
| Fz | 0.24 - 0.32 |
| Ap | 0.5 - 15.0  |

Mistubishi

## CAST IRON

|    |             |
|----|-------------|
| Vc | 150 - 220   |
| Fz | 0.20 - 0.32 |
| Ap | 0.5 - 15.0  |

## APMT 1604 PDTR (STD) UN310

## STEEL

|    |             |
|----|-------------|
| Vc | 130 - 190   |
| Fz | 0.22 - 0.32 |
| Ap | 0.3 - 15.0  |

CUTTER COMPATIBLE

## STAINLESS STEEL

|    |             |
|----|-------------|
| Vc | 150 - 200   |
| Fz | 0.24 - 0.32 |
| Ap | 0.3 - 15.0  |

Mistubishi

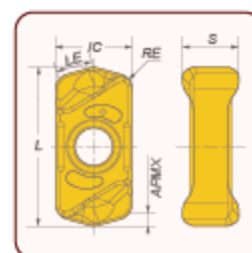
## CAST IRON

|    |             |
|----|-------------|
| Vc | 150 - 220   |
| Fz | 0.20 - 0.32 |
| Ap | 0.3 - 15.0  |



## FAMILY

|            |           |       | L     | IC   | RE   | S    |
|------------|-----------|-------|-------|------|------|------|
| 2100000164 | LNMU 0303 | UN330 | 11.60 | 6.00 | 1.20 | 4.30 |



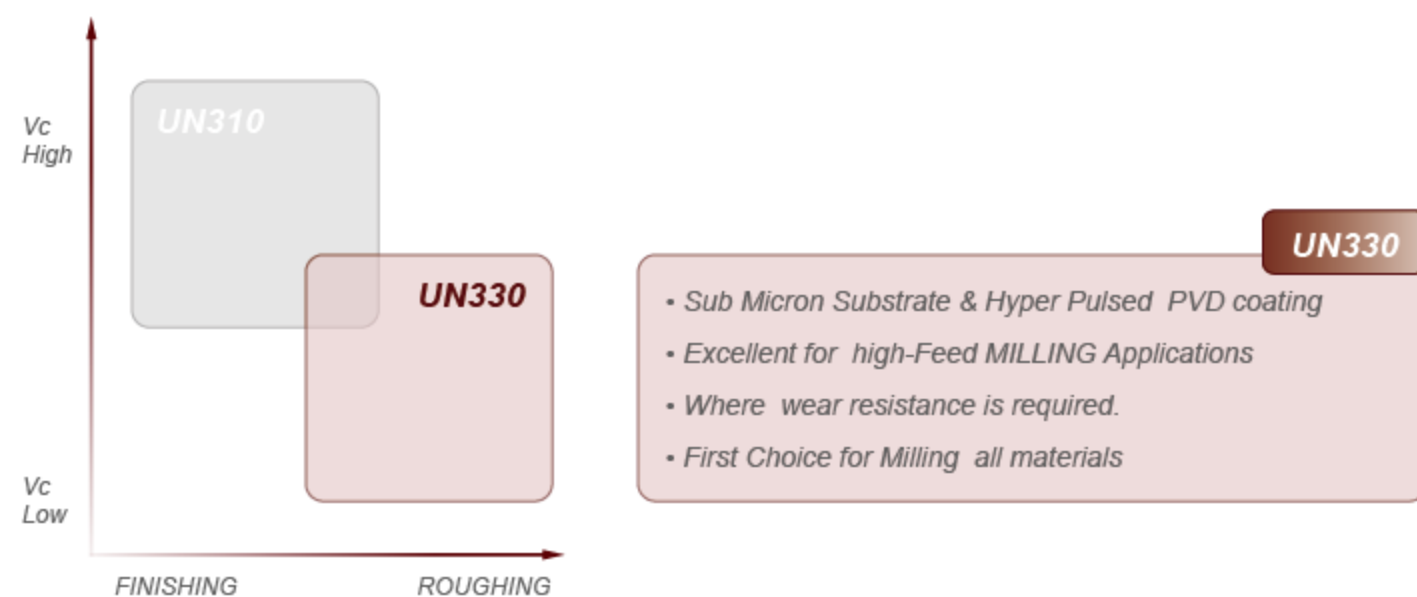
## PRODUCT - LINE UP



## Chip Breakers

- Sharp Chip-breaker
- for Finishing and sticky material
- **Recommended Feed (Fz) : 0.15 (mm/tooth)**

## GRADES



## Cutting Conditions

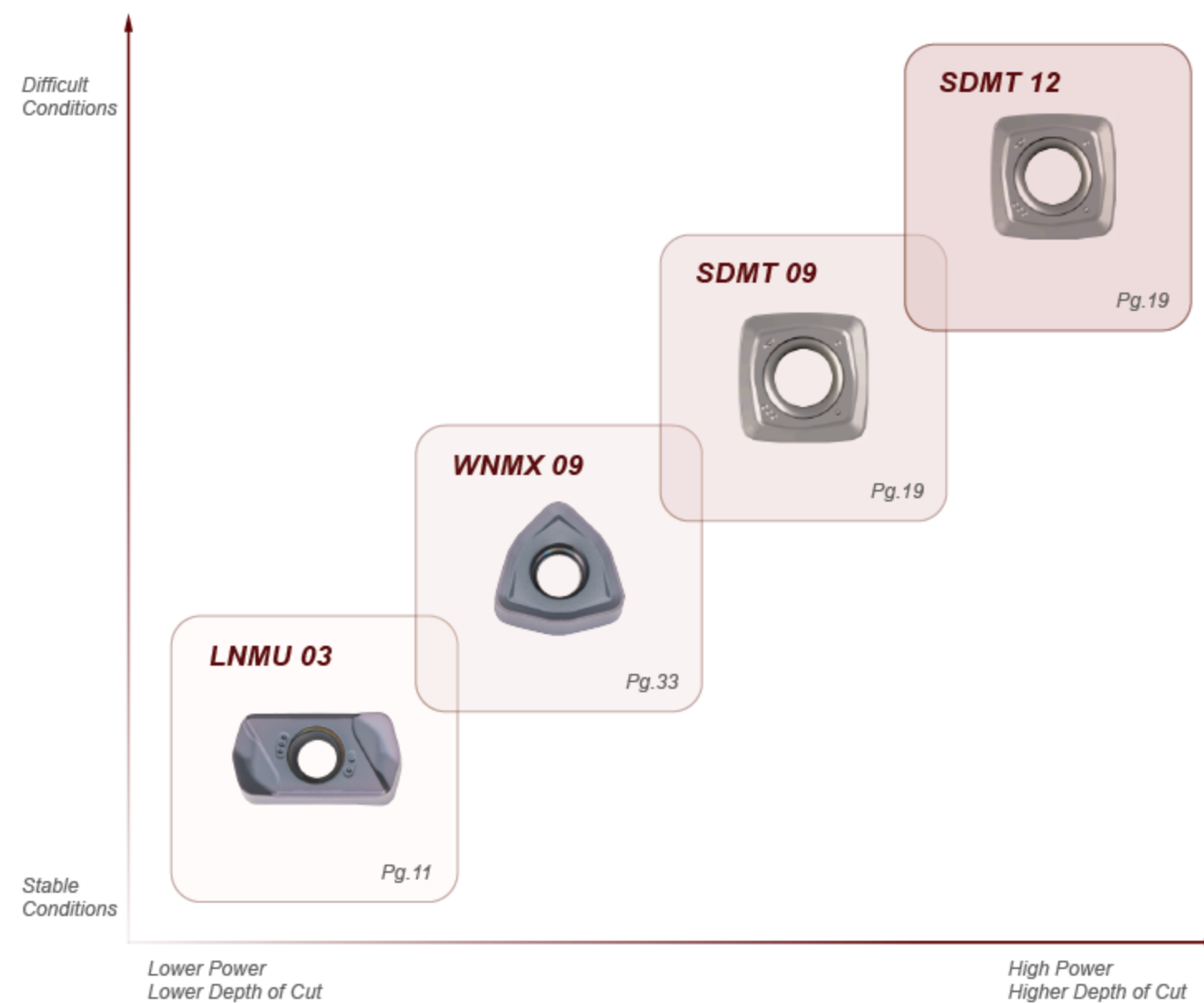
### LNMU 0303 UN330



|    | (P)<br>STEEL | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|----|--------------|------------------------|------------------|
| Vc | 100 - 200    | 120 - 180              | 100 - 220        |
| Fz | 0.15 - 0.70  | 0.20 - 0.70            | 0.20 - 0.80      |
| Ap | 0.2 - 1.0    | 0.2 - 0.8              | 0.2 - 1.0        |

CUTTER COMPATIBLE      TUNGALOY

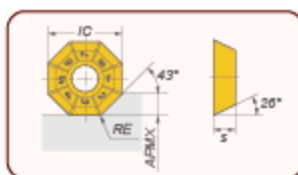
## High Feed Line – Over View





## FAMILY

|            |              |       | IC   | RE   | S    |
|------------|--------------|-------|------|------|------|
| 2100000206 | OFMT 05T3 TN | UN330 | 5.25 | 0.80 | 3.96 |



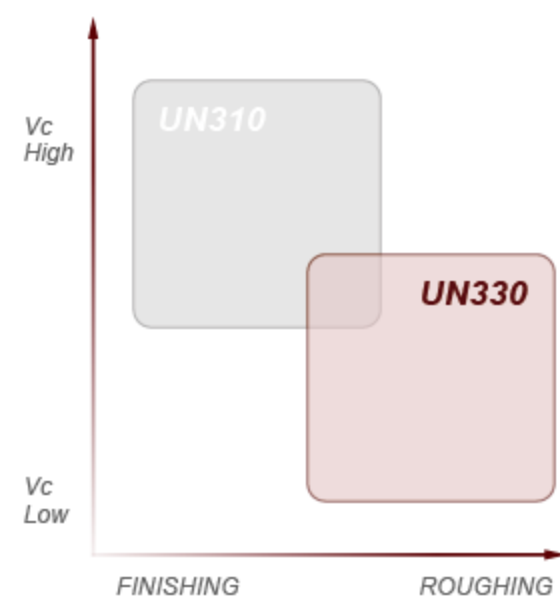
## PRODUCT - LINE UP



## Chip Breakers

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.24** (mm/tooth)

## GRADES



- Sub Micron Substrate & Hyper Pulsed PVD coating
- Excellent for high-Feed MILLING Applications
- Where wear resistance is required.
- First Choice for Milling all materials

UN330

## Cutting Conditions

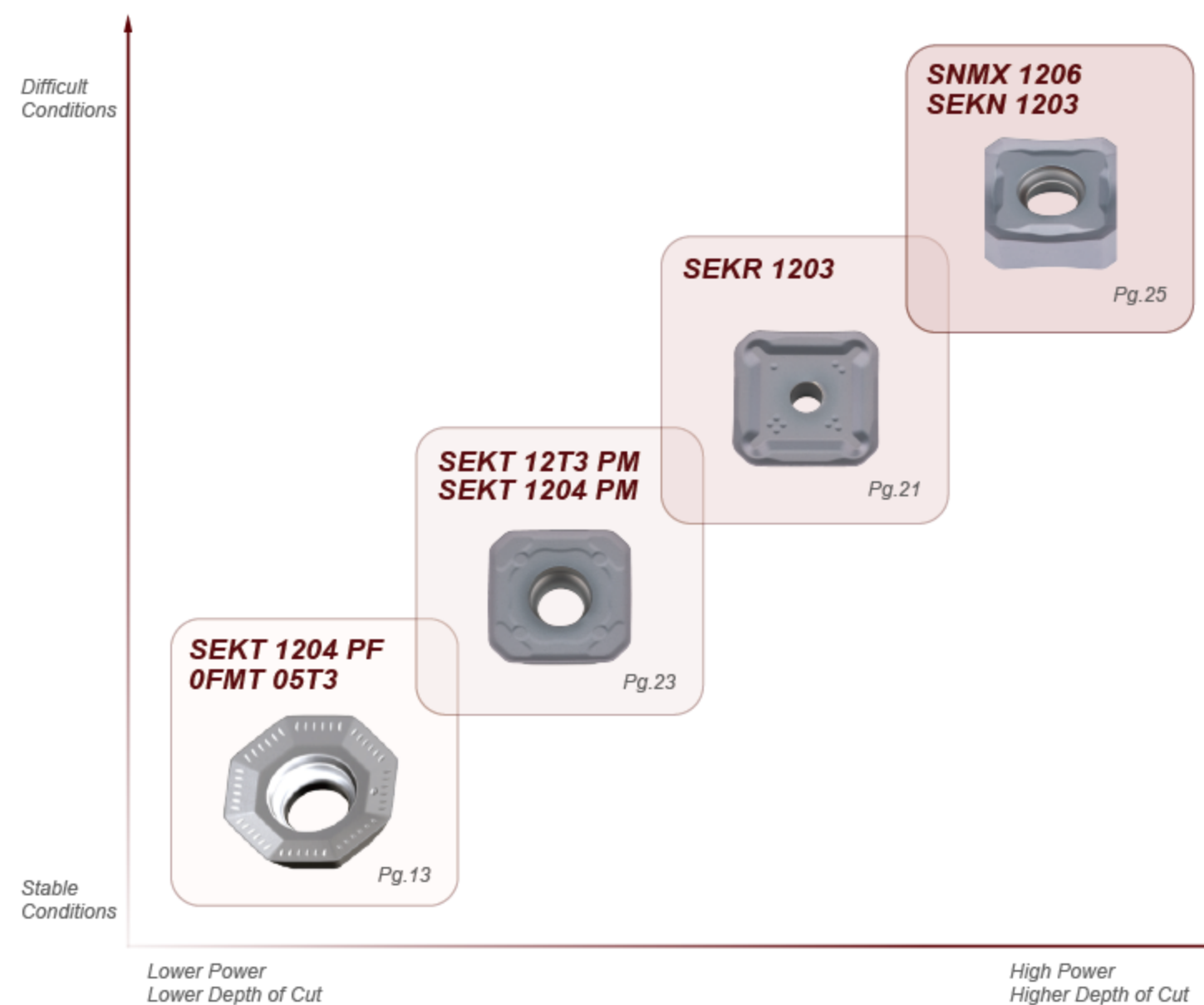
OFMT 05T308 TR UN330



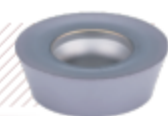
| (P)<br>STEEL   | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|----------------|------------------------|------------------|
| Vc 130 - 190   | Vc 150 - 180           | Vc 130 - 220     |
| Fz 0.14 - 0.28 | Fz 0.16 - 0.28         | Fz 0.14 - 0.28   |
| Ap 0.5 - 6.0   | Ap 0.5 - 6.0           | Ap 0.5 - 6.0     |

CUTTER COMPATIBLE WALTER, ISCAR

## 45 Degree Machining - Over View

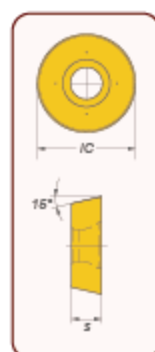


# RDMT & RDMW

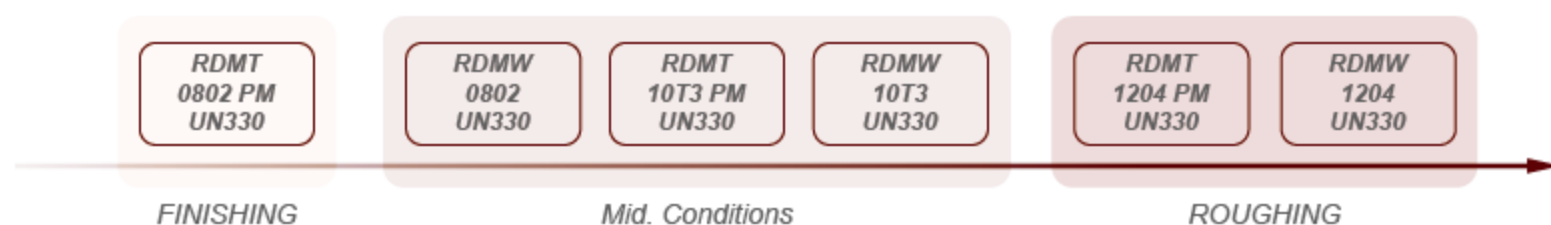


## FAMILY

|            |                 |       | IC    | S    |
|------------|-----------------|-------|-------|------|
| 2100000210 | RDMT 0802 M0 PM | UN330 | 8.00  | 2.38 |
| 2100000212 | RDMW 0802 M0    | UN330 | 8.00  | 2.38 |
| 2100000114 | RDMT 10T3 M0 PM | UN330 | 10.00 | 3.97 |
| 2100000176 | RDMW 10T3 M0    | UN330 | 10.00 | 3.97 |
| 2100000116 | RDMT 1204 M0 PM | UN330 | 12.00 | 4.76 |
| 2100000170 | RDMW 1204 M0    | UN330 | 12.00 | 4.76 |



## PRODUCT - LINE UP



## Chip Breakers

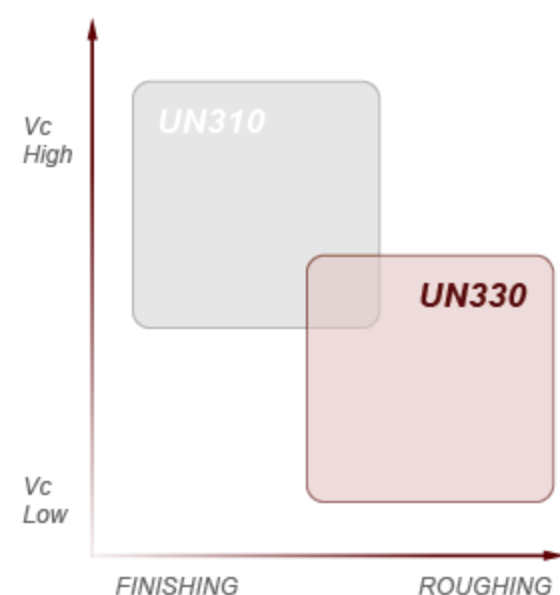
### PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

### (W)

- Flat top - no chip breaker
- for General-tough or for hardened material
- **Recommended Feed (Fz) : 0.28 (mm/tooth)**

## GRADES



### UN330

- Sub Micron Substrate & Hyper Pulsed PVD coating
- General Purpose MILLING Applications
- Where a good balance of wear resistance and toughness is required.
- First Choice for Milling in all condition

## Cutting Conditions

### RDMT 0802 M0 PM UN330

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.15 - 0.40<br>Ap 0.5 - 2.0 | Vc 150 - 200<br>Fz 0.12 - 0.40<br>Ap 0.5 - 2.0 | Vc 150 - 220<br>Fz 0.18 - 0.58<br>Ap 0.5 - 2.0 |
| CUTTER COMPATIBLE                              | WALTER                                         |                                                |

### RDMW 0802 M0 UN330

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 150 - 220<br>Fz 0.18 - 0.58<br>Ap 0.5 - 2.0 |                 | Vc 150 - 220<br>Fz 0.18 - 0.58<br>Ap 0.5 - 2.0 |
| CUTTER COMPATIBLE                              | WALTER          |                                                |

### RDMT 10T3 M0 PM UN330

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.15 - 0.44<br>Ap 0.5 - 2.5 | Vc 150 - 200<br>Fz 0.15 - 0.50<br>Ap 0.5 - 2.5 | Vc 150 - 220<br>Fz 0.18 - 0.64<br>Ap 0.5 - 2.5 |
| CUTTER COMPATIBLE                              | WALTER                                         |                                                |

### RDMW 10T3 M0 UN330

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 150 - 220<br>Fz 0.18 - 0.64<br>Ap 0.5 - 2.5 |                 | Vc 150 - 220<br>Fz 0.18 - 0.64<br>Ap 0.5 - 2.5 |
| CUTTER COMPATIBLE                              | WALTER          |                                                |

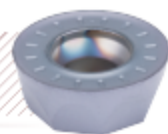
### RDMT 1204 M0 PM UN330

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.21 - 0.51<br>Ap 0.5 - 3.0 | Vc 150 - 200<br>Fz 0.21 - 0.58<br>Ap 0.5 - 3.0 | Vc 150 - 220<br>Fz 0.50 - 0.74<br>Ap 0.5 - 3.0 |
| CUTTER COMPATIBLE                              | WALTER                                         |                                                |

### RDMW 1204 M0 UN330

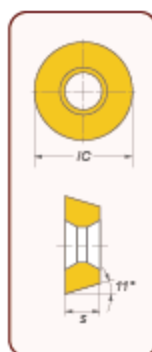
| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 150 - 220<br>Fz 0.25 - 0.74<br>Ap 0.5 - 3.0 |                 | Vc 150 - 220<br>Fz 0.25 - 0.74<br>Ap 0.5 - 3.0 |
| CUTTER COMPATIBLE                              | WALTER          |                                                |





## FAMILY

|            |                 |       | IC    | S    |
|------------|-----------------|-------|-------|------|
| 2100000142 | RPMT 08T2 M0 PF | UN330 | 8.00  | 2.76 |
| 2100000192 | RPMT 10T3 M0 PM | UN310 | 10.00 | 3.97 |
| 2100000118 | RPMT 10T3 M0 PM | UN330 | 10.00 | 3.97 |
| 2100000172 | RPMW 10T3 M0    | UN330 | 10.00 | 3.97 |
| 2100000194 | RPMT 1204 M0 PM | UN310 | 12.00 | 4.76 |
| 2100000120 | RPMT 1204 M0 PM | UN330 | 12.00 | 4.76 |
| 2100000144 | RPMW 1204 M0    | UN330 | 12.04 | 4.76 |



## PRODUCT - LINE UP

RPMT  
08T2 PF  
UN330

RPMT  
10T3 PM  
UN310

RPMT  
10T3 PM  
UN330

RPMT  
1204 PM  
UN310

RPMW  
10T3  
UN330

RPMT  
1204 PM  
UN330

RPMW  
1204  
UN330

FINISHING

Mid. Conditions

ROUGHING

## Chip Breakers

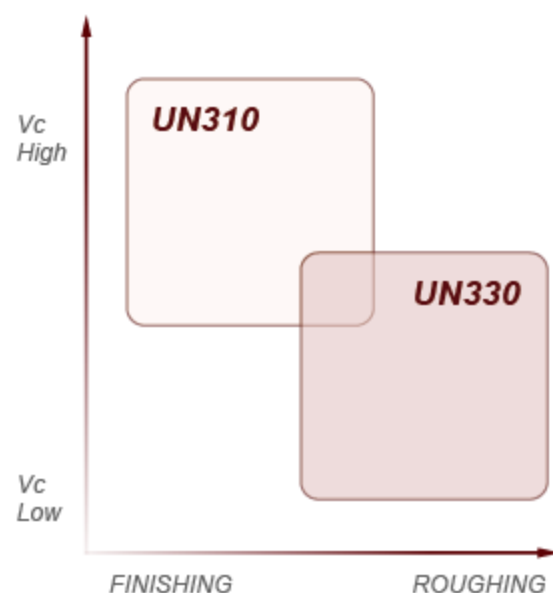
### PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

### (W)

- Flat top - no chip breaker
- for General-tough or for hardened material
- **Recommended Feed (Fz) : 0.28 (mm/tooth)**

## GRADES



UN310

- Sub Micron Substrate & Hyper Pulsed PVD coating
- Suitable for Medium to High Cutting Speed in MILLING Application with a focus on wear resistance
- An excellent option for Milling under stable condition which are not too aggressive.

UN330

- Sub Micron Substrate & Hyper Pulsed PVD coating
- General Purpose MILLING Application where a good balance of wear resistance and toughness is required.
- First Choice for Milling in all condition

## Cutting Conditions

### RPMT 08T2 M0 PF UN330

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.12 - 0.38<br>Ap 0.5 - 2.0 | Vc 150 - 200<br>Fz 0.12 - 0.38<br>Ap 0.5 - 2.0 | Vc 150 - 220<br>Fz 0.10 - 0.45<br>Ap 0.5 - 2.0 |
| CUTTER COMPATIBLE                              | MITSUBISHI                                     |                                                |

### RPMT 10T3 M0 PM UN310

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.15 - 0.44<br>Ap 0.5 - 2.5 | Vc 150 - 200<br>Fz 0.15 - 0.50<br>Ap 0.5 - 2.0 | Vc 150 - 220<br>Fz 0.18 - 0.64<br>Ap 0.5 - 2.0 |
| CUTTER COMPATIBLE                              | MITSUBISHI                                     |                                                |

### RPMT 10T3 M0 PM UN330

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.15 - 0.44<br>Ap 0.5 - 2.0 | Vc 150 - 200<br>Fz 0.15 - 0.50<br>Ap 0.5 - 2.0 | Vc 150 - 220<br>Fz 0.18 - 0.64<br>Ap 0.5 - 2.0 |
| CUTTER COMPATIBLE                              | MITSUBISHI                                     |                                                |

### RPMW 10T3 M0 UN330

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 150 - 220<br>Fz 0.18 - 0.72<br>Ap 0.5 - 2.0 |                 | Vc 150 - 220<br>Fz 0.18 - 0.72<br>Ap 0.5 - 2.0 |
| CUTTER COMPATIBLE                              | MITSUBISHI      |                                                |

### RPMT 1204 M0 PM UN310

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 150 - 190<br>Fz 0.21 - 0.51<br>Ap 0.5 - 3.0 | Vc 150 - 200<br>Fz 0.21 - 0.58<br>Ap 0.5 - 3.0 | Vc 150 - 220<br>Fz 0.25 - 0.74<br>Ap 0.5 - 3.0 |
| CUTTER COMPATIBLE                              | MITSUBISHI                                     |                                                |

### RPMT 1204 M0 PM UN330

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.21 - 0.51<br>Ap 0.5 - 3.0 | Vc 150 - 200<br>Fz 0.21 - 0.58<br>Ap 0.5 - 3.0 | Vc 150 - 220<br>Fz 0.25 - 0.74<br>Ap 0.5 - 3.0 |
| CUTTER COMPATIBLE                              | MITSUBISHI                                     |                                                |

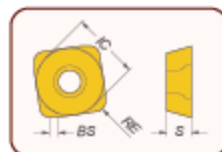
### RPMW 1204 M0 UN330

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 150 - 220<br>Fz 0.25 - 0.82<br>Ap 0.5 - 3.0 |                 | Vc 150 - 220<br>Fz 0.25 - 0.82<br>Ap 0.5 - 3.0 |
| CUTTER COMPATIBLE                              | MITSUBISHI      |                                                |

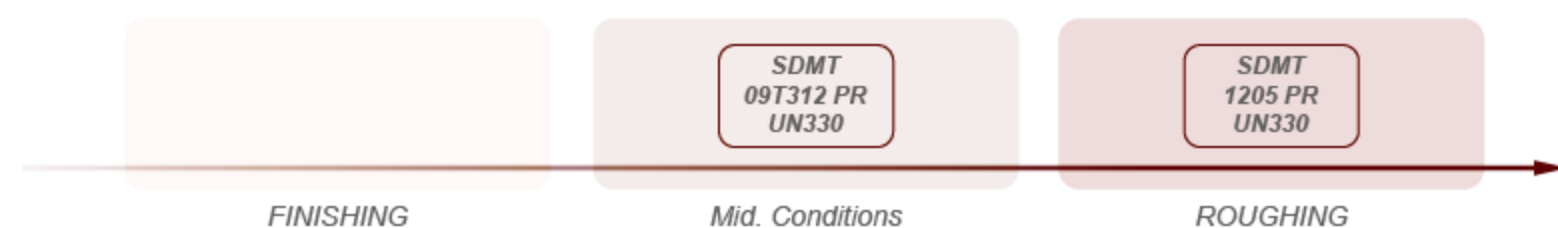


## FAMILY

|            |                |       | IC    | RE   | S    |
|------------|----------------|-------|-------|------|------|
| 2100000132 | SDMT 09T312 PR | UN330 | 9.53  | 1.20 | 3.97 |
| 2100000134 | SDMT 1205 PR   | UN330 | 12.70 | 1.20 | 5.56 |



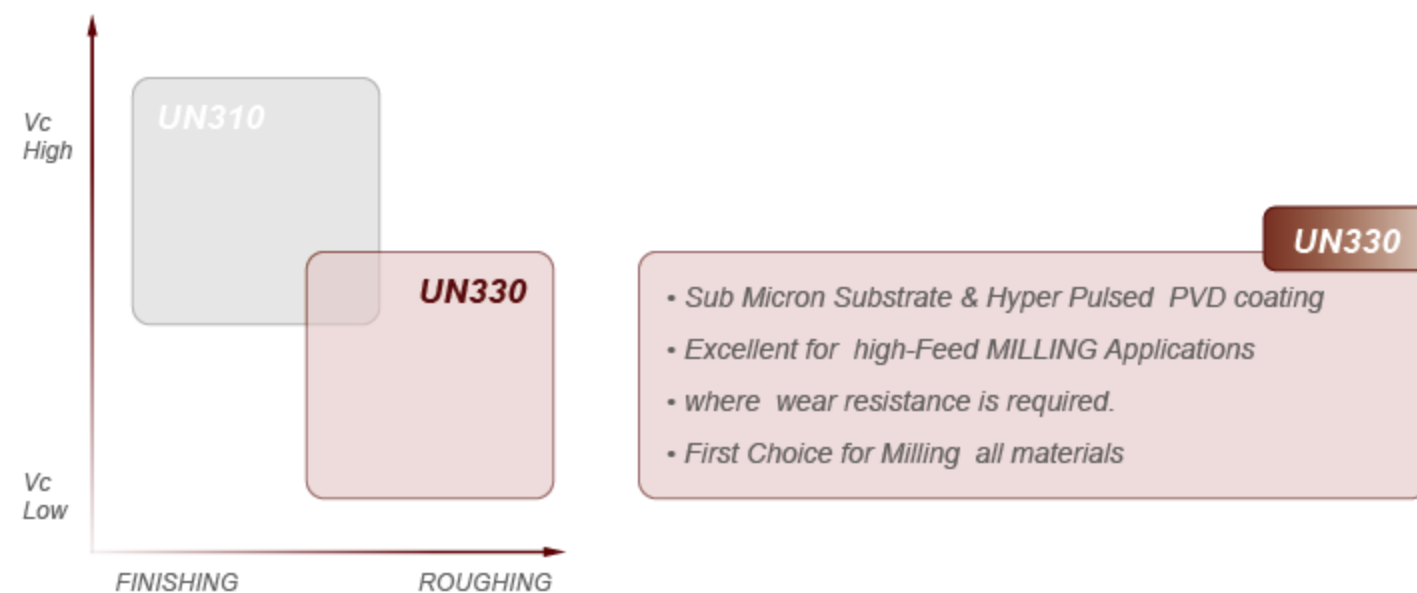
## PRODUCT - LINE UP



## Chip Breakers

- Flat Top chip breaker
- for For aggressive high feed and for hardened material
- **Recommended Feed (Fz) : 0.80** (mm/tooth)

## GRADES



## Cutting Conditions

## SDMT 09T312 PR UN330



| (P)<br>STEEL   | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|----------------|------------------------|------------------|
| Vc 100 - 200   | Vc 120 - 180           | Vc 100 - 220     |
| Fz 0.50 - 1.20 | Fz 0.50 - 1.20         | Fz 0.50 - 1.20   |
| Ap 0.5 - 3.0   | Ap 0.8 - 2.4           | Ap 0.50 - 3.0    |

CUTTER COMPATIBLE

MITSUBISHI, HITACHI

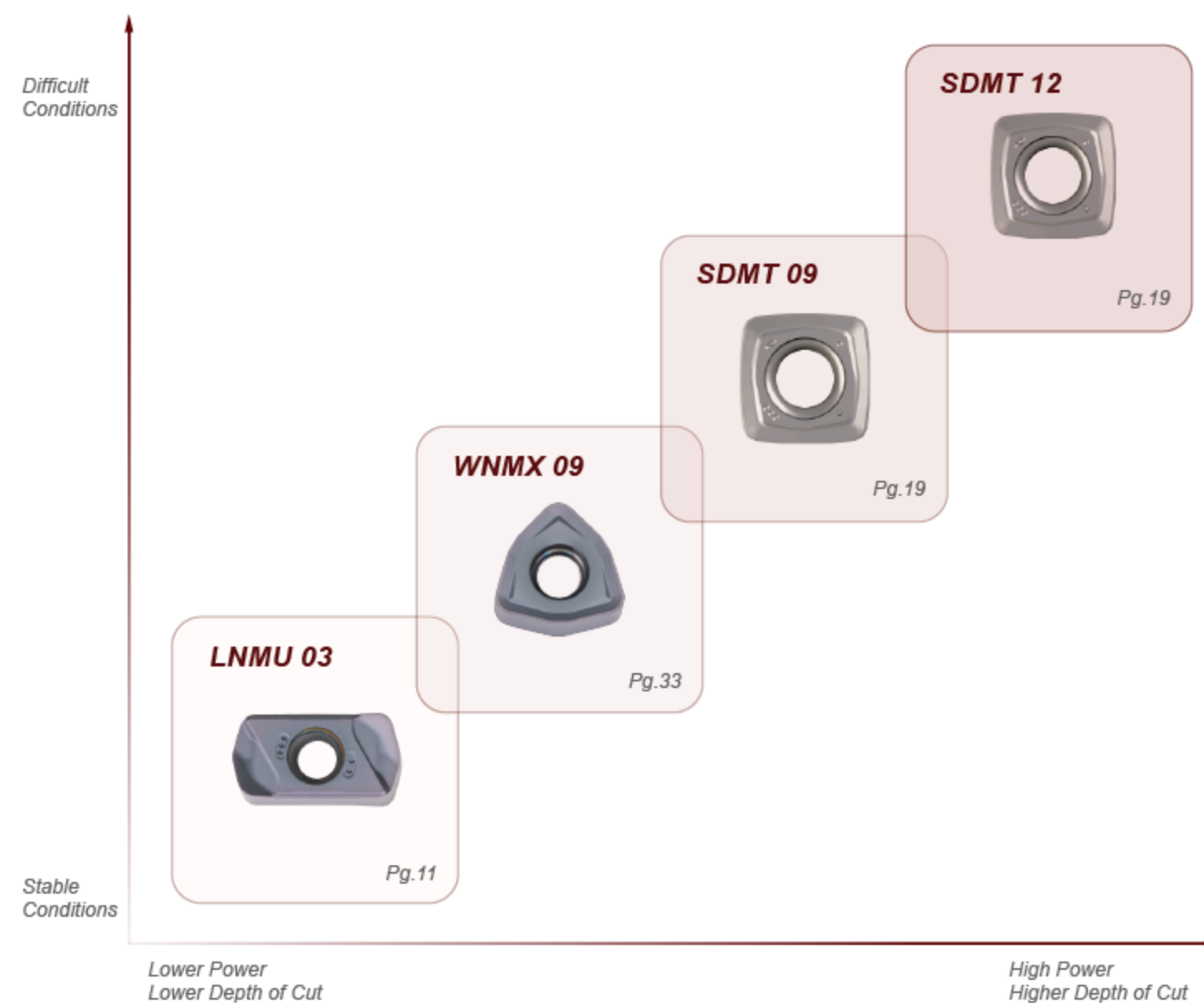
## SDMT 1205 PR UN330

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 100 - 200   | Vc 120 - 180    | Vc 100 - 200   |
| Fz 0.70 - 1.50 | Fz 0.70 - 1.50  | Fz 0.70 - 1.50 |
| Ap 0.5 - 3.0   | Ap 0.8 - 2.4    | Ap 0.5 - 3.0   |

CUTTER COMPATIBLE

MITSUBISHI, HITACHI

## High Feed Line – Over view

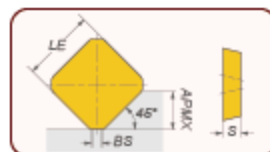


# SEKN & SEKR

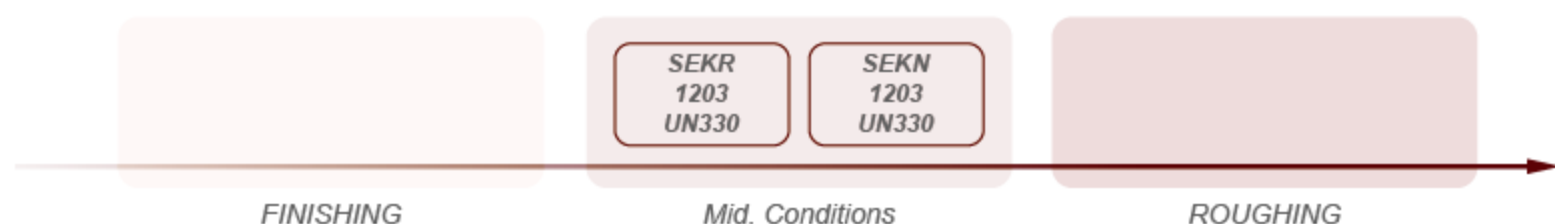


## FAMILY

|            |                |       | LE    | RE   | S    | BS  |
|------------|----------------|-------|-------|------|------|-----|
| 2100000150 | SEKN 1203 AFTN | UN330 | 12.70 | 1.00 | 3.18 | 1.1 |
| 2100000154 | SEKR 1203 AFTN | UN330 | 12.70 | 1.00 | 3.18 | 1.1 |



## PRODUCT - LINE UP



## Chip Breakers

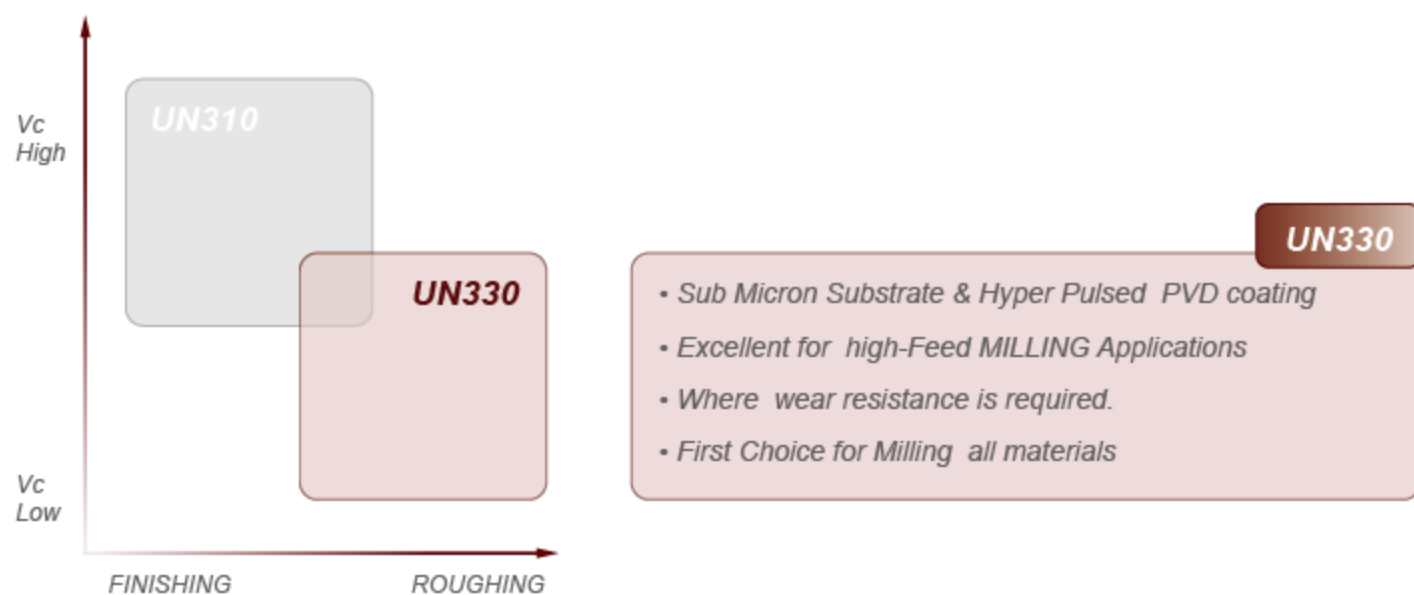
### (R)

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

### (N)

- Mid. conditions - flat top
- for General-tough or unstable machining conditions
- **Recommended Feed (Fz) : 0.25 (mm/tooth)**

## GRADES



## Cutting Conditions

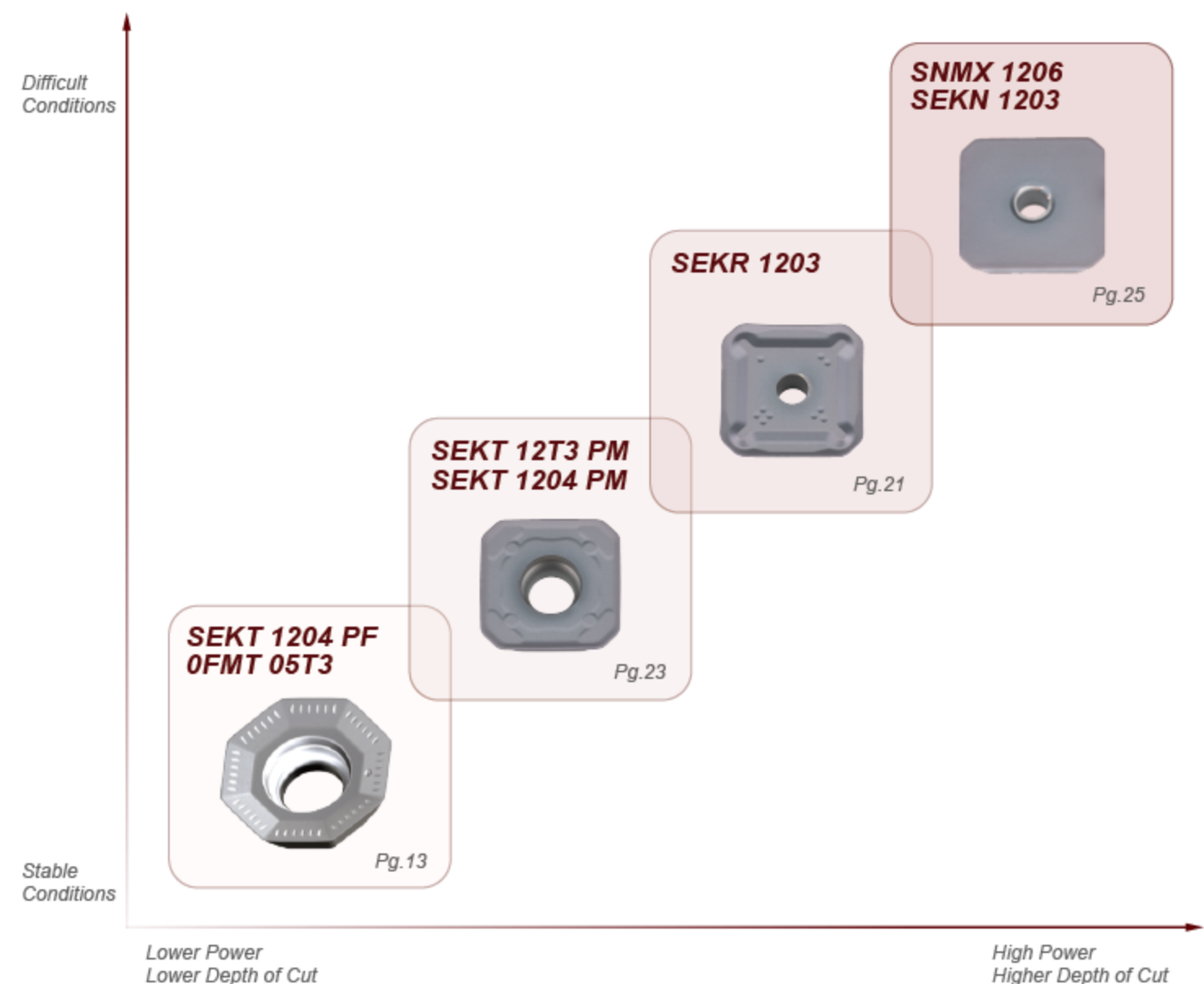
### SEKN 1203 AFTN UN330

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.15 - 0.32<br>Ap 0.5 - 7.0 |                        | Vc 150 - 220<br>Fz 0.15 - 0.46<br>Ap 0.5 - 7.0 |
| CUTTER COMPATIBLE                              | ISO Standard           |                                                |

### SEKR 1203 AFTN UN330

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.15 - 0.32<br>Ap 0.5 - 7.0 | Vc 150 - 200<br>Fz 0.15 - 0.32<br>Ap 0.5 - 7.0 | Vc 150 - 220<br>Fz 0.18 - 0.46<br>Ap 0.5 - 7.0 |
| CUTTER COMPATIBLE                              | ISO Standard                                   |                                                |

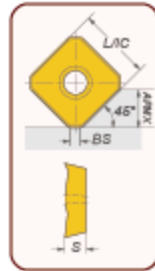
## 45Deg machining – Over view



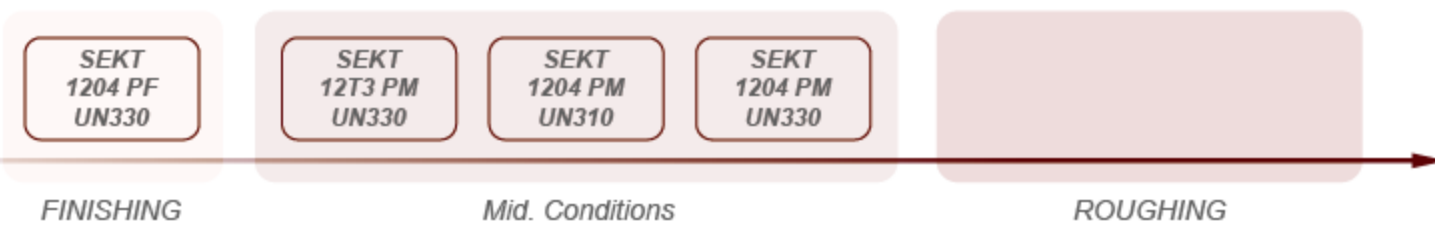


## FAMILY

|            |                   |       | IC    | RE   | S    | BS   |
|------------|-------------------|-------|-------|------|------|------|
| 2100000126 | SEKT 1204 AFTN PF | UN330 | 12.70 | 1.00 | 4.85 | 1.00 |
| 2100000162 | SEKT 1204 AFTN PM | UN330 | 12.70 | 1.00 | 4.85 | 1.20 |
| 2100000196 | SEKT 1204 AFTN PM | UN310 | 12.70 | 1.00 | 4.85 | 1.20 |
| 2100000128 | SEKT 12T3 AGSN PM | UN330 | 13.40 | 0.90 | 3.97 | 1.20 |



## PRODUCT - LINE UP



## Chip Breakers

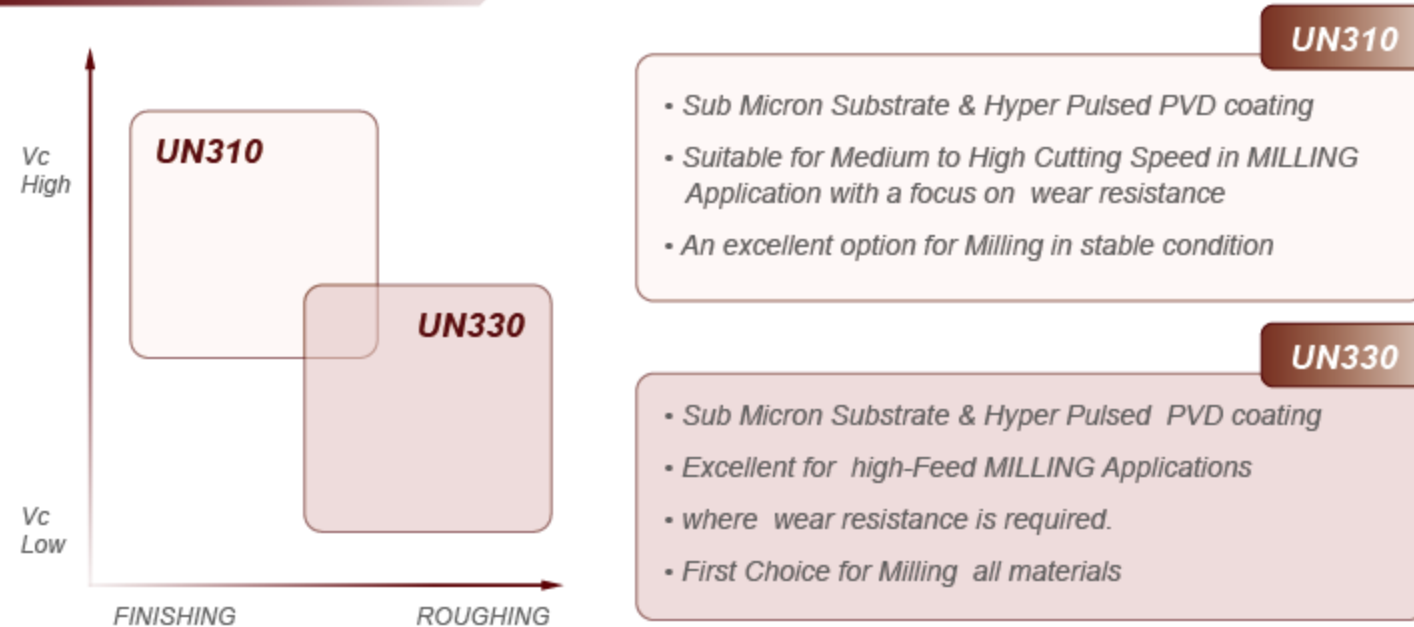
## PF

- Sharp Chip-breaker
- for Finishing and sticky material
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.28 (mm/tooth)**

## GRADES



## Cutting Conditions

## SEKT 1204 AFTN PF UN330

| (P)<br>STEEL   | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|----------------|------------------------|------------------|
| Vc 130 - 190   | Vc 150 - 180           | Vc 130 - 220     |
| Fz 0.14 - 0.28 | Fz 0.16 - 0.28         | Fz 0.14 - 0.28   |
| Ap 0.5 - 6.0   | Ap 0.5 - 6.0           | Ap 0.5 - 6.0     |

CUTTER COMPATIBLE

SECO, ISCAR

## SEKT 1204 AFTN PM UN330

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 130 - 190   | Vc 150 - 200    | Vc 150 - 220   |
| Fz 0.18 - 0.38 | Fz 0.20 - 0.38  | Fz 0.16 - 0.46 |
| Ap 0.5 - 6.0   | Ap 0.5 - 6.0    | Ap 0.5 - 6.0   |

CUTTER COMPATIBLE

SECO, ISCAR

## SEKT 1204 AFTN PM UN310

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 130 - 190   | Vc 150 - 200    | Vc 150 - 220   |
| Fz 0.18 - 0.38 | Fz 0.20 - 0.38  | Fz 0.16 - 0.46 |
| Ap 0.2 - 4.0   | Ap 0.2 - 4.0    | Ap 0.2 - 4.0   |

CUTTER COMPATIBLE

SECO, ISCAR

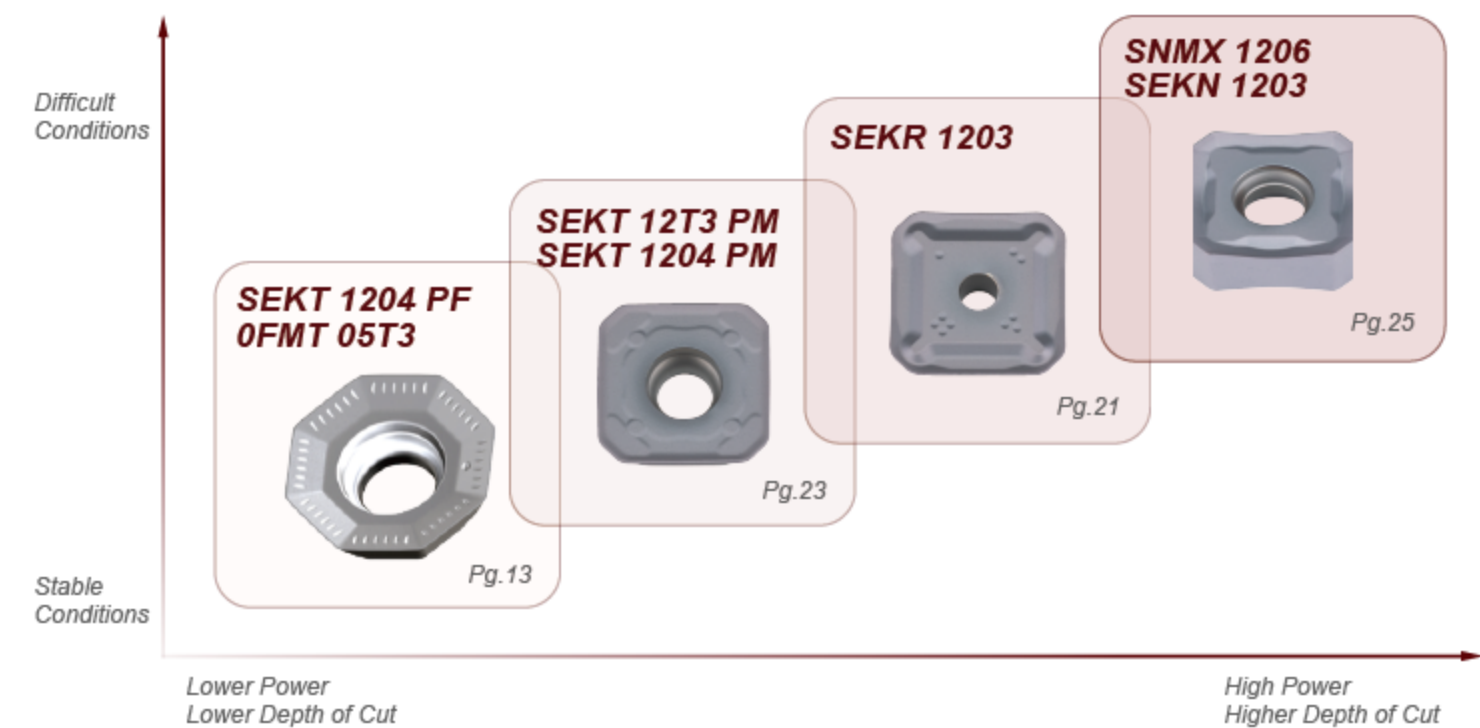
## SEKT 12T3 AGSN PM UN330

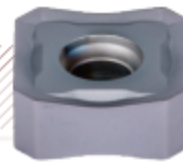
| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 130 - 190   | Vc 150 - 200    | Vc 150 - 220   |
| Fz 0.15 - 0.32 | Fz 0.15 - 0.32  | Fz 0.18 - 0.46 |
| Ap 0.5 - 6.0   | Ap 0.5 - 6.0    | Ap 0.5 - 6.0   |

CUTTER COMPATIBLE

MITSUBISHI, SANDVIK

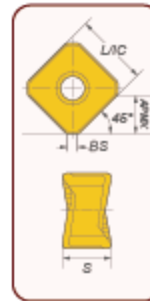
## 45Deg machining – Over view



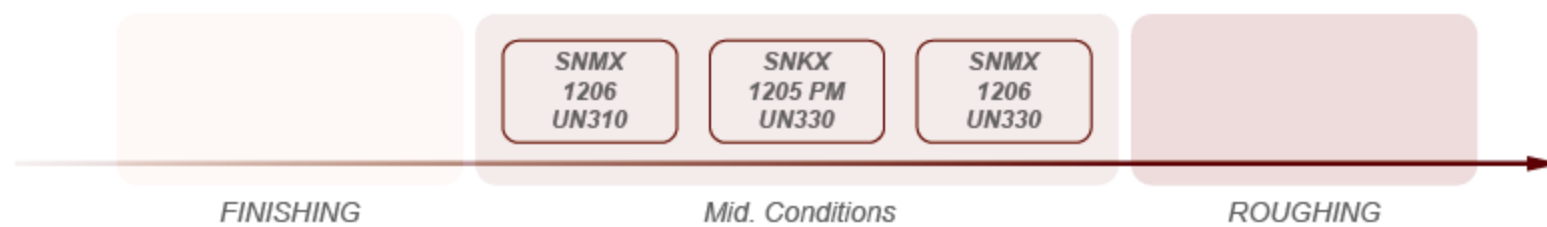


## FAMILY

|            |               |       | IC    | RE   | S    | BS   |
|------------|---------------|-------|-------|------|------|------|
| 2100000218 | SNKX 1205 PM  | UN330 | 12.70 | 0.90 | 3.97 | 1.80 |
| 2100000158 | SNMX 1206 ANN | UN330 | 12.70 | 1.00 | 4.85 | 1.80 |
| 2100000228 | SNMX 1206 ANN | UN310 | 12.70 | 1.00 | 4.85 | 1.80 |



## PRODUCT - LINE UP

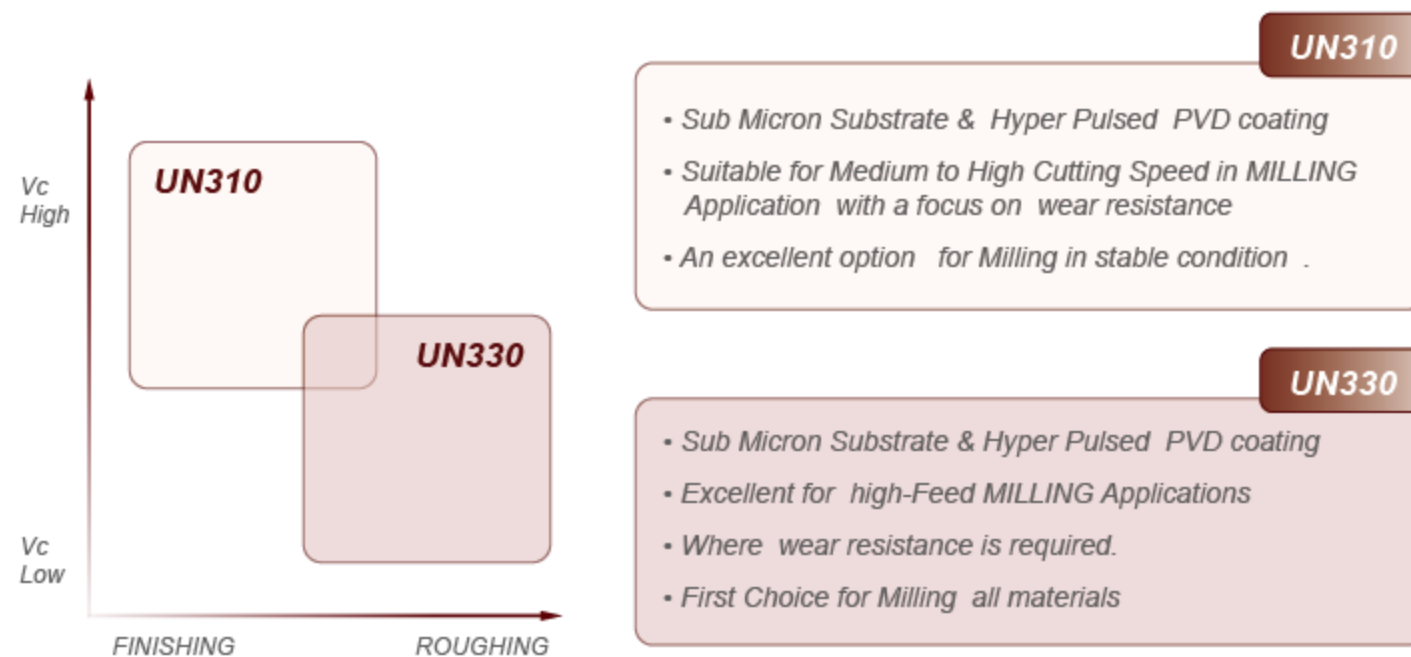


## Chip Breakers

### PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

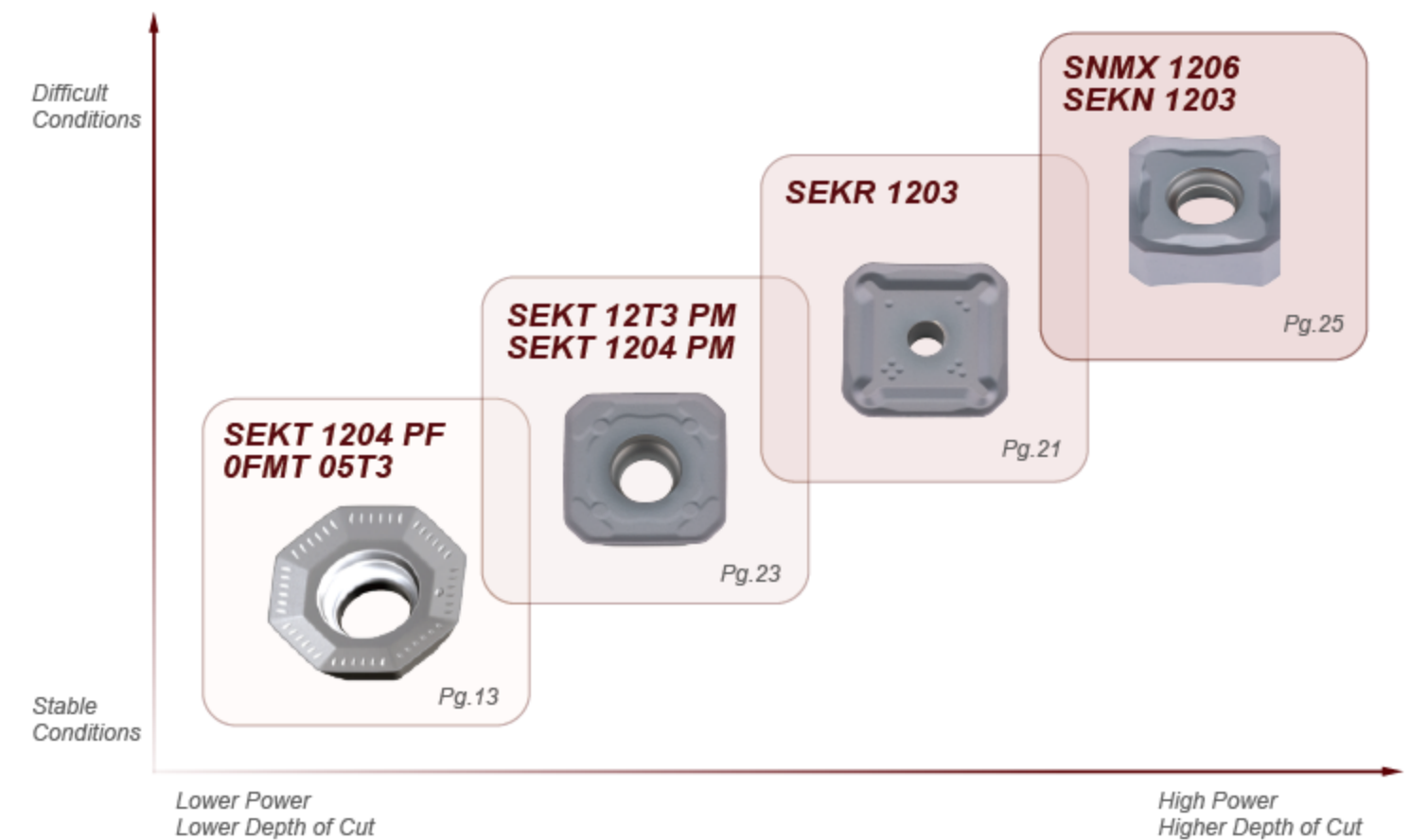
## GRADES



## Cutting Conditions

|                                                |                 |                                                | <b>SNKX 1205 PM UN330</b> |  |  |
|------------------------------------------------|-----------------|------------------------------------------------|---------------------------|--|--|
| (P)                                            | (M)             | (K)                                            |                           |  |  |
| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |                           |  |  |
| Vc 130 - 190<br>Fz 0.14 - 0.26<br>Ap 0.5 - 5.0 |                 | Vc 150 - 220<br>Fz 0.17 - 0.34<br>Ap 0.5 - 5.0 |                           |  |  |
| CUTTER COMPATIBLE                              | SECO, ISCAR     |                                                |                           |  |  |
|                                                |                 |                                                | <b>SNMX 1206ANN UN330</b> |  |  |
| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |                           |  |  |
| Vc 130 - 220<br>Fz 0.11 - 0.32<br>Ap 0.5 - 6.0 |                 | Vc 130 - 220<br>Fz 0.10 - 0.38<br>Ap 0.5 - 6.0 |                           |  |  |
| CUTTER COMPATIBLE                              | KORLOY          |                                                |                           |  |  |
|                                                |                 |                                                | <b>SNMX 1206ANN UN310</b> |  |  |
| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |                           |  |  |
| Vc 130 - 220<br>Fz 0.11 - 0.32<br>Ap 0.3 - 5.0 |                 | Vc 130 - 220<br>Fz 0.10 - 0.38<br>Ap 0.3 - 5.0 |                           |  |  |
| CUTTER COMPATIBLE                              | KORLOY          |                                                |                           |  |  |

## 45Deg machining – Over view



# SPKN & SPKR

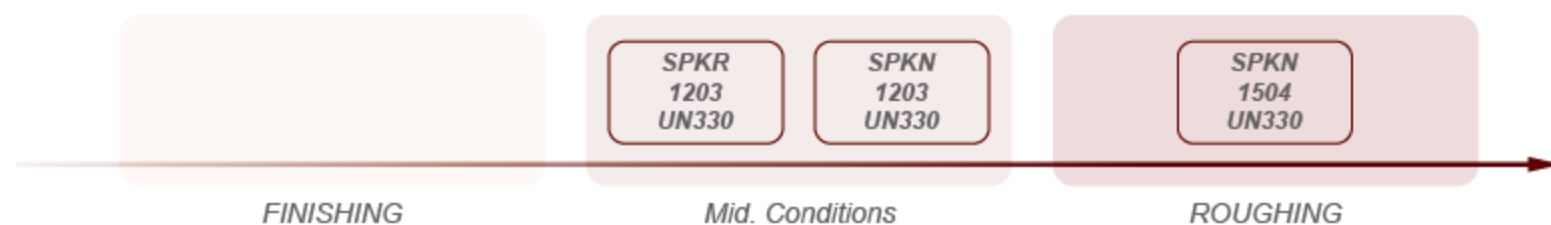


## FAMILY

|            |                |       | L     | RE   | S    | BS   |
|------------|----------------|-------|-------|------|------|------|
| 2100000122 | SPKN 1203 EDTR | UN330 | 12.70 | 0.80 | 3.18 | 1.10 |
| 2100000124 | SPKR 1203 EDTR | UN330 | 12.70 | 0.80 | 3.18 | 1.10 |
| 2100000216 | SPKN 1504 EDTR | UN330 | 15.88 | 1.00 | 4.76 | 1.40 |



## PRODUCT - LINE UP



## Chip Breakers

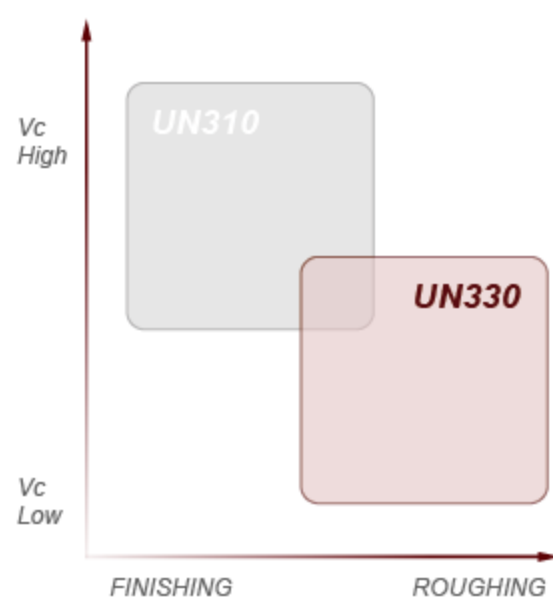
### (R)

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

### (N)

- Mid. conditions - flat top
- for General-tough or unstable machining conditions
- **Recommended Feed (Fz) : 0.25 (mm/tooth)**

## GRADES



- Sub Micron Substrate & Hyper Pulsed PVD coating
- Excellent for high-Feed MILLING Applications
- Where wear resistance is required
- First Choice for Milling all materials

## Cutting Conditions

### SPKN 1203 EDTR UN330

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.15 - 0.30<br>Ap 0.5 - 7.0 |                        | Vc 150 - 220<br>Fz 0.18 - 0.43<br>Ap 0.5 - 7.0 |
| CUTTER COMPATIBLE                              | ISO Standard           |                                                |

### SPKR 1203 EDTR UN330

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 130 - 190<br>Fz 0.15 - 0.30<br>Ap 0.5 - 7.0 | Vc 150 - 210<br>Fz 0.15 - 0.30<br>Ap 0.5 - 7.0 | Vc 150 - 220<br>Fz 0.18 - 0.43<br>Ap 0.5 - 7.0 |
| CUTTER COMPATIBLE                              | ISO Standard                                   |                                                |

### SPKN 1504 EDTR UN330

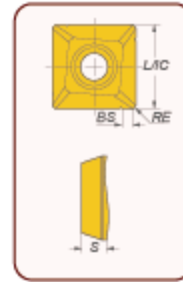
| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 150 - 240<br>Fz 0.15 - 0.34<br>Ap 0.3 - 9.0 |                 | Vc 150 - 240<br>Fz 0.18 - 0.43<br>Ap 0.5 - 9.0 |
| CUTTER COMPATIBLE                              | ISO Standard    |                                                |



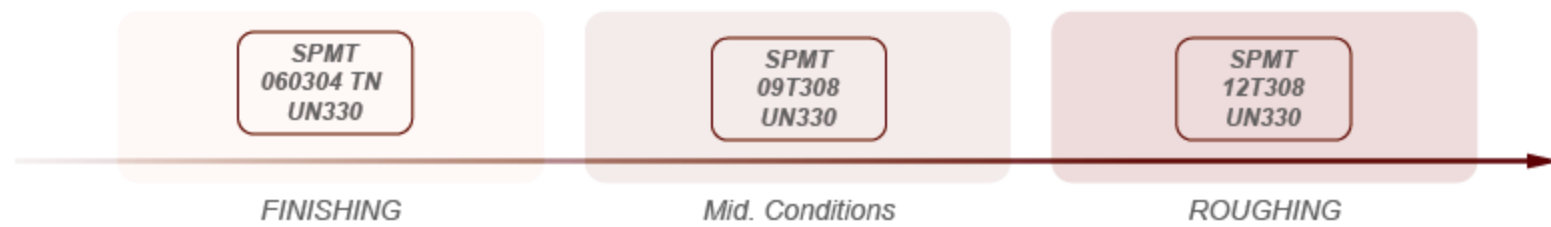


## FAMILY

|            |                |       | IC    | RE   | S    | BS   |
|------------|----------------|-------|-------|------|------|------|
| 2100000220 | SPMT 060304 TN | UN330 | 6.00  | 0.40 | 3.25 | 0.70 |
| 2100000222 | SPMT 09T308    | UN330 | 9.54  | 0.80 | 3.97 | 1.00 |
| 2100000224 | SPMT 12T308    | UN330 | 13.29 | 0.80 | 3.96 | 1.00 |



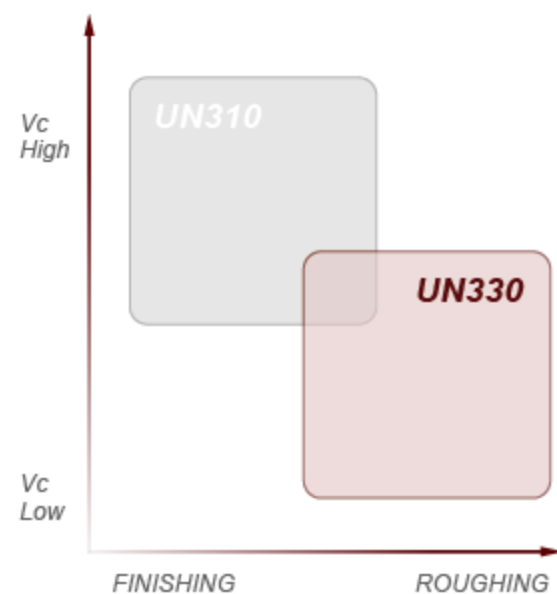
## PRODUCT - LINE UP



## Chip Breakers

- Mid Conditions – Tough Chip breaker
- Optimized for slot machining and similar tough applications
- **Recommended Feed (Fz) : 0.11 (mm/tooth)**

## GRADES



UN330

- Sub Micron Substrate & Hyper Pulsed PVD coating
- Excellent for high-Feed MILLING Applications
- Where wear resistance is required.
- First Choice for Milling all materials

## Cutting Conditions

## SPMT 060304 TN

| (P)<br>STEEL      | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|-------------------|------------------------|------------------|
| Vc 150 - 240      | Vc 150 - 240           | Vc 150 - 240     |
| Fz 0.06 - 0.12    | Fz 0.06 - 0.08         | Fz 0.05 - 0.14   |
| Ap 0.3 - 6.0      | Ap 0.5 - 6.0           | Ap 0.3 - 6.0     |
| CUTTER COMPATIBLE | LAMINA                 |                  |

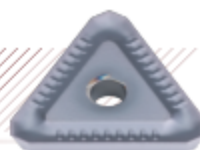
## SPMT 09T308

| STEEL             | STAINLESS STEEL | CAST IRON      |
|-------------------|-----------------|----------------|
| Vc 150 - 210      | Vc 150 - 240    | Vc 150 - 240   |
| Fz 0.06 - 0.15    | Fz 0.05 - 0.11  | Fz 0.06 - 0.22 |
| Ap 0.3 - 6.0      | Ap 0.3 - 6.0    | Ap 0.3 - 6.0   |
| CUTTER COMPATIBLE | WALTER          |                |

## SPMT 12T308

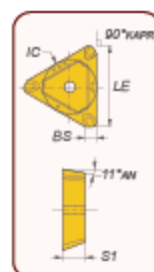
| STEEL             | STAINLESS STEEL | CAST IRON      |
|-------------------|-----------------|----------------|
| Vc 150 - 210      | Vc 160 - 210    | Vc 150 - 240   |
| Fz 0.07 - 0.18    | Fz 0.09 - 0.12  | Fz 0.10 - 0.28 |
| Ap 0.5 - 12.0     | Ap 0.5 - 12.0   | Ap 0.5 - 12.0  |
| CUTTER COMPATIBLE | SANDVIK         |                |

# TPKN & TPKR

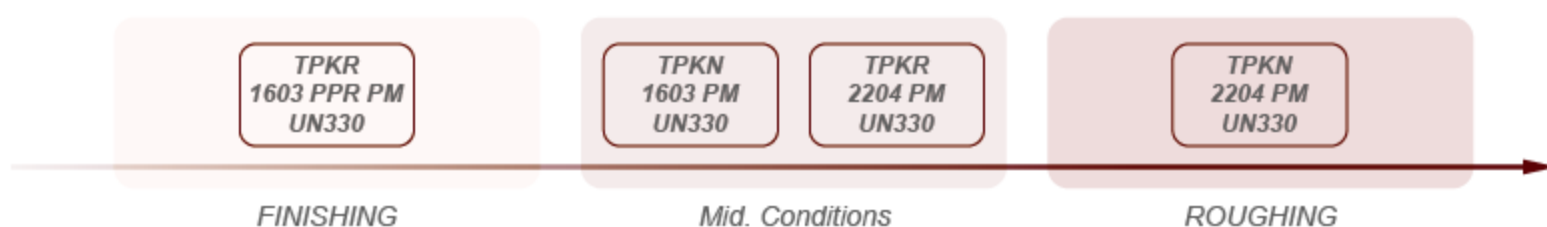


## FAMILY

|            |                  |       | IC    | LE    | RE   | S    | BS   |
|------------|------------------|-------|-------|-------|------|------|------|
| 2100000110 | TPKN 1603 PDR PM | UN330 | 9.52  | 13.90 | 0.50 | 3.18 | 0.90 |
| 2100000112 | TPKR 1603 PPR PM | UN330 | 9.52  | 13.90 | 0.50 | 3.18 | 0.90 |
| 2100000146 | TPKN 2204 PDR PM | UN330 | 12.70 | 19.12 | 0.80 | 4.76 | 1.20 |
| 2100000148 | TPKR 2204 PDR PM | UN330 | 12.70 | 19.12 | 0.80 | 4.76 | 1.20 |



## PRODUCT - LINE UP



## Chip Breakers

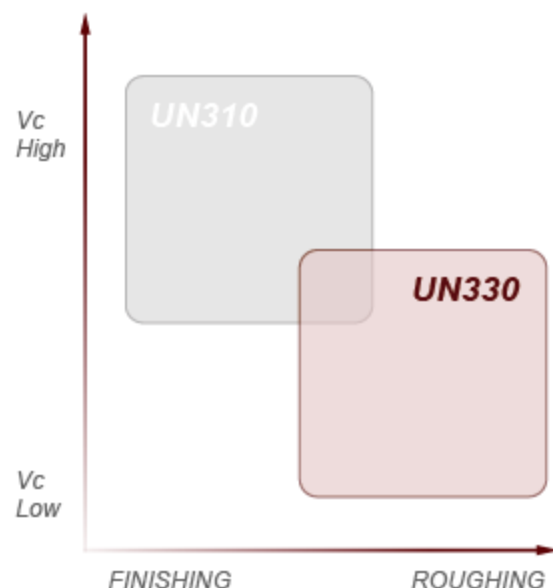
### (R)

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions
- **Recommended Feed (Fz) : 0.20 (mm/tooth)**

### (N)

- Mid. conditions - flat top
- for General-tough or unstable machining conditions
- **Recommended Feed (Fz) : 0.25 (mm/tooth)**

## GRADES



- Sub Micron Substrate & Hyper Pulsed PVD coating
- Excellent for high-Feed MILLING Applications
- Where wear resistance is required
- First Choice for Milling all materials

## Cutting Conditions

### TPKN 1603 PDR PM UN330

| (P)<br>STEEL                                    | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON                                |
|-------------------------------------------------|------------------------|-------------------------------------------------|
| Vc 130 - 170<br>Fz 0.16 - 0.25<br>Ap 0.5 - 12.0 |                        | Vc 150 - 220<br>Fz 0.15 - 0.27<br>Ap 0.5 - 12.0 |
| CUTTER COMPATIBLE                               | ISO Standard           |                                                 |

### TPKR 1603 PPR PM UN330

| STEEL                                           | STAINLESS STEEL                                 | CAST IRON                                       |
|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Vc 130 - 190<br>Fz 0.12 - 0.19<br>Ap 0.5 - 12.0 | Vc 140 - 200<br>Fz 0.13 - 0.19<br>Ap 0.5 - 12.0 | Vc 150 - 220<br>Fz 0.14 - 0.27<br>Ap 0.5 - 12.0 |
| CUTTER COMPATIBLE                               | ISO Standard                                    | 1st Choice                                      |

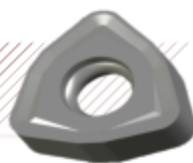
### TPKN 2204 PDR PM UN330

| STEEL                                           | STAINLESS STEEL | CAST IRON                                       |
|-------------------------------------------------|-----------------|-------------------------------------------------|
| Vc 130 - 190<br>Fz 0.18 - 0.30<br>Ap 0.5 - 18.0 |                 | Vc 150 - 220<br>Fz 0.18 - 0.32<br>Ap 0.5 - 18.0 |
| CUTTER COMPATIBLE                               | ISO Standard    | 1st Choice                                      |

### TPKR 2204 PDR PM UN330

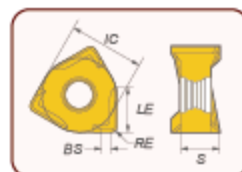
| STEEL                                           | STAINLESS STEEL                                 | CAST IRON                                       |
|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Vc 130 - 190<br>Fz 0.16 - 0.25<br>Ap 0.5 - 18.0 | Vc 140 - 200<br>Fz 0.16 - 0.25<br>Ap 0.5 - 18.0 | Vc 150 - 220<br>Fz 0.16 - 0.27<br>Ap 0.5 - 18.0 |
| CUTTER COMPATIBLE                               | ISO Standard                                    |                                                 |





## FAMILY

|            |                 |       | IC    | LE   | RE   | BS   |
|------------|-----------------|-------|-------|------|------|------|
| 2100000178 | WNMX 09T316 ZNN | UN330 | 9.525 | 3.60 | 1.60 | 1.70 |



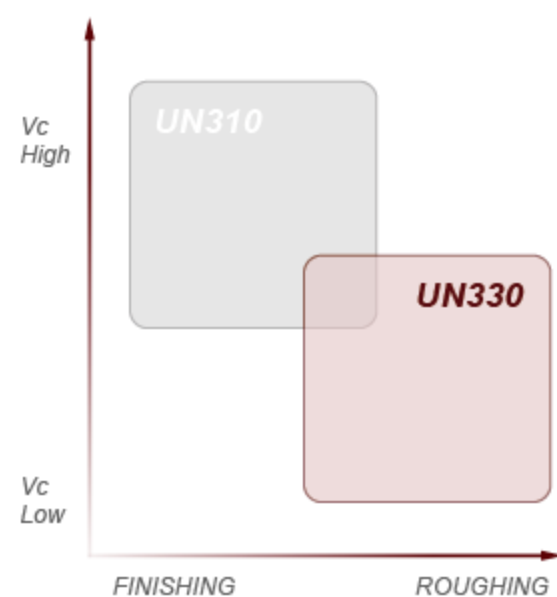
## PRODUCT - LINE UP



## Chip Breakers

- MID. CONDITIONS Chip-breaker
- For Semi- Finishing High feed applications
- **Recommended Feed (Fz) : 1.10 (mm/tooth)**

## GRADES



- Sub Micron Substrate & Hyper Pulsed PVD coating
- Excellent for high-Feed MILLING Applications
- Where wear resistance is required.
- First Choice for Milling all materials

## Cutting Conditions

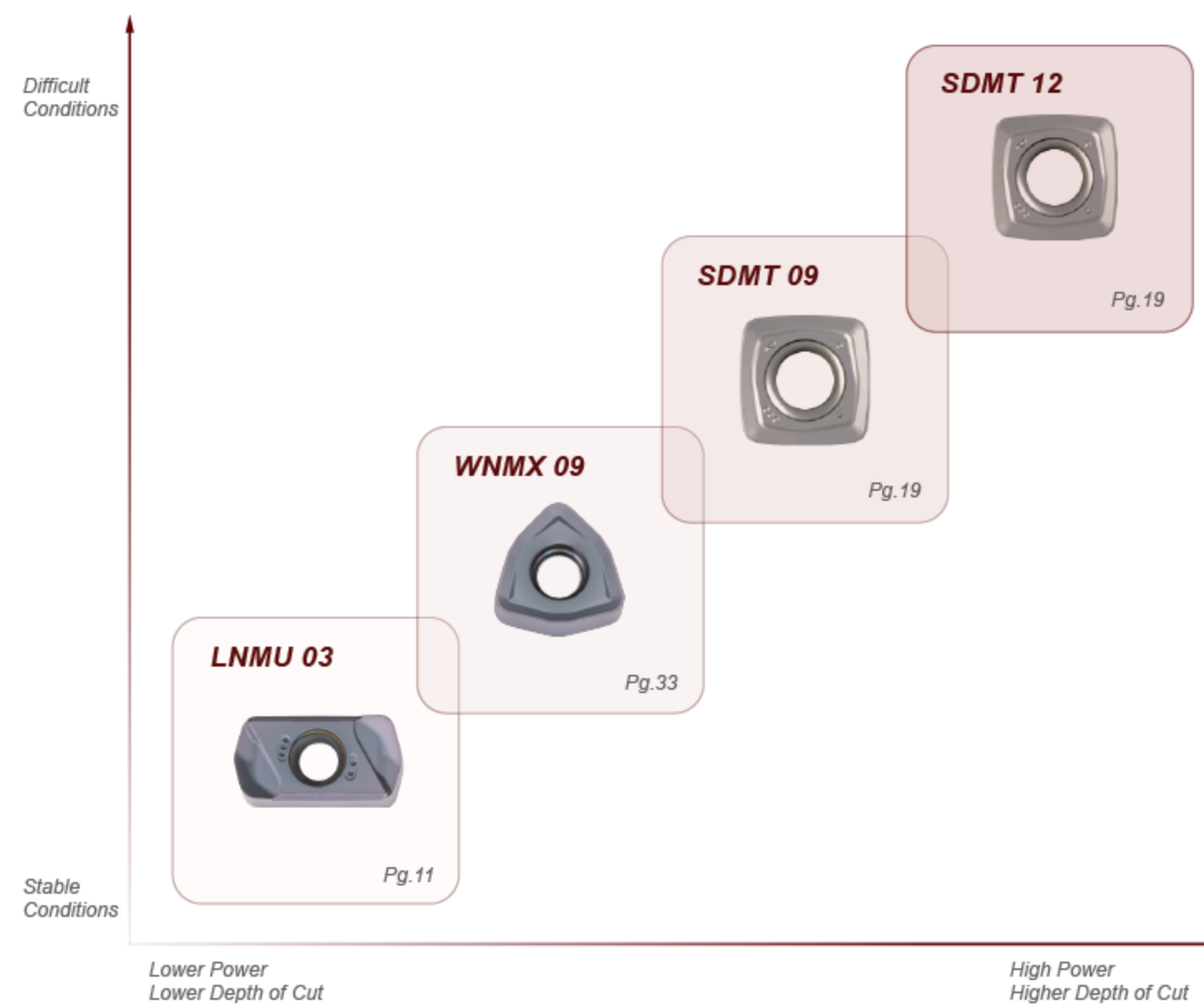
### WNMX 09T316 ZNN UN330



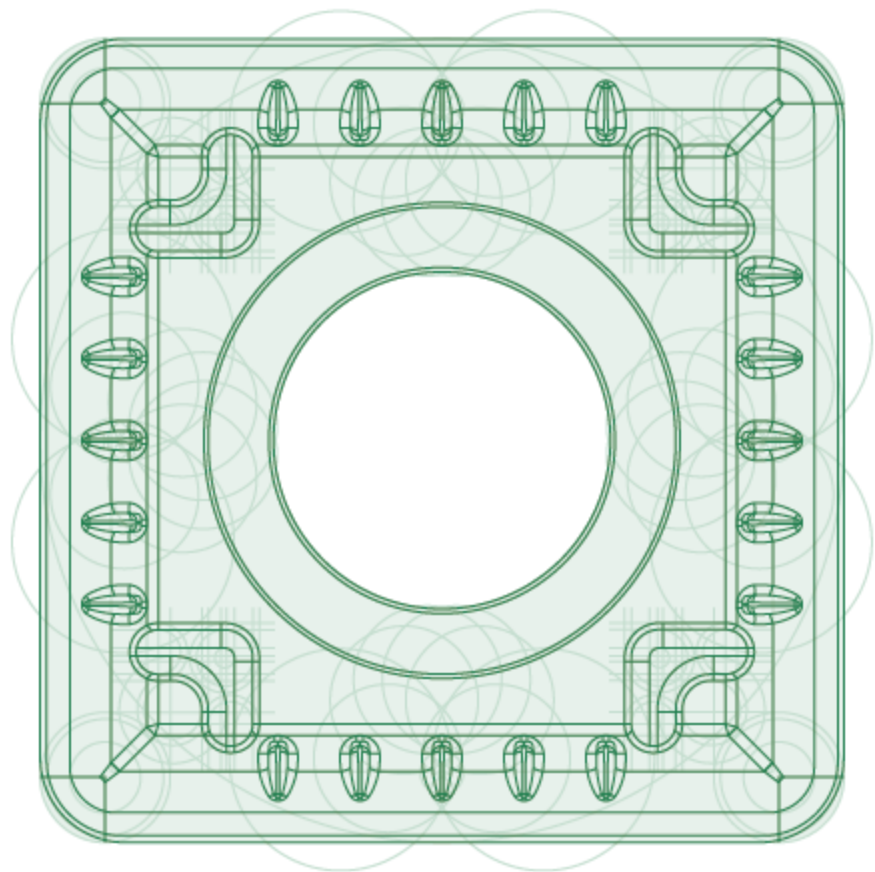
|    | (P)<br>STEEL | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|----|--------------|------------------------|------------------|
| Vc | 100 - 200    | 120 - 180              | 100 - 220        |
| Fz | 0.40 - 1.50  | 0.40 - 1.20            | 0.40 - 1.50      |
| Ap | 0.5 - 1.3    | 0.5 - 1.0              | 0.5 - 1.3        |

CUTTER COMPATIBLE KORLOY

## High Feed Line – Over view



# DRILLING



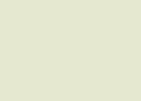
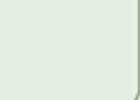
SPMG

Pg.039

WCMX

Pg.043

## INSERTS SELECTION

|          | P                                                       | M                                                                                 | K                                                                                 | N                                                                                   | S                                                                                     | H                                                                                     |
|----------|---------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|          | UN330                                                   | UN330                                                                             | UN330                                                                             | UN330                                                                               | UN330                                                                                 | UN330                                                                                 |
| DRILLING | Light<br>Machining<br><br>FEED<br>0.04-0.10             |  |  |                                                                                     |                                                                                       |                                                                                       |
|          |                                                         |                                                                                   |                                                                                   |                                                                                     |                                                                                       |                                                                                       |
|          |                                                         |                                                                                   |                                                                                   |                                                                                     |                                                                                       |                                                                                       |
|          | Mid.<br>Machining<br>(GENERAL)<br><br>FEED<br>0.08-0.12 |  |  |  |                                                                                       |    |
|          |                                                         |                                                                                   |                                                                                   |                                                                                     |                                                                                       |                                                                                       |
|          |                                                         |                                                                                   |                                                                                   |                                                                                     |                                                                                       |                                                                                       |
|          | Heavy<br>Machining<br><br>FEED<br>0.10-0.18             |  |  |                                                                                     |  |  |
|          |                                                         |                                                                                   |                                                                                   |                                                                                     |                                                                                       |                                                                                       |
|          |                                                         |                                                                                   |                                                                                   |                                                                                     |                                                                                       |                                                                                       |

## CHIP BREAKERS

### PM

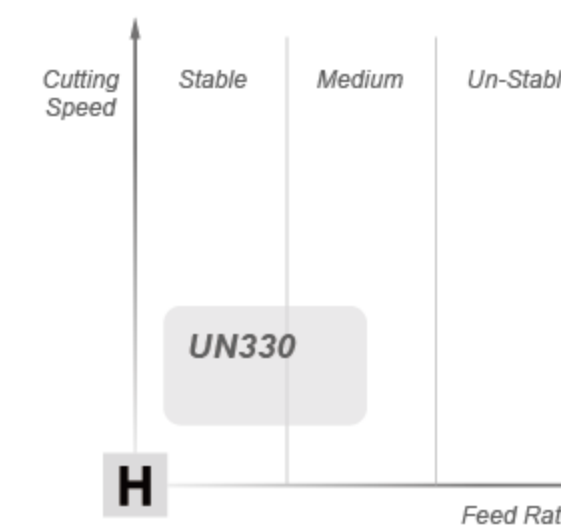
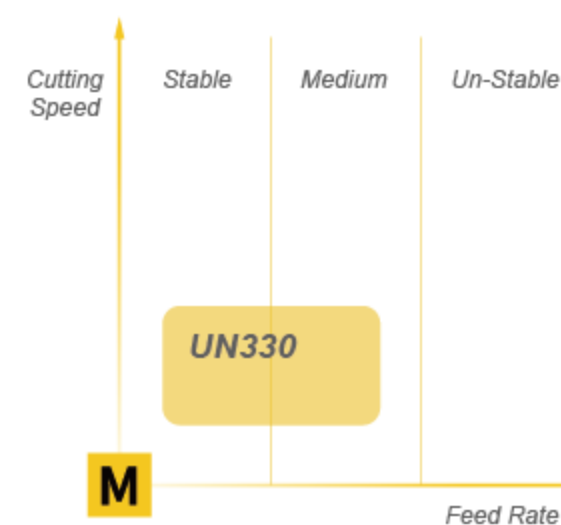
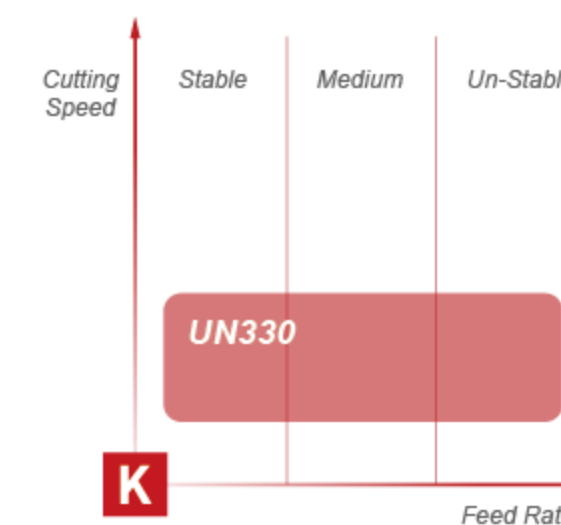
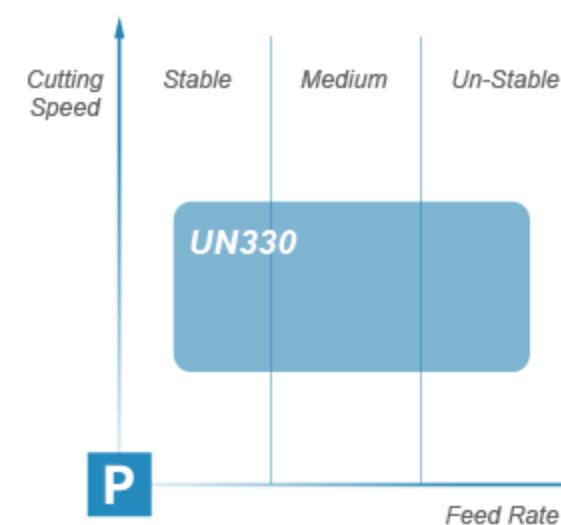
- Semi Finishing chip Breaker for General Machining
- First Choice for all conditions
- **Recommended Feeds (Fz) are between: 0.05 - 0.13 (mm/tooth)**

### PR

- Mid. to Roughing chip Breaker
- First choice for aggressive and unstable drilling conditions
- **Recommended Feeds (Fz) are between: 0.09 - 0.18 (mm/tooth)**

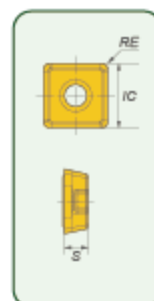
## GRADES

| GRADE                 | ISO       | Features & Applications                                                      |
|-----------------------|-----------|------------------------------------------------------------------------------|
| UN330                 | P15 - P30 | For All Drilling Applications (internal and External Inserts)                |
|                       | M20 - M40 | Applicable for Alloy Steel, Stainless steel, hardened material and Aerospace |
| Sub micron PVD coated | S20 - S35 | Extremely versatile grade for all conditions of cutting                      |
|                       | H10 - H20 | Should be used for all Drilling operations - with coolant                    |

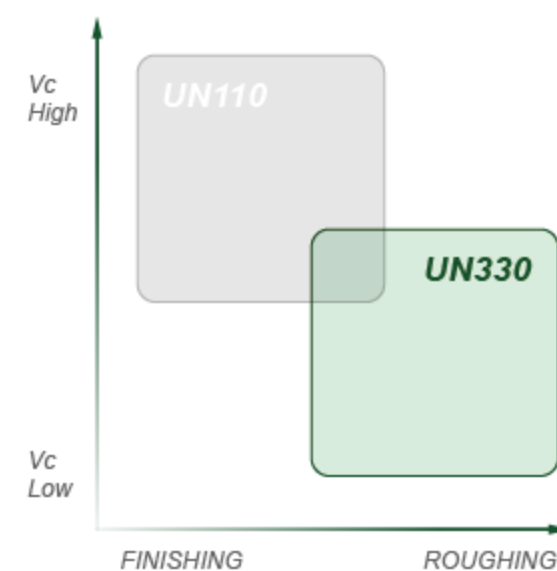


## FAMILY

|            |                |       | IC    | RE   | S    |
|------------|----------------|-------|-------|------|------|
| 3100000024 | SPMG 050204 PM | UN330 | 5.00  | 0.40 | 2.37 |
| 3100000012 | SPMG 050204 PR | UN330 | 5.00  | 0.40 | 2.37 |
| 3100000026 | SPMG 060204 PM | UN330 | 6.00  | 0.40 | 2.38 |
| 3100000014 | SPMG 060204 PR | UN330 | 6.00  | 0.40 | 2.38 |
| 3100000028 | SPMG 07T308 PM | UN330 | 7.94  | 0.80 | 3.97 |
| 3100000016 | SPMG 07T308 PR | UN330 | 7.94  | 0.80 | 3.97 |
| 3100000030 | SPMG 090408 PM | UN330 | 9.78  | 0.80 | 4.30 |
| 3100000018 | SPMG 090408 PR | UN330 | 9.78  | 0.80 | 4.30 |
| 3100000032 | SPMG 110408 PM | UN330 | 11.50 | 0.80 | 4.76 |
| 3100000020 | SPMG 110408 PR | UN330 | 11.50 | 0.80 | 4.76 |
| 3100000022 | SPMG 140512 PM | UN330 | 14.30 | 1.20 | 5.20 |



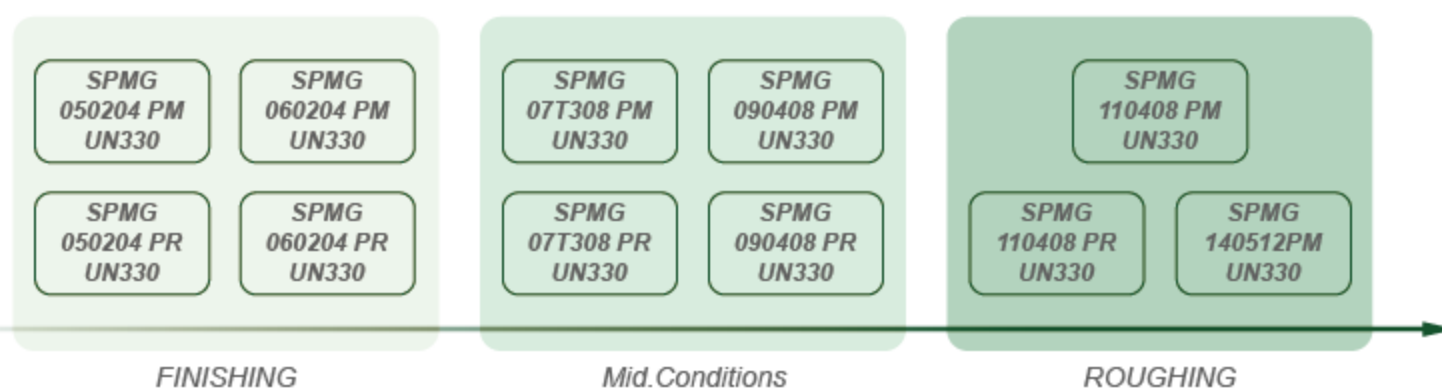
## GRADES



## UN330

- Sub Micron Substrate & Hyper Pulsed PVD coating
- General Purpose DRILLING Applications
- An exceptional grade ensuring long tool life and high toughness for both internal insert and the external ones..
- First Choice for Drilling in all condition

## PRODUCT - LINE UP



## Chip Breakers

## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for for all conditions
- **Recommended Feeds (Fz) are between: 0.05 - 0.13 (mm/tooth)**

## PR

- Mid. to Roughing chip Breaker
- First choice for aggressive and unstable drilling conditions
- **Recommended Feeds (Fz) are between: 0.09 - 0.18 (mm/tooth)**

## SPMG 050204 PM UN330

| (P)<br>STEEL                         | (M)<br>STAINLESS STEEL               | (K)<br>CAST IRON                     |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.04 - 0.09<br>Ap | Vc 170 - 230<br>Fz 0.04 - 0.09<br>Ap | Vc 150 - 210<br>Fz 0.07 - 0.10<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 050204 PR UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.08 - 0.12<br>Ap | Vc 170 - 230<br>Fz 0.08 - 0.12<br>Ap | Vc 150 - 210<br>Fz 0.07 - 0.14<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 060204 PM UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.04 - 0.09<br>Ap | Vc 170 - 230<br>Fz 0.04 - 0.09<br>Ap | Vc 150 - 210<br>Fz 0.07 - 0.10<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 060204 PR UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.10 - 0.16<br>Ap | Vc 170 - 230<br>Fz 0.10 - 0.16<br>Ap | Vc 150 - 210<br>Fz 0.10 - 0.16<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 07T308 PM UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.05 - 0.10<br>Ap | Vc 170 - 230<br>Fz 0.05 - 0.10<br>Ap | Vc 150 - 210<br>Fz 0.10 - 0.11<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 07T308 PR UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.16 - 0.22<br>Ap | Vc 170 - 230<br>Fz 0.17 - 0.22<br>Ap | Vc 150 - 210<br>Fz 0.16 - 0.22<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 090408 PM UN330

| (P)<br>STEEL                         | (M)<br>STAINLESS STEEL               | (K)<br>CAST IRON                     |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.06 - 0.11<br>Ap | Vc 170 - 230<br>Fz 0.06 - 0.11<br>Ap | Vc 150 - 210<br>Fz 0.10 - 0.12<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 090408 PR UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.15 - 0.22<br>Ap | Vc 170 - 230<br>Fz 0.16 - 0.22<br>Ap | Vc 150 - 210<br>Fz 0.15 - 0.22<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 110408 PM UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.07 - 0.14<br>Ap | Vc 170 - 230<br>Fz 0.06 - 0.11<br>Ap | Vc 150 - 210<br>Fz 0.10 - 0.15<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 110408 PR UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.20 - 0.26<br>Ap | Vc 170 - 230<br>Fz 0.21 - 0.26<br>Ap | Vc 150 - 210<br>Fz 0.18 - 0.26<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

## SPMG 140512 PM UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.12 - 0.18<br>Ap | Vc 170 - 230<br>Fz 0.13 - 0.18<br>Ap | Vc 150 - 210<br>Fz 0.12 - 0.18<br>Ap |

DRILLING BODY COMPATABILITY

TaeguTec

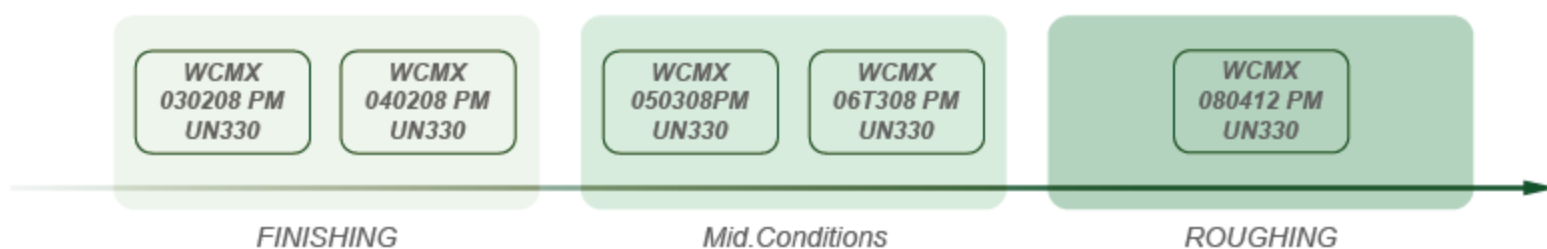


## FAMILY

|            |                |       | IC    | L    | RE   | S    |
|------------|----------------|-------|-------|------|------|------|
| 3100000002 | WCMX 030208 PM | UN330 | 5.56  | 3.50 | 0.80 | 2.38 |
| 3100000004 | WCMX 040208 PM | UN330 | 6.35  | 4.30 | 0.80 | 2.38 |
| 3100000006 | WCMX 050308 PM | UN330 | 7.94  | 5.40 | 0.80 | 3.18 |
| 3100000008 | WCMX 06T308 PM | UN330 | 9.52  | 6.50 | 0.80 | 3.97 |
| 3100000010 | WCMX 080412 PM | UN330 | 12.70 | 8.70 | 1.20 | 4.76 |



## PRODUCT - LINE UP

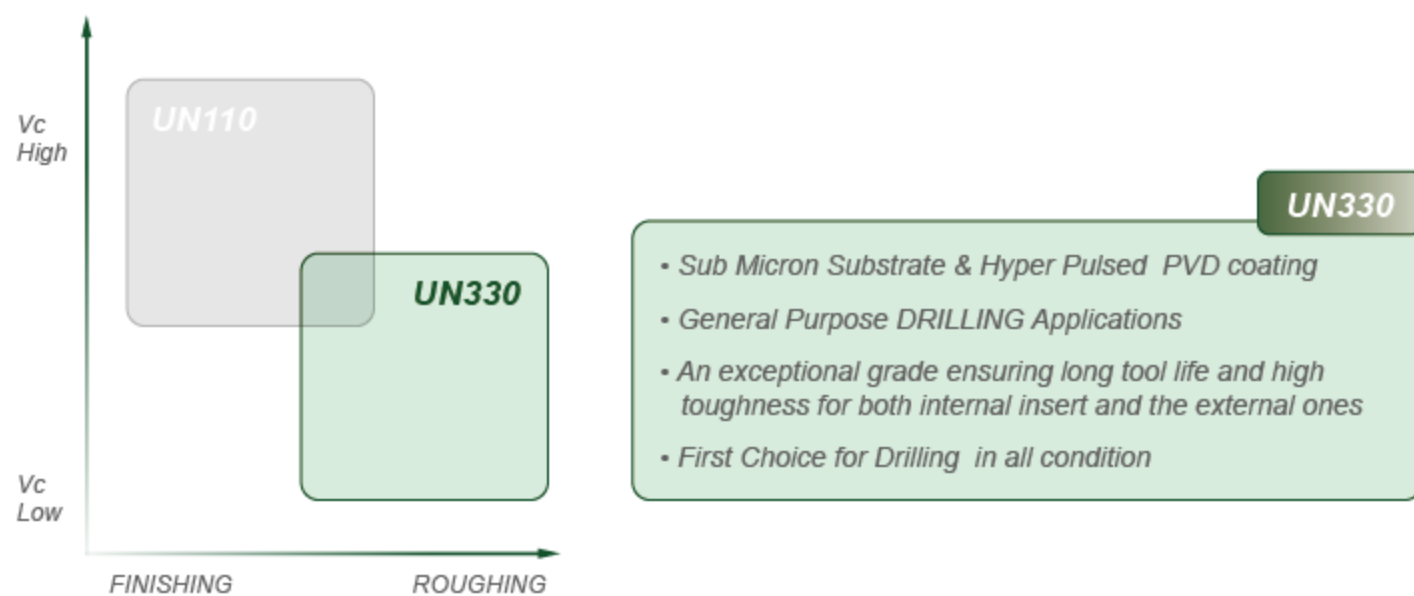


## Chip Breakers

## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for FOR all conditions
- **Recommended Feeds (Fz) are between: 0.05 - 0.13 (mm/tooth)**

## GRADES



## Cutting Conditions

## WCMX 030208 PM UN330

| (P)<br>STEEL                         | (M)<br>STAINLESS STEEL               | (K)<br>CAST IRON                     |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.04 - 0.09<br>Ap | Vc 170 - 230<br>Fz 0.04 - 0.09<br>Ap | Vc 150 - 210<br>Fz 0.07 - 0.10<br>Ap |
| DRILLING BODY COMPATABILITY          | ISCAR, COMET                         |                                      |

## WCMX 040208 PM UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.04 - 0.09<br>Ap | Vc 170 - 230<br>Fz 0.04 - 0.09<br>Ap | Vc 150 - 210<br>Fz 0.07 - 0.10<br>Ap |
| DRILLING BODY COMPATABILITY          | ISCAR, COMET                         |                                      |

## WCMX 050308 PM UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.05 - 0.10<br>Ap | Vc 170 - 230<br>Fz 0.05 - 0.10<br>Ap | Vc 150 - 210<br>Fz 0.10 - 0.11<br>Ap |
| DRILLING BODY COMPATABILITY          | ISCAR, COMET                         |                                      |

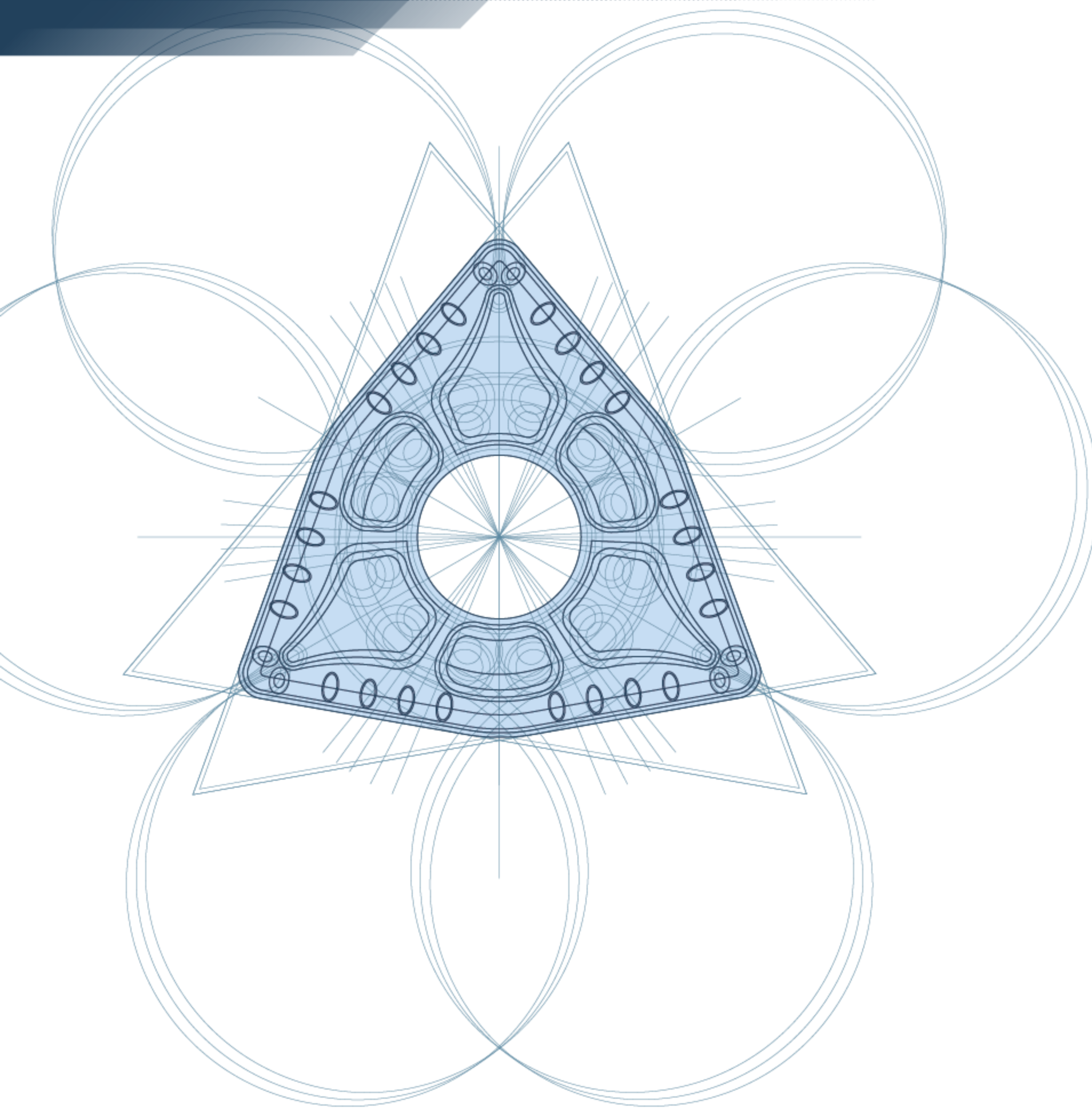
## WCMX 06T308 PM UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.06 - 0.11<br>Ap | Vc 170 - 230<br>Fz 0.06 - 0.11<br>Ap | Vc 150 - 210<br>Fz 0.10 - 0.12<br>Ap |
| DRILLING BODY COMPATABILITY          | ISCAR, COMET                         |                                      |

## WCMX 080412 PM UN330

| STEEL                                | STAINLESS STEEL                      | CAST IRON                            |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Vc 100 - 170<br>Fz 0.07 - 0.14<br>Ap | Vc 170 - 230<br>Fz 0.06 - 0.11<br>Ap | Vc 150 - 210<br>Fz 0.10 - 0.15<br>Ap |
| DRILLING BODY COMPATABILITY          | ISCAR, COMET                         |                                      |

# TURNING



CCMT

Pg.055

CNMA

Pg.057

CNMG

Pg.059

DCMT

Pg.065

DNMG

Pg.067

TCMT

Pg.069

TNMA

Pg.071

TNMG

Pg.073

TNUX

Pg.079

VBMT

Pg.081

VNMG

Pg.083

WNMA

Pg.085

WNMG

Pg.087

# CHIP BREAKERS & GRADES SELECTION

NEGATIVE



**P**  
STEEL

|               | FINISHING | MEDIUM   | ROUGHING |
|---------------|-----------|----------|----------|
| Chip Breakers | PF        | PM (STD) | PR       |
| GRADES        | UN6010    | UN6025   | UN110    |

**M**  
STAINLESS  
STEEL

|               |       |        |        |
|---------------|-------|--------|--------|
| Chip Breakers | MF    | MM     | (TNUX) |
| GRADES        | UN210 | UN6025 |        |

**K**  
CAST IRON

|               |        |        |       |
|---------------|--------|--------|-------|
| Chip Breakers | (STD)  | PR     | (A)   |
| GRADES        | UN7010 | UN6025 | UN110 |

POSITIVE



**P**  
STEEL

|               | FINISHING | MEDIUM | ROUGHING |
|---------------|-----------|--------|----------|
| Chip Breakers | PF        | PM     |          |
| GRADES        | UN110     | UN6025 |          |

**M**  
STAINLESS  
STEEL

|               |       |        |  |
|---------------|-------|--------|--|
| Chip Breakers | PF    | PM     |  |
| GRADES        | UN110 | UN6025 |  |

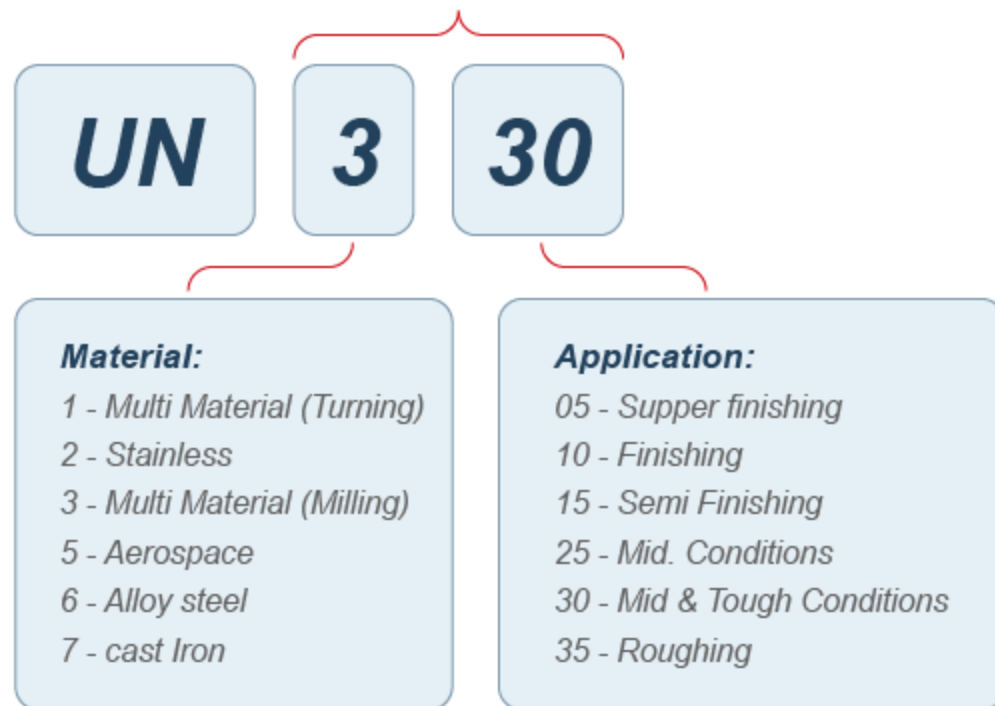
**K**  
CAST IRON

|               |       |        |  |
|---------------|-------|--------|--|
| Chip Breakers | PF    | PM     |  |
| GRADES        | UN110 | UN6025 |  |

# GRADES

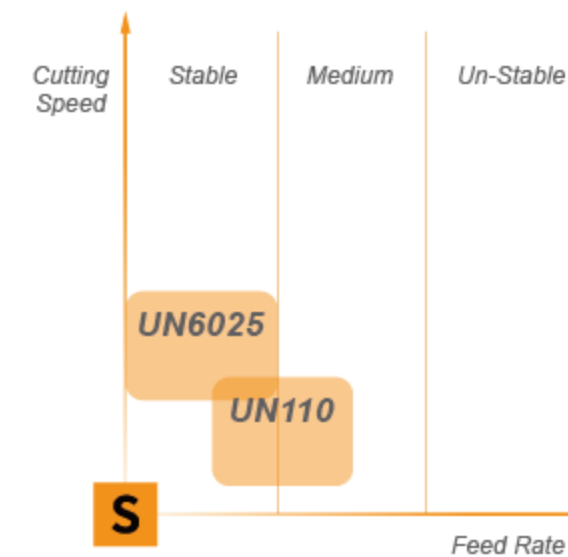
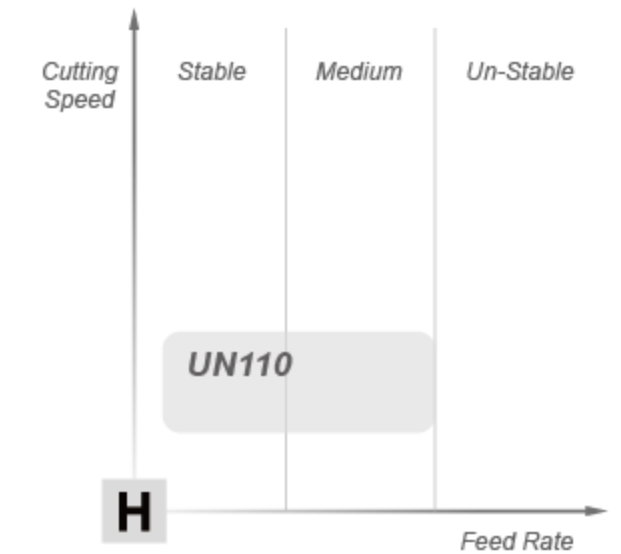
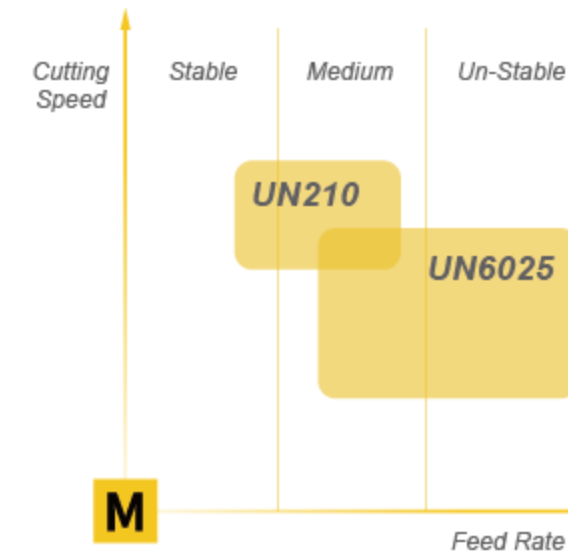
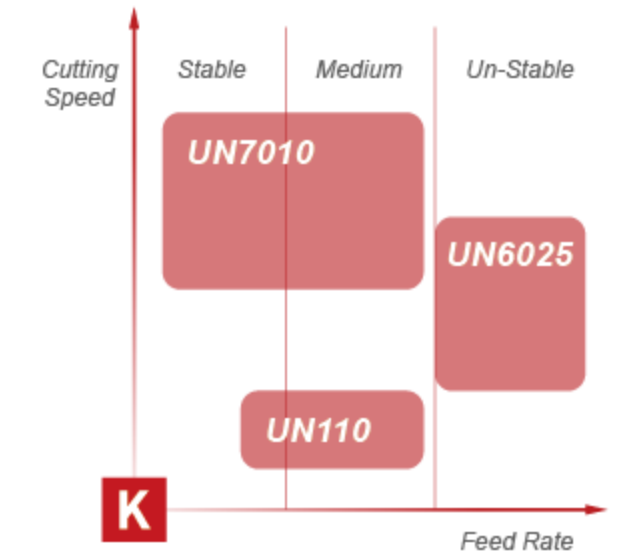
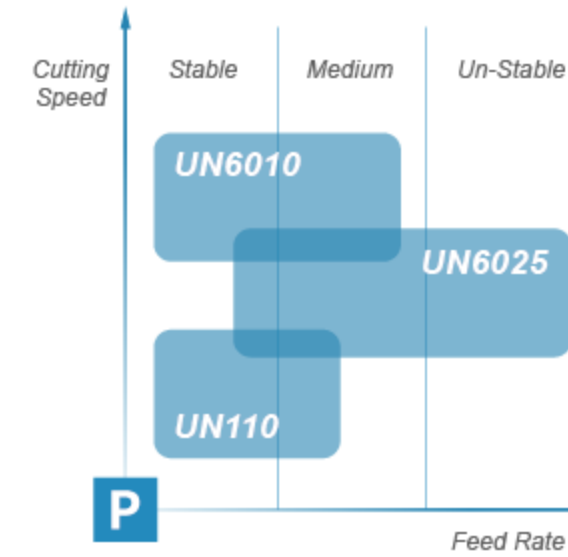
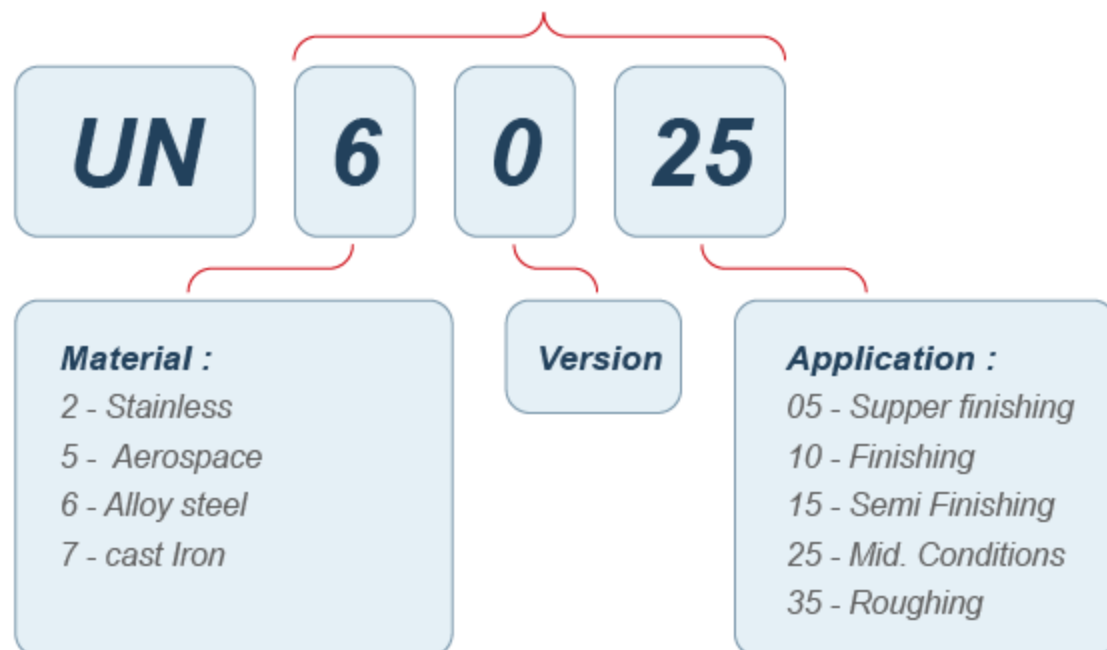
## PVD Grades - Explained

### 3 X numbers - PVD



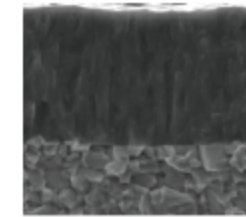
## CVD Grades - Explained

### 4 X numbers - CVD



# GRADES

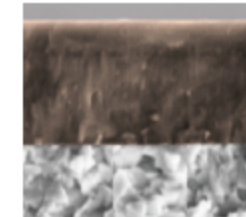
| GRADE                           | ISO |   |     | Features & Applications                                                                                |
|---------------------------------|-----|---|-----|--------------------------------------------------------------------------------------------------------|
| UN110                           | P05 | - | P15 | A very tough PVD grade with excellent wear resistance                                                  |
|                                 | M15 | - | M25 | For cutting speeds (Vc) - up to 180 m/min                                                              |
|                                 | K10 | - | K20 | Developed for Internal Turning and Turning of Aerospace material                                       |
|                                 | S20 | - | S35 | In all applications should be used with coolant                                                        |
| Sub micron PVD coated           |     |   |     |                                                                                                        |
| UN210                           | M10 | - | M25 | Unique PVD grade, using patented deposition technology                                                 |
| Sub Micron PVD Coated           |     |   |     |                                                                                                        |
| UN6010                          | P15 | - | P30 | Modern CVD grade with very thick Alpha Alumina For high wear resistance Turning machining              |
|                                 | K10 | - | K20 | Applicable for Alloy Steel                                                                             |
|                                 |     |   |     | Extremely wear resistant grade for stable conditions of cutting, up to cutting speed (Vc) of 450 m/min |
|                                 |     |   |     | In most applications should be used with coolant                                                       |
| K10 Grade Very Thick CVD Coated |     |   |     |                                                                                                        |
| UN6025                          | P15 | - | P30 | Cobalt Enriched Substrate & CVD coated grade with Alpha Alumina For General Turning machining          |
|                                 | M20 | - | M40 | Applicable for Alloy Steel, Stainless steel, cast Iron and some Aerospace material                     |
|                                 | K15 | - | K25 | Extremely versatile grade for all conditions of cutting, upto cutting speed (Vc) of 300 m/min          |
|                                 |     |   |     | In most applications should be used with coolant                                                       |
| Cobalt Enriched CVD Coated      |     |   |     |                                                                                                        |
| UN7010                          | P15 | - | P30 | Modern CVD grade with very thick Alpha Alumina For high wear resistance Turning machining              |
|                                 | K10 | - | K20 | Applicable for cast Iron material                                                                      |
|                                 |     |   |     | Extremely wear resistant grade for stable conditions of cutting, up to cutting speed (Vc) of 450 m/min |
|                                 |     |   |     | In most applications should be used with coolant                                                       |
| K10 Grade Very Thick CVD Coated |     |   |     |                                                                                                        |



## UN110

### Hyper Pulsed - Extremely Thick PVD coating & submicron substrate

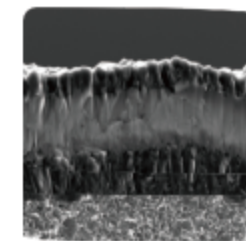
- Unique coating composition, with ground breaking deposition technology
- Thickest PVD coating in commercial use, with over 7mic of deposition



## UN210

### Hyper Pulsed PVD coating & submicron substrate

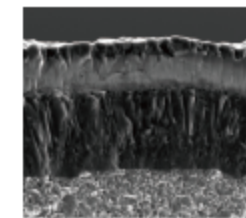
- Unique coating composition, with ground breaking deposition technology
- Especially developed for Stainless steel machining



## UN6010

### P10 substrate & modern CVD Coating

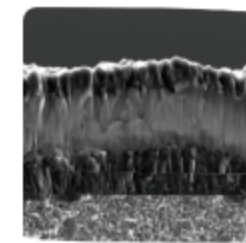
- Extremely wear resistant Turning grade
- With CVD coating based of very thick Alpha Alumina
- Excellent wear resistance and hot hardness parameters



## UN6025

### Cobalt Enriched substrate & modern CVD Coating

- Extremely versatile Turning grade
- With (MT) TiCN layer and Alpha Alumina
- Excellent combination of Toughness and wear resistance



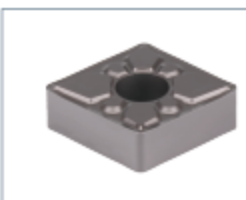
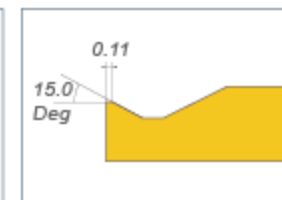
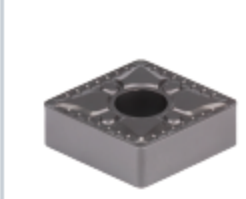
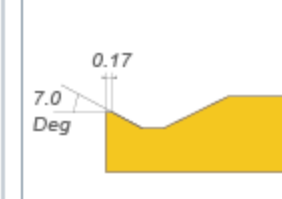
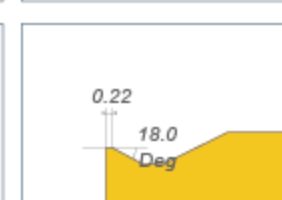
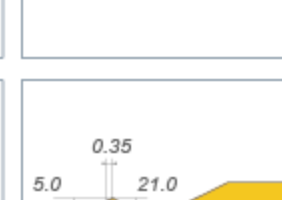
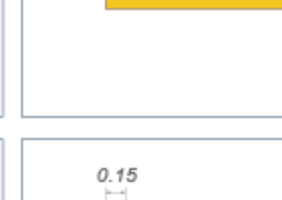
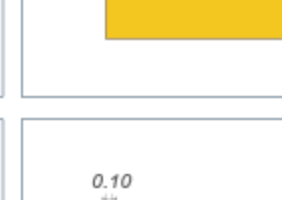
## UN7010

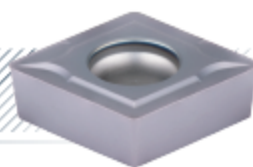
### K10 substrate & modern CVD Coating

- Extremely wear resistant Turning grade
- With CVD coating based of very thick Alpha Alumina
- Excellent wear resistance and hot hardness parameters

# CHIP BREAKERS

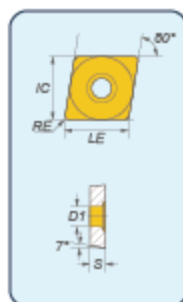
|               |                                                                                                                                             |                                |              |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------|
| <b>PF</b>     | <ul style="list-style-type: none"> <li>• Sharp Chip-breaker</li> <li>• for Finishing and sticky material</li> </ul>                         | • Fz min: <b>0.12</b> (mm/Rev) | <b>P M K</b> |
| <b>PM</b>     | <ul style="list-style-type: none"> <li>• for Semi- Finishing</li> <li>• General Machining</li> </ul>                                        | • Fz min: <b>0.18</b> (mm/Rev) | <b>P M K</b> |
| <b>(STD)</b>  | <ul style="list-style-type: none"> <li>• Tough Chip-breaker</li> <li>• for Mid-tough machining</li> </ul>                                   | • Fz min: <b>0.24</b> (mm/Rev) | <b>P K</b>   |
| <b>PR</b>     | <ul style="list-style-type: none"> <li>• Tough Chip-breaker</li> <li>• for General-tough machining</li> </ul>                               | • Fz min: <b>0.35</b> (mm/Rev) | <b>P K</b>   |
| <b>MF</b>     | <ul style="list-style-type: none"> <li>• Sharp Chip-breaker</li> <li>• Stainless Steel - Finishing</li> </ul>                               | • Fz min: <b>0.12</b> (mm/Rev) | <b>M S</b>   |
| <b>MM</b>     | <ul style="list-style-type: none"> <li>• for Semi- Finishing</li> <li>• Stainless steel -General Machining</li> </ul>                       | • Fz min: <b>0.18</b> (mm/Rev) | <b>M S</b>   |
| <b>CNM(A)</b> | <ul style="list-style-type: none"> <li>• Flat top Chip Breaker</li> <li>• for Cast iron machining</li> </ul>                                | • Fz min: <b>0.15</b> (mm/Rev) | <b>K</b>     |
| <b>TNU(X)</b> | <ul style="list-style-type: none"> <li>• Very sharp chip breaker like KNUX</li> <li>• for Low carbon steel &amp; Stainless Steel</li> </ul> | • Fz min: <b>0.10</b> (mm/Rev) | <b>P M</b>   |

| Chip Breaker name and Geometry |                                                                                       |                                                                                       | Applications and Features                                                                                                                                                                                                                                                                                                    |
|--------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PF                             |    |    | <ul style="list-style-type: none"> <li>• Sharp chip breaker</li> <li>• For finishing operations</li> <li>• Also adopted for sticky material and Stainless steel</li> <li>• Chip Control starts at Fz: 0.12</li> </ul>                                                                                                        |
| PM                             |    |    | <ul style="list-style-type: none"> <li>• Semi Finishing chip breaker for General machining</li> <li>• First choice for stable machining and light-Mid. cutting pressure</li> <li>• Smooth cutting due to very positive chip breaker angles</li> <li>• Chip Control starts at Fz: 0.18</li> </ul>                             |
| (STD)                          |    |    | <ul style="list-style-type: none"> <li>• Mid. cutting conditions - chip breaker for General machining</li> <li>• First choice for Un-stable machining with reasonable cutting pressure</li> <li>• Reinforced chipbreaker allows for high shock resistance</li> <li>• Chip Control starts at Fz: 0.25</li> </ul>              |
| PR                             |    |    | <ul style="list-style-type: none"> <li>• Roughing chip breaker mostly used in tough machining applications</li> <li>• First choice for very Un-stable machining or for thick casting "skin"</li> <li>• Tough and reinforced cutting edge and chip breaker angles</li> <li>• Chip Control starts at Fz: 0.35</li> </ul>       |
| (A)                            |  |  | <ul style="list-style-type: none"> <li>• Flat top insert design</li> <li>• used mostly for Cast iron applications</li> <li>• Chip Control starts at Fz: 0.15</li> <li>• Use with UN 7010 grade for best results</li> </ul>                                                                                                   |
| (X)                            |  |  | <ul style="list-style-type: none"> <li>• Sharp chip breaker</li> <li>• For finishing operations with performance similar to KNUX</li> <li>• Also adopted for sticky material, Stainless steel and Aerospace Material</li> <li>• Chip Control starts at Fz: 0.10</li> </ul>                                                   |
| MF                             |  |  | <ul style="list-style-type: none"> <li>• Sharp chip breaker - especially developed for stainless Applications</li> <li>• For finishing operations</li> <li>• Also adopted for very soft or sticky material</li> <li>• Chip Control starts at Fz: 0.10</li> </ul>                                                             |
| MM                             |  |  | <ul style="list-style-type: none"> <li>• Semi Finishing chip breaker - especially developed for stainless Applications</li> <li>• First choice for all stainless steel applications</li> <li>• Also adopted for very soft, sticky material and some Aerospace material</li> <li>• Chip Control starts at Fz: 0.14</li> </ul> |

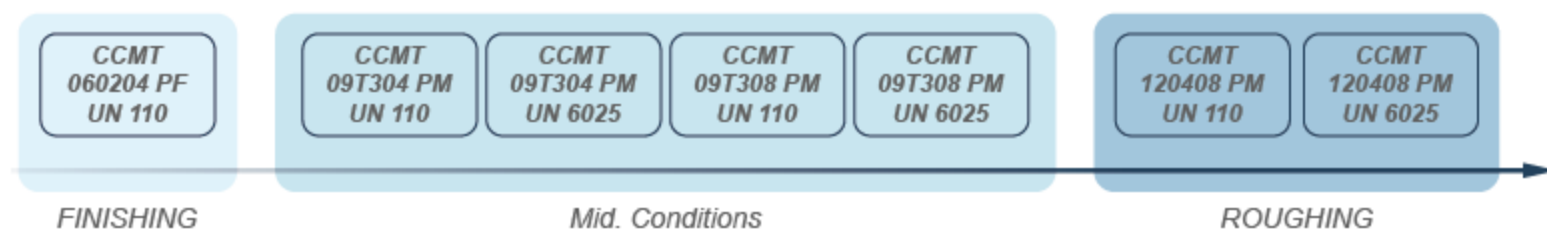


## FAMILY

|            |                |        | IC    | LE    | RE   | S    |
|------------|----------------|--------|-------|-------|------|------|
| 5100000106 | CCMT 060204 PF | UN110  | 6.35  | 6.35  | 0.40 | 2.38 |
| 5100000110 | CCMT 09T304 PM | UN110  | 9.53  | 9.53  | 0.40 | 3.97 |
| 5100000112 | CCMT 09T304 PM | UN6025 | 9.53  | 9.53  | 0.40 | 3.97 |
| 5100000114 | CCMT 09T308 PM | UN110  | 9.53  | 9.53  | 0.80 | 3.97 |
| 5100000116 | CCMT 09T308 PM | UN6025 | 9.53  | 9.53  | 0.80 | 3.97 |
| 5100000118 | CCMT 120408 PM | UN110  | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000120 | CCMT 120408 PM | UN6025 | 12.70 | 12.70 | 0.80 | 4.76 |



## PRODUCT - LINE UP



## Chip Breakers

## PF

- Sharp Chip-breaker
- for Finishing and sticky material

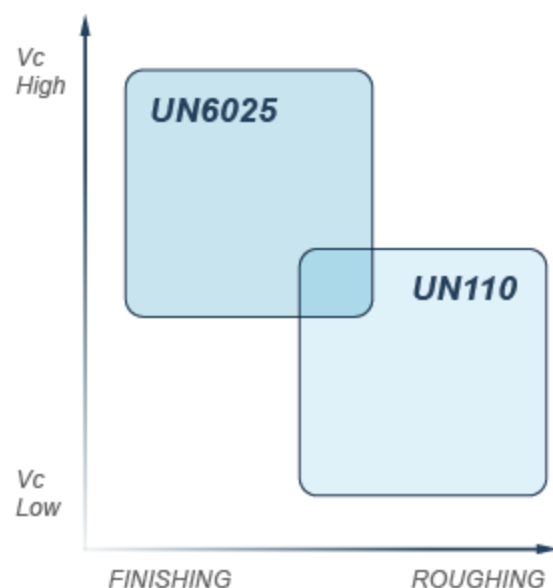
• Starting Feed (Fz) : 0.12 (mm/Rev) **P M K**

## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for ALL conditions

• Starting Feed (Fz) : 0.18 (mm/Rev) **P M K**

## GRADES



- UN6025**
- Cobalt Enriched & Alpha Alumina CVD
  - General Purpose internal and external TURNING Applications
  - Where a good balance of wear resistance and toughness is required

- UN110**
- Sub Micron Substrate & thick Hyper Pulsed PVD coating
  - Suitable for Low to Mid Cutting Speeds in INTERNAL TURNING
  - An excellent option for tough, aggressive and non stable condition

## Cutting Conditions

## CCMT 060204 PF UN110

| (P)<br>STEEL   | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|----------------|------------------------|------------------|
| Vc 80 - 180    | Vc 100 - 170           | Vc 100 - 180     |
| Fz 0.12 - 0.18 | Fz 0.12 - 0.18         | Fz 0.12 - 0.18   |
| Ap 0.3 - 1.0   | Ap 0.3 - 1.0           | Ap 0.3 - 2.0     |

TOOL HOLDER COMPATABILITY

ISO Standard

## CCMT 09T304 PM UN110

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 80 - 180    | Vc 100 - 170    | Vc 100 - 180   |
| Fz 0.14 - 0.22 | Fz 0.14 - 0.22  | Fz 0.14 - 0.22 |
| Ap 0.3 - 2.0   | Ap 0.3 - 2.0    | Ap 0.3 - 3.0   |

TOOL HOLDER COMPATABILITY

ISO Standard

## CCMT 09T304 PM UN6025

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 120 - 210   | Vc 120 - 170    | Vc 120 - 230   |
| Fz 0.14 - 0.22 | Fz 0.14 - 0.22  | Fz 0.14 - 0.22 |
| Ap 0.3 - 2.0   | Ap 0.3 - 2.0    | Ap 0.3 - 3.0   |

TOOL HOLDER COMPATABILITY

ISO Standard

## CCMT 09T308 PM UN110

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 80 - 180    | Vc 120 - 170    | Vc 100 - 180   |
| Fz 0.14 - 0.22 | Fz 0.14 - 0.22  | Fz 0.14 - 0.22 |
| Ap 0.5 - 3.0   | Ap 0.5 - 4.0    | Ap 0.5 - 4.0   |

TOOL HOLDER COMPATABILITY

ISO Standard

## CCMT 09T308 PM UN6025

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 120 - 210   | Vc 120 - 170    | Vc 120 - 230   |
| Fz 0.14 - 0.22 | Fz 0.14 - 0.22  | Fz 0.14 - 0.22 |
| Ap 0.5 - 3.0   | Ap 0.5 - 4.0    | Ap 0.5 - 4.0   |

TOOL HOLDER COMPATABILITY

ISO Standard

## CCMT 120408 PM UN110

| STEEL          | STAINLESS STEEL | CAST IRON      |
|----------------|-----------------|----------------|
| Vc 80 - 180    | Vc 120 - 170    | Vc 100 - 180   |
| Fz 0.18 - 0.30 | Fz 0.18 - 0.30  | Fz 0.18 - 0.30 |
| Ap 0.5 - 4.0   | Ap 0.5 - 5.0    | Ap 0.5 - 5.0   |

TOOL HOLDER COMPATABILITY

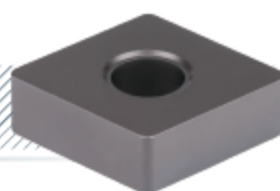
ISO Standard

## CCMT 120408 PM UN6025

| (P)<br>STEEL   | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|----------------|------------------------|------------------|
| Vc 120 - 210   | Vc 120 - 270           | Vc 120 - 230     |
| Fz 0.18 - 0.30 | Fz 0.18 - 0.30         | Fz 0.18 - 0.30   |
| Ap 0.5 - 4.0   | Ap 0.5 - 5.0           | Ap 0.5 - 5.0     |

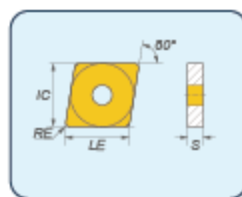
TOOL HOLDER COMPATABILITY

ISO Standard

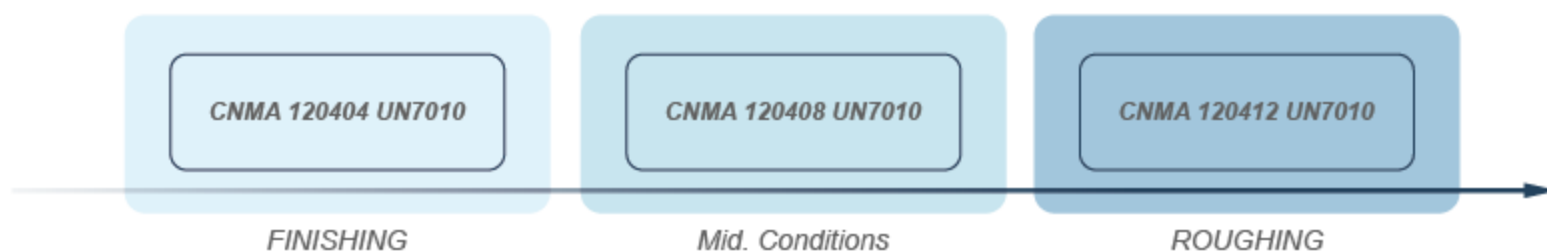


## FAMILY

|            |             |        | IC    | LE    | RE   | S    |
|------------|-------------|--------|-------|-------|------|------|
| 5100000238 | CNMA 120404 | UN7010 | 12.70 | 12.70 | 0.40 | 4.76 |
| 5100000090 | CNMA 120408 | UN7010 | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000092 | CNMA 120412 | UN7010 | 12.70 | 12.70 | 1.20 | 4.76 |



## PRODUCT - LINE UP



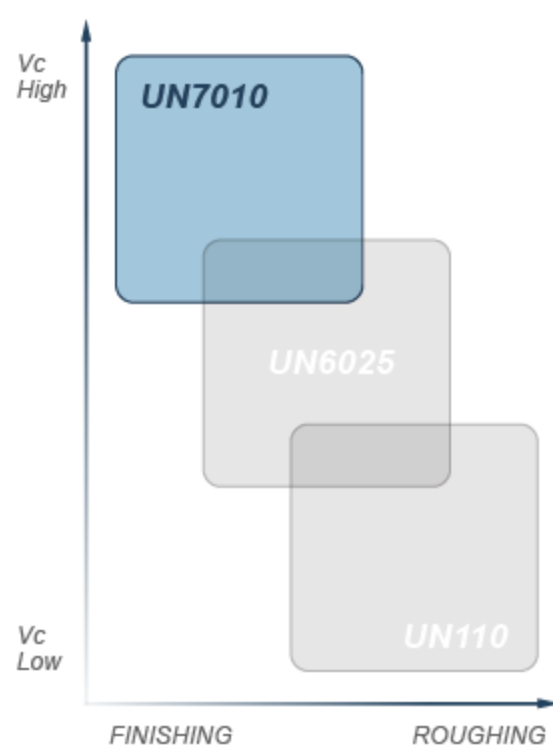
## Chip Breakers

## A

- Flat top chip breaker
- For all cast iron application

• Starting Feed (Fz) : 0.15 (mm/Rev) **K**

## GRADES



## UN7010

- Hard K10 substrate with Thick Alumina (Alpha) CVD coating
- For high speed CAST IRON TURNING Applications
- Where the focus is on very high abrasive wear resistance and high speed machining.
- First Choice for cast iron application

## Cutting Conditions

(P)  
STEEL  
TOOL HOLDER COMPATABILITY

(M)  
STAINLESS STEEL  
ISO Standard

## CNMA 120404 UN7010

(K)  
CAST IRON  
Vc 140 - 300  
Fz 0.15 - 0.60  
Ap 0.2 - 4.0

STEEL  
TOOL HOLDER COMPATABILITY

STAINLESS STEEL  
ISO Standard

## CNMA 120408 UN7010

CAST IRON  
Vc 140 - 300  
Fz 0.15 - 0.60  
Ap 0.3 - 6.0

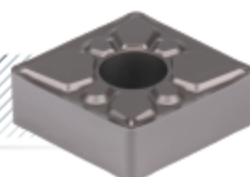


STEEL  
TOOL HOLDER COMPATABILITY

STAINLESS STEEL  
ISO Standard

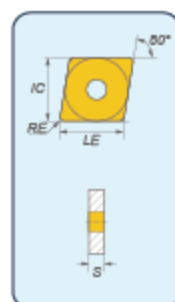
## CNMA 120412 UN7010

CAST IRON  
Vc 140 - 300  
Fz 0.15 - 0.60  
Ap 0.4 - 8.0

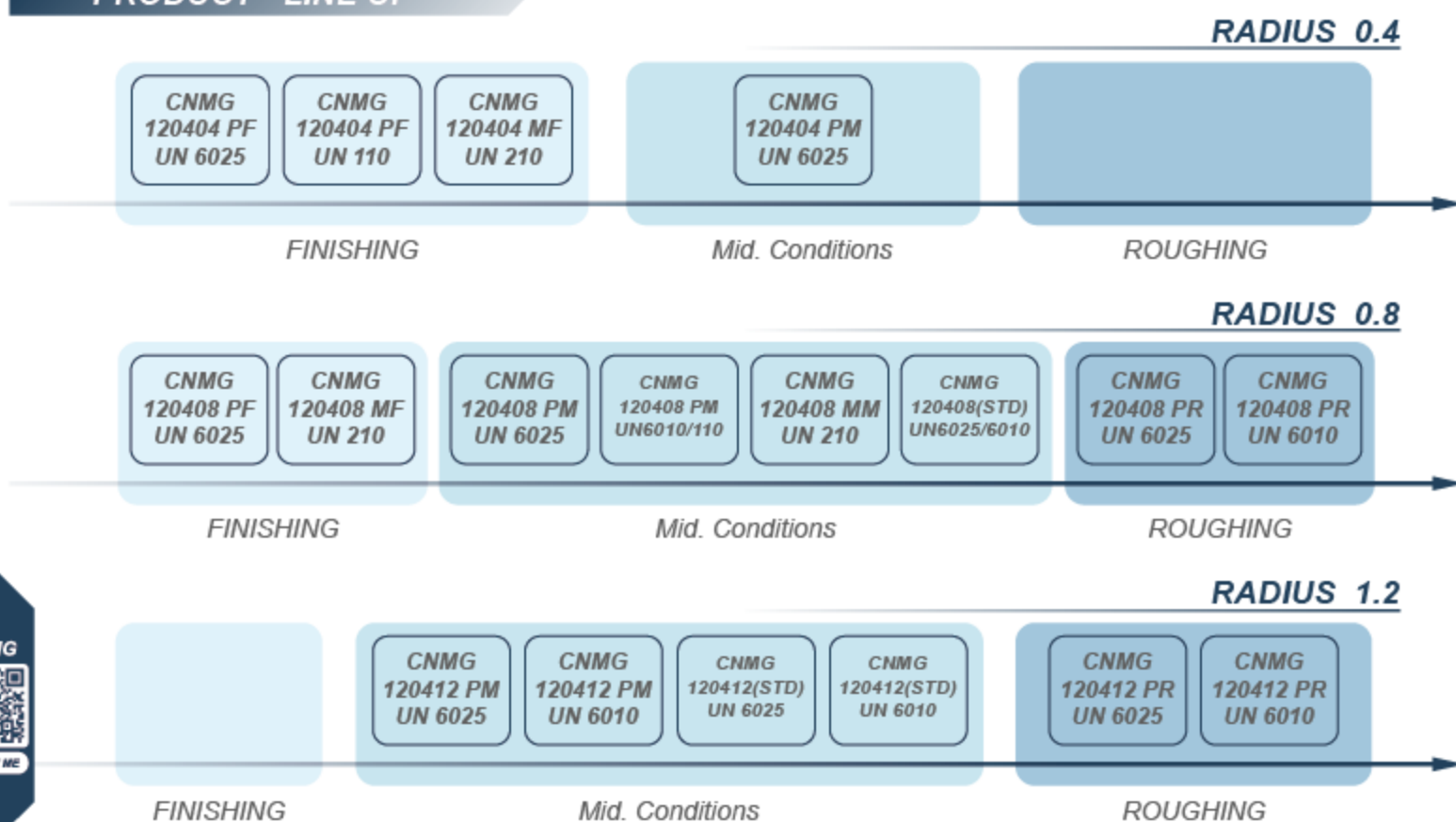


## FAMILY

|            |                |        | IC    | LE    | RE   | S    |
|------------|----------------|--------|-------|-------|------|------|
| 5100000004 | CNMG 120404 PF | UN6025 | 12.70 | 12.70 | 0.40 | 4.76 |
| 5100000162 | CNMG 120404 PM | UN6025 | 12.70 | 12.70 | 0.40 | 4.76 |
| 5100000234 | CNMG 120404 PF | UN110  | 12.70 | 12.70 | 0.40 | 4.76 |
| 5100000006 | CNMG 120404 MF | UN210  | 12.70 | 12.70 | 0.40 | 4.76 |
| 5100000008 | CNMG 120408 PF | UN6025 | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000014 | CNMG 120408 MF | UN210  | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000012 | CNMG 120408 PM | UN6025 | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000010 | CNMG 120408 PM | UN6010 | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000236 | CNMG 120408 PM | UN110  | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000020 | CNMG 120408 MM | UN210  | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000160 | CNMG 120408    | UN6025 | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000158 | CNMG 120408    | UN6010 | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000018 | CNMG 120408 PR | UN6025 | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000016 | CNMG 120408 PR | UN6010 | 12.70 | 12.70 | 0.80 | 4.76 |
| 5100000024 | CNMG 120412 PM | UN6025 | 12.70 | 12.70 | 1.20 | 4.76 |
| 5100000022 | CNMG 120412 PM | UN6010 | 12.70 | 12.70 | 1.20 | 4.76 |
| 5100000194 | CNMG 120412    | UN6025 | 12.70 | 12.70 | 1.20 | 4.76 |
| 5100000096 | CNMG 120412    | UN6010 | 12.70 | 12.70 | 1.20 | 4.76 |
| 5100000030 | CNMG 120412 PR | UN6025 | 12.70 | 12.70 | 1.20 | 4.76 |
| 5100000028 | CNMG 120412 PR | UN6010 | 12.70 | 12.70 | 1.20 | 4.76 |



## PRODUCT - LINE UP



## Chip Breakers

### PF

- Sharp Chip-breaker
- for Finishing and sticky material

• Starting Feed (Fz) : 0.12 (mm/Rev)

P M K

### PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions

• Starting Feed (Fz) : 0.18 (mm/Rev)

P M K

### (STD)

- Mid. conditions Chip-breaker
- for General-tough or unstable machining conditions

• Starting Feed (Fz) : 0.25 (mm/Rev)

P K

### PR

- Tough Chip-breaker
- for tough, Interrupted or very unstable conditions

• Starting Feed (Fz) : 0.35 (mm/Rev)

P K

### MF

- Unique and very Sharp Chip-breaker
- for Finishing of Stainless steel and Aerospace material

• Starting Feed (Fz) : 0.11 (mm/Rev)

M S

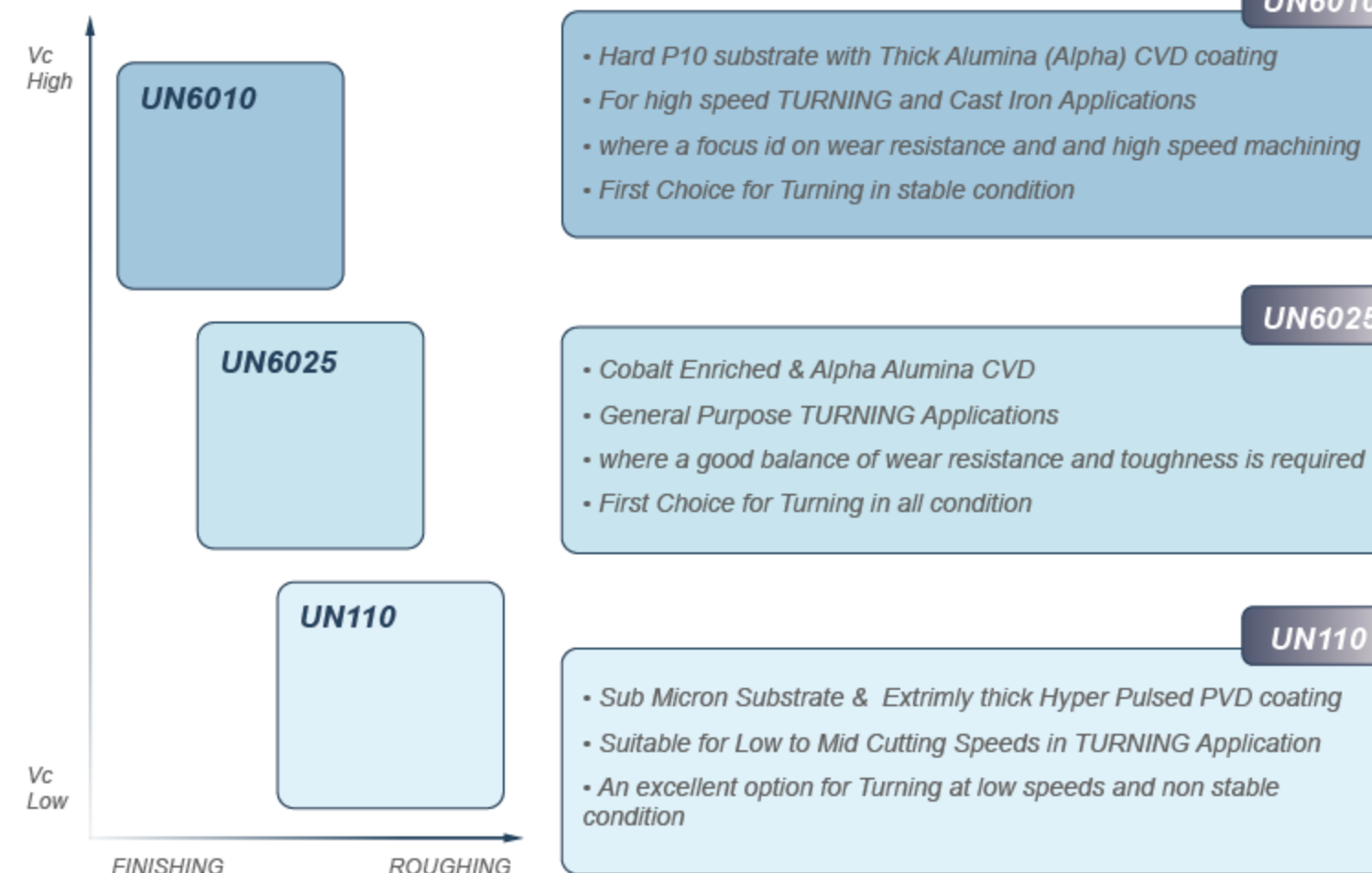
### MM

- Unique and Mid. conditions Chip-breaker
- First Choice for Stainless steel and Aerospace material

• Starting Feed (Fz) : 0.15 (mm/Rev)

M S

## GRADES



## Cutting Conditions

RADIUS 0.4

### CNMG 120404 PF UN6025

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.10 - 0.40<br>Ap 0.3 - 1.0 | Vc 120 - 240<br>Fz 0.10 - 0.40<br>Ap 0.3 - 1.0 | Vc 120 - 270<br>Fz 0.10 - 0.40<br>Ap 0.3 - 1.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120404 PM UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.14 - 0.30<br>Ap 0.2 - 4.0 | Vc 120 - 240<br>Fz 0.14 - 0.30<br>Ap 0.3 - 3.0 | Vc 120 - 270<br>Fz 0.14 - 0.30<br>Ap 0.2 - 4.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120404 PF UN110

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 100 - 180<br>Fz 0.10 - 0.40<br>Ap 0.3 - 1.0 | Vc 140 - 170<br>Fz 0.10 - 0.40<br>Ap 0.3 - 1.0 | Vc 100 - 180<br>Fz 0.10 - 0.40<br>Ap 0.3 - 1.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120404 MF UN210

| STEEL                                         | STAINLESS STEEL                                | CAST IRON |
|-----------------------------------------------|------------------------------------------------|-----------|
| Vc 80 - 160<br>Fz 0.08 - 0.18<br>Ap 0.2 - 4.0 | Vc 120 - 160<br>Fz 0.08 - 0.18<br>Ap 0.2 - 4.0 |           |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |           |

RADIUS 0.8

### CNMG 120408 PF UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 240<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 270<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120408 MF UN210

| STEEL                                         | STAINLESS STEEL                                | CAST IRON |
|-----------------------------------------------|------------------------------------------------|-----------|
| Vc 80 - 160<br>Fz 0.08 - 0.18<br>Ap 0.4 - 4.0 | Vc 120 - 160<br>Fz 0.08 - 0.18<br>Ap 0.4 - 4.0 |           |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |           |

### CNMG 120408 PM UN6025

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.18 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 240<br>Fz 0.18 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 270<br>Fz 0.18 - 0.30<br>Ap 0.4 - 5.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120408 PM UN6010

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 120 - 300<br>Fz 0.18 - 0.30<br>Ap 0.4 - 5.0 |                 | Vc 150 - 290<br>Fz 0.18 - 0.30<br>Ap 0.4 - 5.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard    |                                                |

### CNMG 120408 PM UN110

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.18 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 240<br>Fz 0.18 - 0.30<br>Ap 0.4 - 5.0 | Vc 160 - 270<br>Fz 0.16 - 0.30<br>Ap 0.4 - 5.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120408 MM UN210

| STEEL                                         | STAINLESS STEEL                                | CAST IRON |
|-----------------------------------------------|------------------------------------------------|-----------|
| Vc 80 - 160<br>Fz 0.12 - 0.24<br>Ap 0.4 - 4.0 | Vc 120 - 160<br>Fz 0.12 - 0.24<br>Ap 0.4 - 4.0 |           |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |           |

### CNMG 120408 PR UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 | Vc 140 - 210<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 | Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120408 PR UN6010

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 |                 | Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard    |                                                |

### CNMG 120408 UN6025

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.5 - 7.0 | Vc 140 - 210<br>Fz 0.24 - 0.45<br>Ap 0.5 - 7.0 | Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.5 - 7.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120408 UN6010

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.5 - 7.0 |                 | Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.5 - 7.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard    |                                                |

### CNMG 120412 STD UN6025

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.8 - 7.0 | Vc 140 - 210<br>Fz 0.24 - 0.45<br>Ap 0.8 - 7.0 | Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.8 - 7.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120412 UN6010

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.8 - 7.0 |                 | Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.8 - 7.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard    |                                                |

RADIUS 1.2

### CNMG 120412 PM UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.14 - 0.30<br>Ap 0.7 - 5.0 | Vc 120 - 240<br>Fz 0.14 - 0.30<br>Ap 0.7 - 5.0 | Vc 120 - 270<br>Fz 0.14 - 0.30<br>Ap 0.7 - 5.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### CNMG 120412 PM UN6010

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 120 - 300<br>Fz 0.14 - 0.30<br>Ap 0.7 - 5.0 |                 | Vc 150 - 290<br>Fz 0.14 - 0.30<br>Ap 0.7 - 5.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard    |                                                |

### CNMG 120412 PR UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.1 - 7.0 | Vc 140 - 210<br>Fz 0.34 - 0.50<br>Ap 0.1 - 7.0 | Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.1 - 7.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

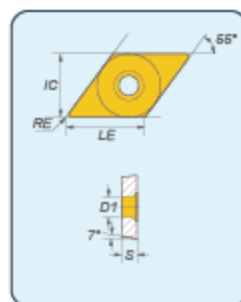
### CNMG 120412 PR UN6010

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.1 - 7.0 |                 | Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.1 - 7.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard    |                                                |

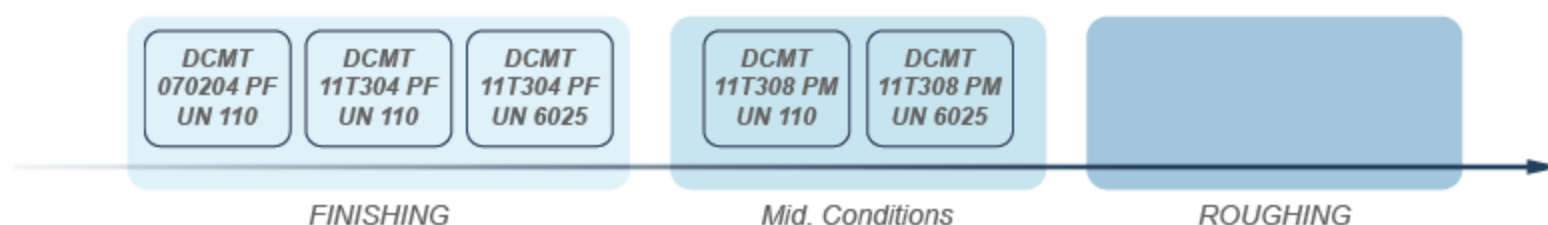


## FAMILY

|            |                |        | IC   | LE    | RE   | S    |
|------------|----------------|--------|------|-------|------|------|
| 5100000122 | DCMT 070204 PF | UN110  | 6.35 | 7.75  | 0.40 | 2.38 |
| 5100000126 | DCMT 11T304 PF | UN110  | 9.53 | 11.60 | 0.40 | 3.97 |
| 5100000128 | DCMT 11T304 PF | UN6025 | 9.53 | 11.60 | 0.40 | 3.97 |
| 5100000130 | DCMT 11T308 PM | UN110  | 9.53 | 11.60 | 0.80 | 3.97 |
| 5100000132 | DCMT 11T308 PM | UN6025 | 9.53 | 11.60 | 0.80 | 3.97 |



## PRODUCT - LINE UP



## Chip Breakers

## PF

- Sharp Chip-breaker
- for Finishing and sticky material

• Starting Feed (Fz) : 0.12 (mm/Rev)



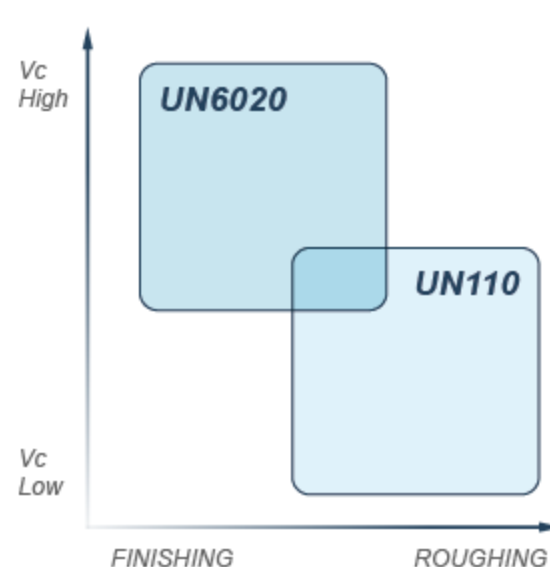
## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for ALL conditions

• Starting Feed (Fz) : 0.18 (mm/Rev)



## GRADES



## UN6020

- Cobalt Enriched & Alpha Alumina CVD
- General Purpose internal and external TURNING Applications
- where a good balance of wear resistance and toughness is required

## UN110

- Sub Micron Substrate & thick Hyper Pulsed PVD coating
- Suitable for Low to Mid Cutting Speeds in INTERNAL TURNING
- An excellent option for tough, aggressive and non stable condition

## Cutting Conditions

## DCMT 070204 PF UN110

| (P)<br>STEEL              | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|---------------------------|------------------------|------------------|
| Vc 80 - 180               | Vc 120 - 170           | Vc 100 - 180     |
| Fz 0.08 - 0.15            | Fz 0.08 - 0.15         | Fz 0.06 - 0.17   |
| Ap 0.3 - 1.0              | Ap 0.3 - 1.0           | Ap 0.3 - 2.0     |
| TOOL HOLDER COMPATABILITY | ISO Standard           |                  |

## DCMT11T304 PF UN110

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 80 - 180               | Vc 140 - 170    | Vc 100 - 180   |
| Fz 0.10 - 0.18            | Fz 0.08 - 0.18  | Fz 0.08 - 0.02 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 2.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## DCMT11T304 PF UN6025

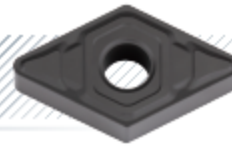
| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 210              | Vc 120 - 170    | Vc 120 - 230   |
| Fz 0.10 - 0.18            | Fz 0.08 - 0.18  | Fz 0.08 - 0.02 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 2.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## DCMT 11T308 PM UN110

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 80 - 180               | Vc 120 - 170    | Vc 100 - 180   |
| Fz 0.10 - 0.18            | Fz 0.08 - 0.18  | Fz 0.08 - 0.02 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 2.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

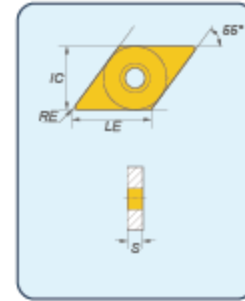
## DCMT 11T308 PM UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 210              | Vc 120 - 170    | Vc 120 - 230   |
| Fz 0.10 - 0.18            | Fz 0.08 - 0.18  | Fz 0.08 - 0.02 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 2.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

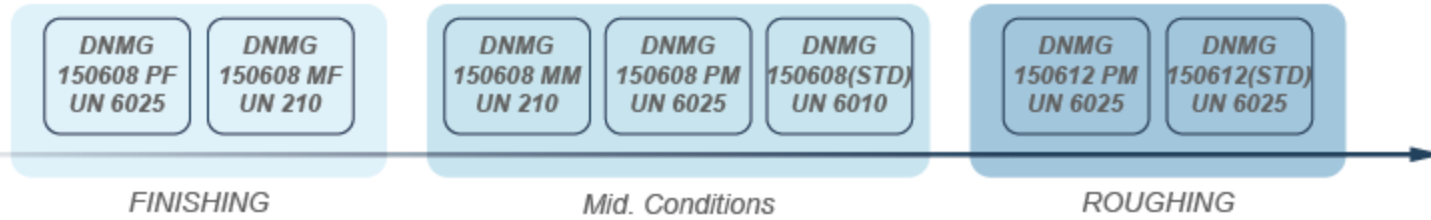


## FAMILY

|            |                |        | IC    | LE    | RE   | S    |
|------------|----------------|--------|-------|-------|------|------|
| 5100000038 | DNMG 150608 PF | UN6025 | 12.70 | 15.50 | 0.80 | 6.35 |
| 5100000026 | DNMG 150608 MF | UN210  | 12.70 | 15.50 | 0.80 | 6.35 |
| 5100000040 | DNMG 150608 PM | UN6025 | 12.70 | 15.50 | 0.80 | 6.35 |
| 5100000124 | DNMG 150608 MM | UN210  | 12.70 | 15.50 | 0.80 | 6.35 |
| 5100000002 | DNMG 150608    | UN6010 | 12.70 | 15.50 | 0.80 | 6.35 |
| 5100000222 | DNMG 150612 PM | UN6025 | 12.70 | 15.50 | 1.20 | 6.35 |
| 5100000244 | DNMG 150612    | UN6025 | 12.70 | 15.50 | 1.20 | 6.35 |



## PRODUCT - LINE UP



## Chip Breakers

## PF

- Sharp Chip-breaker
- for Finishing and sticky material

• Starting Feed (Fz) : 0.12 (mm/Rev)

P M K

## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions

• Starting Feed (Fz) : 0.18 (mm/Rev)

P M K

## (STD)

- Mid. conditions Chip-breaker
- for General-tough or unstable machining conditions

• Starting Feed (Fz) : 0.25 (mm/Rev)

P K

## MF

- Unique and very Sharp Chip-breaker
- for Finishing of Stainless steel and Aerospace material

• Starting Feed (Fz) : 0.11 (mm/Rev)

M S

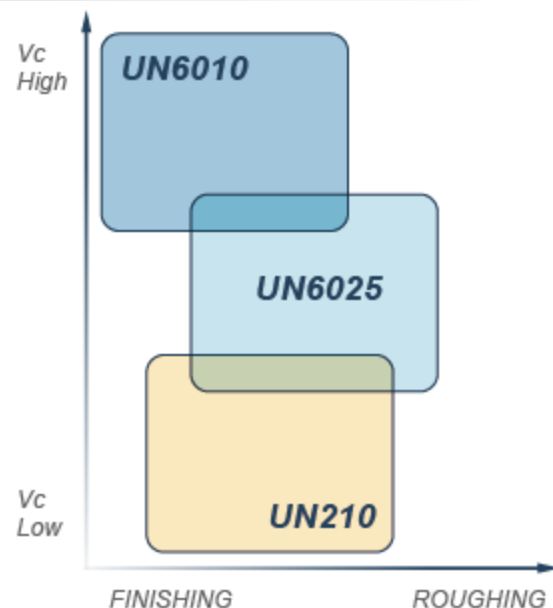
## MM

- Unique and Mid. conditions Chip-breaker
- First Choice for Stainless steel and Aerospace material

• Starting Feed (Fz) : 0.15 (mm/Rev)

M S

## GRADES



**UN6010**

- Hard P10 substrate with Thick Alumina (Alpha) CVD coating
- For high speed CAST IRON TURNING Applications
- where the focus is on very high abrasive wear resistance and high speed machining.
- First Choice for cast iron application

**UN6025**

- Cobalt Enriched & Alpha Alumina CVD
- General Purpose internal and external TURNING Applications
- where a good balance of wear resistance and toughness is required

**UN210**

- Sub Micron Substrate & unique and Patented Hyper Pulsed PVD Coating
- Suitable for all STAINLESS STEEL applications
- Especially developed to delay Notch wear damage

## Cutting Conditions

## DNMG 150608 PF UN6025

| (P)                       | (M)             | (K)            |
|---------------------------|-----------------|----------------|
| STEEL                     | STAINLESS STEEL | CAST IRON      |
| Vc 120 - 240              | Vc 120 - 240    | Vc 120 - 250   |
| Fz 0.10 - 0.40            | Fz 0.10 - 0.40  | Fz 0.10 - 0.40 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 2.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## DNMG 150608 MF UN110

| STEEL                     | STAINLESS STEEL | CAST IRON |
|---------------------------|-----------------|-----------|
| Vc 80 - 160               | Vc 140 - 160    |           |
| Fz 0.06 - 0.18            | Fz 0.07 - 0.18  |           |
| Ap 0.4 - 4.0              | Ap 0.4 - 4.0    |           |
| TOOL HOLDER COMPATABILITY | ISO Standard    |           |

## DNMG 150608 PM UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 240              | Vc 120 - 240    | Vc 120 - 250   |
| Fz 0.14 - 0.42            | Fz 0.16 - 0.42  | Fz 0.14 - 0.42 |
| Ap 0.5 - 4.0              | Ap 0.5 - 4.0    | Ap 0.5 - 4.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## DNMG 150608 MM UN110

| STEEL                     | STAINLESS STEEL | CAST IRON |
|---------------------------|-----------------|-----------|
| Vc 80 - 160               | Vc 140 - 160    |           |
| Fz 0.14 - 0.22            | Fz 0.15 - 0.22  |           |
| Ap 0.4 - 4.0              | Ap 0.4 - 4.0    |           |
| TOOL HOLDER COMPATABILITY | ISO Standard    |           |

## DNMG 150608 UN6010

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 240              |                 | Vc 120 - 250   |
| Fz 0.18 - 0.42            |                 | Fz 0.16 - 0.42 |
| Ap 0.5 - 4.0              |                 | Ap 0.5 - 4.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## DNMG 150612 PM UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 240              | Vc 120 - 240    | Vc 120 - 250   |
| Fz 0.18 - 0.50            | Fz 0.20 - 0.50  | Fz 0.18 - 0.50 |
| Ap 0.6 - 5.0              | Ap 0.6 - 5.0    | Ap 0.6 - 5.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

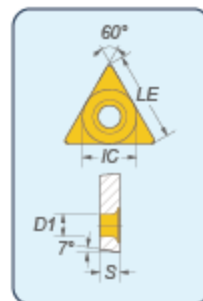
## DNMG 150612 UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 240              | Vc 120 - 240    | Vc 120 - 250   |
| Fz 0.18 - 0.50            | Fz 0.20 - 0.50  | Fz 0.18 - 0.50 |
| Ap 0.6 - 5.0              | Ap 0.6 - 5.0    | Ap 0.6 - 5.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

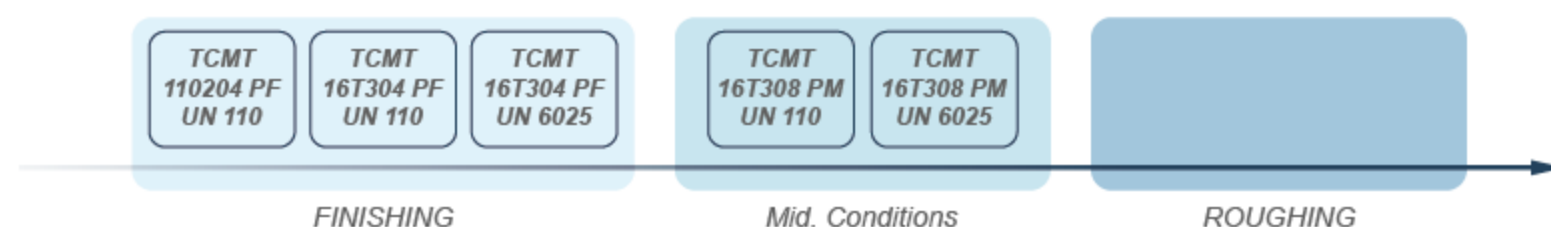


## FAMILY

|            |                |        | IC   | LE    | RE   | S    |
|------------|----------------|--------|------|-------|------|------|
| 5100000138 | TCMT 110204 PF | UN110  | 6.35 | 11.00 | 0.40 | 2.41 |
| 5100000142 | TCMT 16T304 PF | UN110  | 9.53 | 16.50 | 0.40 | 4.02 |
| 5100000144 | TCMT 16T304 PF | UN6025 | 9.53 | 16.50 | 0.40 | 4.02 |
| 5100000146 | TCMT 16T308 PM | UN110  | 9.53 | 16.50 | 0.80 | 4.02 |
| 5100000148 | TCMT 16T308 PM | UN6025 | 9.53 | 16.50 | 0.80 | 4.02 |



## PRODUCT - LINE UP



## Chip Breakers

## PF

- Sharp Chip-breaker
- for Finishing and sticky material

• Starting Feed (Fz) : 0.12 (mm/Rev)



## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for ALL conditions

• Starting Feed (Fz) : 0.18 (mm/Rev)



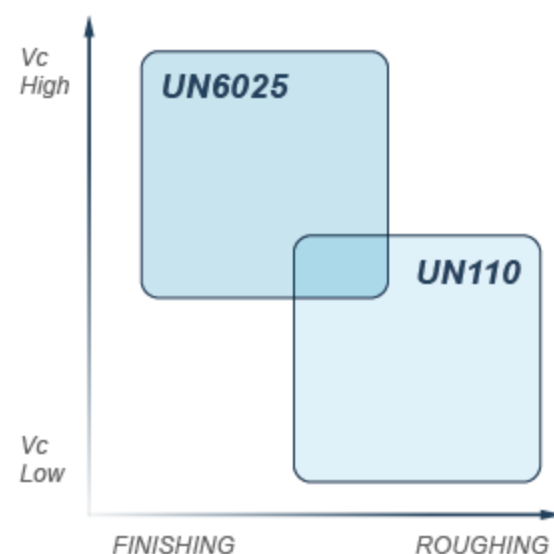
## GRADES

## UN6025

- Cobalt Enriched & Alpha Alumina CVD
- General Purpose internal and external TURNING Applications
- where a good balance of wear resistance and toughness is required

## UN110

- Sub Micron Substrate & thick Hyper Pulsed PVD coating
- Suitable for Low to Mid Cutting Speeds in INTERNAL TURNING
- An excellent option for tough, aggressive and non stable condition



## Cutting Conditions

## TCMT 110204 PF UN110

| (P)<br>STEEL              | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|---------------------------|------------------------|------------------|
| Vc 80 - 180               | Vc 100 - 170           | Vc 100 - 180     |
| Fz 0.10 - 0.15            | Fz 0.12 - 0.15         | Fz 0.08 - 0.17   |
| Ap 0.3 - 1.0              | Ap 0.3 - 1.0           | Ap 0.3 - 2.0     |
| TOOL HOLDER COMPATABILITY | ISO Standard           |                  |

## TCMT 16T304 PF UN110

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 80 - 180               | Vc 100 - 170    | Vc 100 - 180   |
| Fz 0.10 - 0.18            | Fz 0.08 - 0.18  | Fz 0.08 - 0.02 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 3.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## TCMT 16T304 PF UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 210              | Vc 120 - 170    | Vc 120 - 230   |
| Fz 0.10 - 0.18            | Fz 0.08 - 0.18  | Fz 0.08 - 0.02 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 3.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## TCMT 16T308 PM UN110

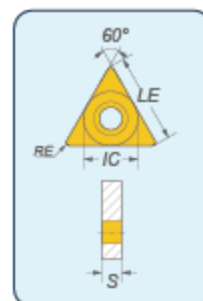
| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 80 - 180               | Vc 100 - 170    | Vc 100 - 180   |
| Fz 0.12 - 0.24            | Fz 0.14 - 0.24  | Fz 0.12 - 0.35 |
| Ap 0.5 - 4.0              | Ap 0.5 - 5.0    | Ap 0.5 - 5.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## TCMT 16T308 PM UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 210              | Vc 120 - 170    | Vc 120 - 230   |
| Fz 0.12 - 0.24            | Fz 0.14 - 0.24  | Fz 0.12 - 0.35 |
| Ap 0.5 - 4.0              | Ap 0.5 - 5.0    | Ap 0.5 - 5.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## FAMILY

|            |             |        | IC   | LE    | RE   | S    |
|------------|-------------|--------|------|-------|------|------|
| 5100000196 | TNMA 160404 | UN7010 | 9.53 | 16.50 | 0.40 | 4.76 |
| 5100000098 | TNMA 160408 | UN7010 | 9.53 | 16.50 | 0.80 | 4.76 |
| 5100000100 | TNMA 160412 | UN7010 | 9.53 | 16.50 | 1.20 | 4.76 |



## PRODUCT - LINE UP

TNMA 160404 UN 7010

TNMA 160408 UN 7010

TNMA 160412 UN 7010

FINISHING

Mid. Conditions

ROUGHING

## Chip Breakers

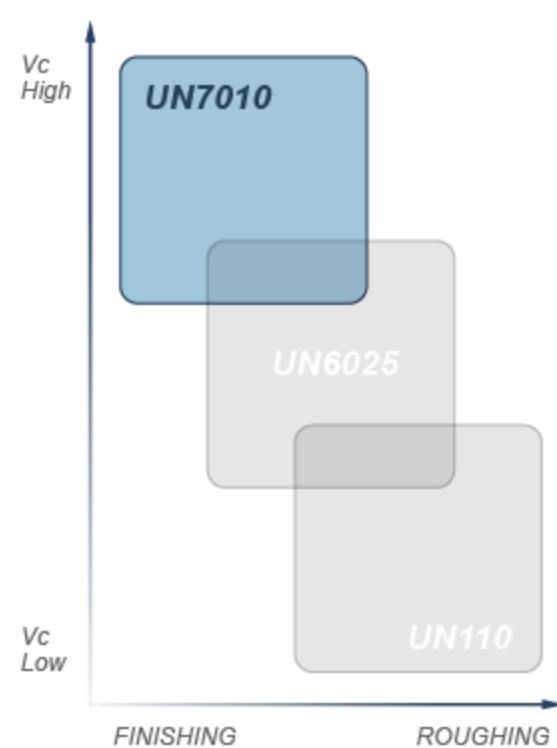
A

- Flat top chip breaker
- For all cast iron application

• Starting Feed (Fz) : 0.15 (mm/Rev)

K

## GRADES



UN7010

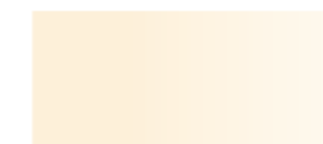
- Hard K10 substrate with Thick Alumina (Alpha) CVD coating
- For high speed CAST IRON TURNING Applications
- Where the focus is on very high abrasive wear resistance and high speed machining.
- First Choice for cast iron application

## Cutting Conditions

## TNMA 160404 UN 7010

(P)  
STEEL

TOOL HOLDER COMPATABILITY

(M)  
STAINLESS STEEL

ISO Standard

(K)  
CAST IRON

|    |             |
|----|-------------|
| Vc | 150 - 230   |
| Fz | 0.15 - 0.60 |
| Ap | 0.2 - 7.0   |

## TNMA 160408 UN7010

STEEL



TOOL HOLDER COMPATABILITY

STAINLESS STEEL



ISO Standard

CAST IRON

|    |             |
|----|-------------|
| Vc | 150 - 230   |
| Fz | 0.15 - 0.60 |
| Ap | 0.4 - 7.0   |

1st Choice

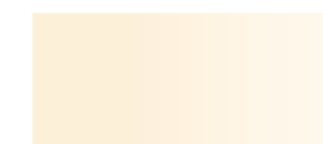
## TNMA 160412 UN7010

STEEL



TOOL HOLDER COMPATABILITY

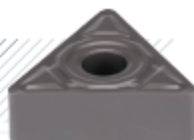
STAINLESS STEEL



ISO Standard

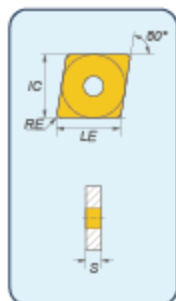
CAST IRON

|    |             |
|----|-------------|
| Vc | 150 - 230   |
| Fz | 0.15 - 0.60 |
| Ap | 0.6 - 7.0   |



## FAMILY

|            |                |        | IC   | LE    | RE   | S    |
|------------|----------------|--------|------|-------|------|------|
| 5100000182 | TNMG 160404 PF | UN110  | 9.52 | 16.50 | 0.40 | 4.76 |
| 5100000206 | TNMG 160404 MF | UN210  | 9.52 | 16.50 | 0.40 | 4.76 |
| 5100000042 | TNMG 160404 PF | UN6025 | 9.52 | 16.50 | 0.40 | 4.76 |
| 5100000200 | TNMG 160404 PM | UN110  | 9.52 | 16.50 | 0.40 | 4.76 |
| 5100000064 | TNMG 160404 PM | UN6025 | 9.52 | 16.50 | 0.40 | 4.76 |
| 5100000184 | TNMG 160408 PF | UN110  | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000060 | TNMG 160408 MF | UN210  | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000044 | TNMG 160408 PF | UN6025 | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000202 | TNMG 160408 PM | UN110  | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000050 | TNMG 160408 MM | UN210  | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000046 | TNMG 160408 PM | UN6025 | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000174 | TNMG 160408    | UN6010 | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000164 | TNMG 160408    | UN6025 | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000212 | TNMG 160408 PR | UN6025 | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000166 | TNMG 160412    | UN6025 | 9.52 | 16.50 | 1.20 | 4.76 |
| 5100000176 | TNMG 160412    | UN6010 | 9.52 | 16.50 | 1.20 | 4.76 |
| 5100000048 | TNMG 160412 PR | UN6025 | 9.52 | 16.50 | 1.20 | 4.76 |

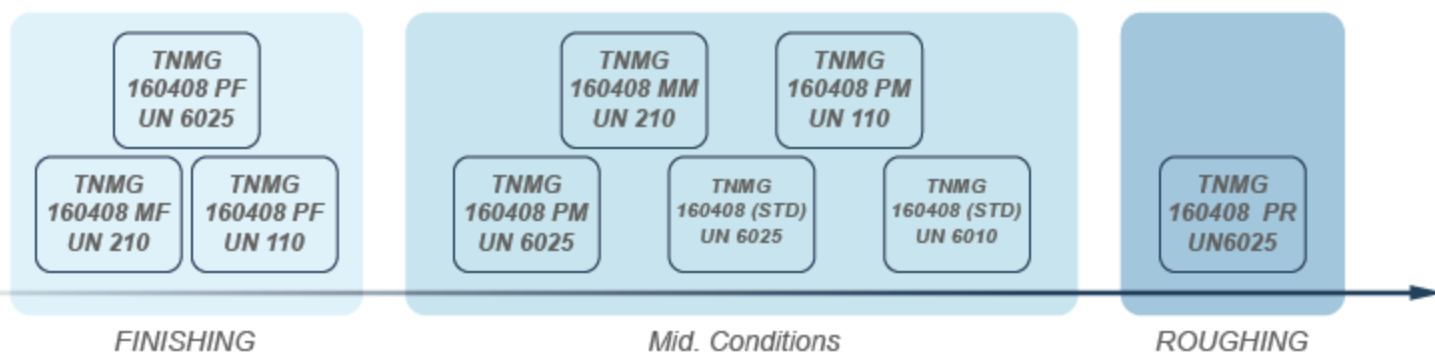


## PRODUCT - LINE UP

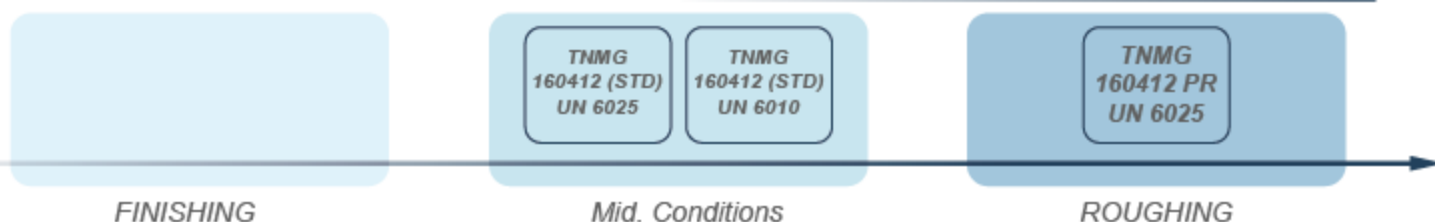
## RADIUS 0.4



## RADIUS 0.8



## RADIUS 1.2



## Chip Breakers

## PF

- Sharp Chip-breaker
- for Finishing and sticky material

• Starting Feed (Fz) : 0.12 (mm/Rev)

P M K

## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions

• Starting Feed (Fz) : 0.18 (mm/Rev)

P M K

## (STD)

- Mid. conditions Chip-breaker
- for General-tough or unstable machining conditions

• Starting Feed (Fz) : 0.25 (mm/Rev)

P K

## PR

- Tough Chip-breaker
- for tough, Interrupted or very unstable conditions

• Starting Feed (Fz) : 0.35 (mm/Rev)

P K

## MF

- Unique and very Sharp Chip-breaker
- for Finishing of Stainless steel and Aerospace material

• Starting Feed (Fz) : 0.11 (mm/Rev)

M S

## MM

- Unique and Mid. conditions Chip-breaker
- First Choice for Stainless steel and Aerospace material

• Starting Feed (Fz) : 0.15 (mm/Rev)

M S

## GRADES

Vc  
High

UN6010

- Hard P10 substrate with Thick Alumina (Alpha) CVD coating
- For high speed TURNING and Cast Iron Applications
- where a focus is on wear resistance and high speed machining
- First Choice for Turning in stable condition

UN6010

UN6025

- Cobalt Enriched & Alpha Alumina CVD
- General Purpose TURNING Applications
- where a good balance of wear resistance and toughness is required
- First Choice for Turning in all condition

UN6025

UN110

- Sub Micron Substrate & Extrimly thick Hyper Pulsed PVD coating
- Suitable for Low to Mid Cutting Speeds in TURNING Application
- An excellent option for Turning at low speeds and non stable condition

UN110

Vc  
Low

FINISHING

ROUGHING

## Cutting Conditions

RADIUS 0.4

### TNMG 160404 PF UN110

| (P)<br>STEEL                                  | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|-----------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 80 - 180<br>Fz 0.10 - 0.40<br>Ap 0.3 - 2.0 | Vc 100 - 170<br>Fz 0.10 - 0.40<br>Ap 0.3 - 2.0 | Vc 100 - 180<br>Fz 0.10 - 0.40<br>Ap 0.3 - 2.0 |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |                                                |

### TNMG 160404 MF UN210

| STEEL                                         | STAINLESS STEEL                               | CAST IRON |
|-----------------------------------------------|-----------------------------------------------|-----------|
| Vc 80 - 160<br>Fz 0.06 - 0.18<br>Ap 0.2 - 4.0 | Vc 80 - 160<br>Fz 0.07 - 0.18<br>Ap 0.2 - 4.0 |           |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                  |           |

### TNMG 160404 PF UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 240<br>Fz 0.10 - 0.40<br>Ap 0.3 - 2.0 | Vc 120 - 170<br>Fz 0.10 - 0.40<br>Ap 0.3 - 1.0 | Vc 120 - 250<br>Fz 0.10 - 0.40<br>Ap 0.3 - 1.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### TNMG 160404 PM UN110

| STEEL                                         | STAINLESS STEEL                                | CAST IRON                                      |
|-----------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 80 - 180<br>Fz 0.14 - 0.42<br>Ap 0.4 - 5.0 | Vc 100 - 170<br>Fz 0.14 - 0.42<br>Ap 0.4 - 5.0 | Vc 100 - 180<br>Fz 0.14 - 0.42<br>Ap 0.4 - 5.0 |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |                                                |

### TNMG 160404 PM UN6025

| STEEL                                         | STAINLESS STEEL                                | CAST IRON                                      |
|-----------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 80 - 180<br>Fz 0.14 - 0.42<br>Ap 0.4 - 5.0 | Vc 100 - 170<br>Fz 0.14 - 0.42<br>Ap 0.4 - 5.0 | Vc 100 - 180<br>Fz 0.14 - 0.42<br>Ap 0.4 - 5.0 |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |                                                |

RADIUS 0.8

### TNMG 160408 PF UN110

| STEEL                                         | STAINLESS STEEL                                | CAST IRON                                      |
|-----------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 80 - 180<br>Fz 0.10 - 0.40<br>Ap 0.4 - 2.0 | Vc 100 - 170<br>Fz 0.10 - 0.40<br>Ap 0.4 - 2.0 | Vc 100 - 180<br>Fz 0.10 - 0.40<br>Ap 0.4 - 2.0 |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |                                                |

### TNMG 160408 MF UN210

| (P)<br>STEEL                                  | (M)<br>STAINLESS STEEL                        | (K)<br>CAST IRON |
|-----------------------------------------------|-----------------------------------------------|------------------|
| Vc 80 - 160<br>Fz 0.06 - 0.18<br>Ap 0.4 - 4.0 | Vc 80 - 160<br>Fz 0.07 - 0.18<br>Ap 0.4 - 4.0 |                  |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                  |                  |

### TNMG 160408 PF UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 240<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 170<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 250<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### TNMG 160408 PM UN110

| STEEL                                         | STAINLESS STEEL                                | CAST IRON                                      |
|-----------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 80 - 180<br>Fz 0.14 - 0.42<br>Ap 0.5 - 5.0 | Vc 100 - 170<br>Fz 0.16 - 0.42<br>Ap 0.5 - 5.0 | Vc 100 - 180<br>Fz 0.14 - 0.42<br>Ap 0.5 - 5.0 |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |                                                |

### TNMG 160408 MM UN210

| STEEL                                         | STAINLESS STEEL                                | CAST IRON |
|-----------------------------------------------|------------------------------------------------|-----------|
| Vc 80 - 160<br>Fz 0.14 - 0.22<br>Ap 0.4 - 4.0 | Vc 140 - 160<br>Fz 0.15 - 0.22<br>Ap 0.4 - 4.0 |           |
| TOOL HOLDER COMPATABILITY                     | ISO Standard                                   |           |

### TNMG 160408 PM UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 240<br>Fz 0.14 - 0.42<br>Ap 0.5 - 5.0 | Vc 120 - 240<br>Fz 0.16 - 0.42<br>Ap 0.5 - 5.0 | Vc 120 - 250<br>Fz 0.14 - 0.42<br>Ap 0.5 - 5.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

### TNMG 160408 UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 240<br>Fz 0.18 - 0.50<br>Ap 0.6 - 5.0 | Vc 120 - 240<br>Fz 0.20 - 0.50<br>Ap 0.6 - 5.0 | Vc 120 - 250<br>Fz 0.18 - 0.50<br>Ap 0.6 - 5.0 |
| TOOL HOLDER COMPATABILITY                      | ISO Standard                                   |                                                |

**TNMG 160408 UN6010****(P)**  
STEELVc 120 - 210  
Fz 0.18 - 0.50  
Ap 0.6 - 5.0**(M)**  
STAINLESS STEEL**(K)**  
CAST IRONVc 120 - 230  
Fz 0.18 - 0.50  
Ap 0.6 - 5.0

TOOL HOLDER COMPATABILITY

ISO Standard

**TNMG 160408 PR UN6025**

STEEL

Vc 120 - 240  
Fz 0.34 - 0.55  
Ap 0.7 - 6.0

STAINLESS STEEL

Vc 120 - 240  
Fz 0.34 - 0.55  
Ap 0.7 - 6.0

CAST IRON

Vc 120 - 250  
Fz 0.34 - 0.55  
Ap 0.7 - 6.0

TOOL HOLDER COMPATABILITY

ISO Standard

RADIUS 1.2

**TNMG 160412 UN6025**

STEEL

Vc 120 - 240  
Fz 0.18 - 0.50  
Ap 0.8 - 5.0

STAINLESS STEEL

Vc 120 - 240  
Fz 0.20 - 0.50  
Ap 0.8 - 5.0

CAST IRON

Vc 120 - 250  
Fz 0.18 - 0.50  
Ap 0.8 - 5.0

TOOL HOLDER COMPATABILITY

ISO Standard

**TNMG 160412 UN6010**

STEEL

Vc 140 - 220  
Fz 0.18 - 0.50  
Ap 0.8 - 5.0

STAINLESS STEEL

CAST IRON

Vc 140 - 240  
Fz 0.18 - 0.50  
Ap 0.8 - 5.0

TOOL HOLDER COMPATABILITY

ISO Standard

**TNMG 160412 PR UN6025**

STEEL

Vc 120 - 240  
Fz 0.34 - 0.55  
Ap 0.7 - 6.0

STAINLESS STEEL

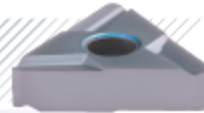
Vc 120 - 240  
Fz 0.34 - 0.55  
Ap 0.7 - 6.0

CAST IRON

Vc 120 - 250  
Fz 0.34 - 0.55  
Ap 0.7 - 6.0

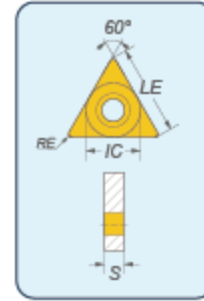
TOOL HOLDER COMPATABILITY

ISO Standard

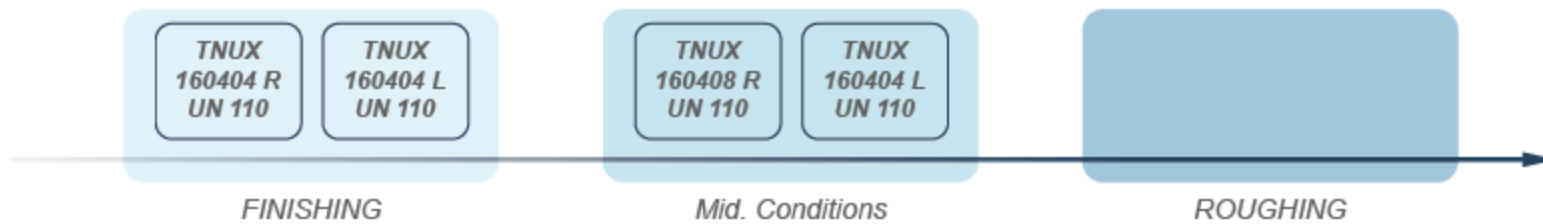


### FAMILY

|            |               |       | IC   | LE    | RE   | S    |
|------------|---------------|-------|------|-------|------|------|
| 5100000052 | TNUX 160404 R | UN110 | 9.52 | 16.50 | 0.40 | 4.76 |
| 5100000054 | TNUX 160408 R | UN110 | 9.52 | 16.50 | 0.80 | 4.76 |
| 5100000244 | TNUX 160404 L | UN110 | 9.52 | 16.50 | 0.40 | 4.76 |
| 5100000246 | TNUX 160408 L | UN110 | 9.52 | 16.50 | 0.80 | 4.76 |



### PRODUCT - LINE UP



### Chip Breakers

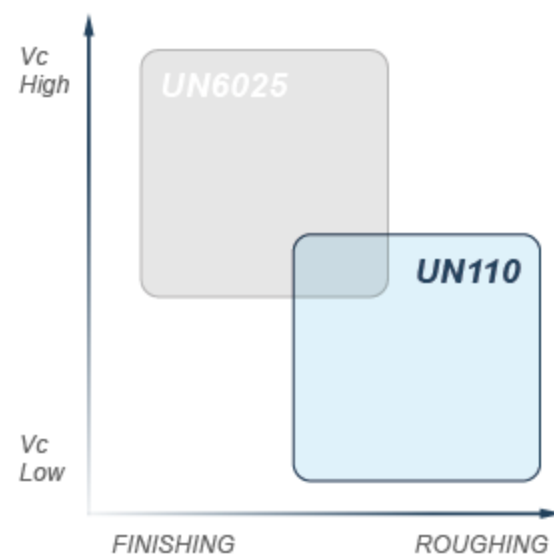
#### R / L

- Left or Right, very Sharp Chip-breakers
- for Finishing and sticky material
- Basic operation - same as KNUX

• Starting Feed (Fz) : 0.12 (mm/Rev)

P M K

### GRADES



- Sub Micron Substrate & thick Hyper Pulsed PVD coating
- Suitable for Low to Mid Cutting Speeds in EXTERNAL TURNING
- An excellent option for tough, aggressive and non stable condition

### Cutting Conditions

#### TNUX 160404 R UN110

| (P)<br>STEEL              | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|---------------------------|------------------------|------------------|
| Vc 80 - 180               | Vc 100 - 180           | Vc 80 - 180      |
| Fz 0.10 - 0.20            | Fz 0.10 - 0.20         | Fz 0.10 - 0.20   |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0           | Ap 0.3 - 2.0     |
| TOOL HOLDER COMPATABILITY | ISO Standard           |                  |

#### TNUX 160408 R UN110

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 80 - 180               | Vc 100 - 180    | Vc 80 - 180    |
| Fz 0.14 - 0.24            | Fz 0.14 - 0.24  | Fz 0.14 - 0.24 |
| Ap 0.4 - 2.0              | Ap 0.4 - 2.0    | Ap 0.4 - 2.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

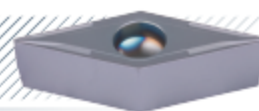
#### TNUX 160404 L UN110

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 80 - 180               | Vc 100 - 180    | Vc 80 - 180    |
| Fz 0.10 - 0.20            | Fz 0.10 - 0.20  | Fz 0.10 - 0.20 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 2.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

#### TNUX 160408 L UN110

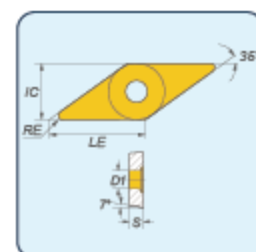
| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 80 - 180               | Vc 100 - 180    | Vc 80 - 180    |
| Fz 0.14 - 0.24            | Fz 0.14 - 0.24  | Fz 0.14 - 0.24 |
| Ap 0.4 - 2.0              | Ap 0.4 - 2.0    | Ap 0.4 - 2.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |



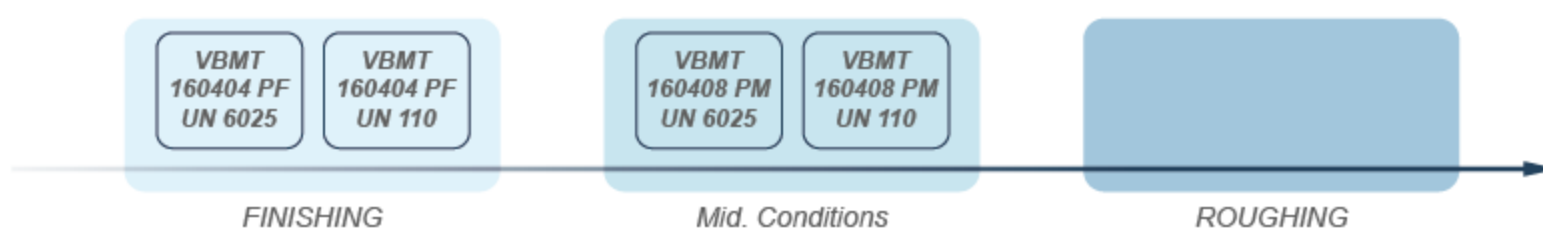


## FAMILY

|            |                |        | IC   | LE    | RE   | S    |
|------------|----------------|--------|------|-------|------|------|
| 5100000150 | VBMT 160404 PF | UN110  | 9.52 | 16.60 | 0.40 | 4.76 |
| 5100000152 | VBMT 160404 PF | UN6025 | 9.52 | 16.50 | 0.40 | 4.76 |
| 5100000154 | VBMT 160408 PM | UN110  | 9.52 | 16.60 | 0.80 | 4.76 |
| 5100000156 | VBMT 160408 PM | UN6025 | 9.52 | 16.50 | 0.80 | 4.76 |



## PRODUCT - LINE UP



## Chip Breakers

## PF

- Sharp Chip-breaker
- for Finishing and sticky material

• Starting Feed (Fz) : 0.12 (mm/Rev)

P M K

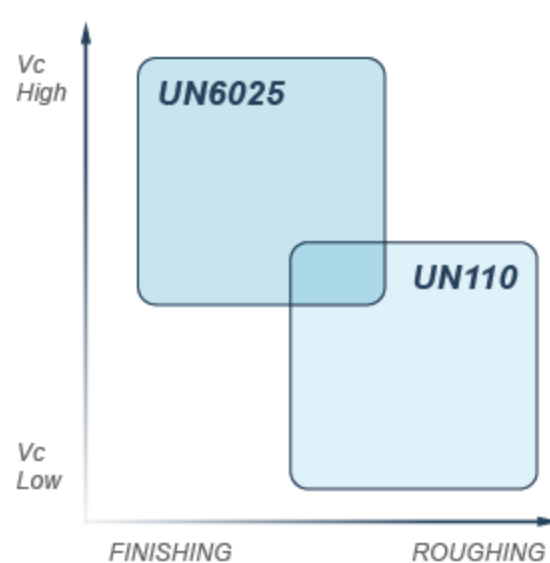
## PM

- Semi Finishing chip Breaker for General Machining
- First Choice for ALL conditions

• Starting Feed (Fz) : 0.18 (mm/Rev)

P M K

## GRADES



- UN6025**
- Cobalt Enriched & Alpha Alumina CVD
  - General Purpose internal and external TURNING Applications
  - where a good balance of wear resistance and toughness is required

- UN110**
- Sub Micron Substrate & thick Hyper Pulsed PVD coating
  - Suitable for Low to Mid Cutting Speeds in EXTERNAL TURNING
  - An excellent option for tough, aggressive and non stable condition

## Cutting Conditions

## VBMT 160404 PF UN110

| (P)<br>STEEL              | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|---------------------------|------------------------|------------------|
| Vc 80 - 180               | Vc 100 - 170           | Vc 80 - 180      |
| Fz 0.10 - 0.18            | Fz 0.08 - 0.18         | Fz 0.08 - 0.20   |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0           | Ap 0.3 - 3.0     |
| TOOL HOLDER COMPATABILITY | ISO Standard           |                  |

## VBMT 160408 PM UN110

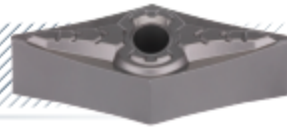
| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 80 - 180               | Vc 100 - 170    | Vc 80 - 180    |
| Fz 0.16 - 0.32            | Fz 0.18 - 0.32  | Fz 0.14 - 0.48 |
| Ap 0.5 - 2.0              | Ap 0.5 - 3.0    | Ap 0.5 - 3.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

## VBMT 160404 PF UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 210              | Vc 120 - 170    | Vc 120 - 230   |
| Fz 0.10 - 0.18            | Fz 0.08 - 0.18  | Fz 0.08 - 0.20 |
| Ap 0.3 - 2.0              | Ap 0.3 - 2.0    | Ap 0.3 - 3.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

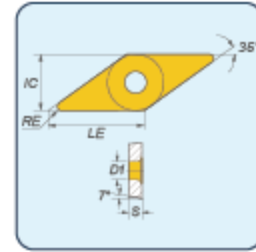
## VBMT 160408 PM UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 120 - 210              | Vc 120 - 270    | Vc 120 - 230   |
| Fz 0.16 - 0.32            | Fz 0.18 - 0.32  | Fz 0.14 - 0.48 |
| Ap 0.5 - 2.0              | Ap 0.5 - 3.0    | Ap 0.5 - 3.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

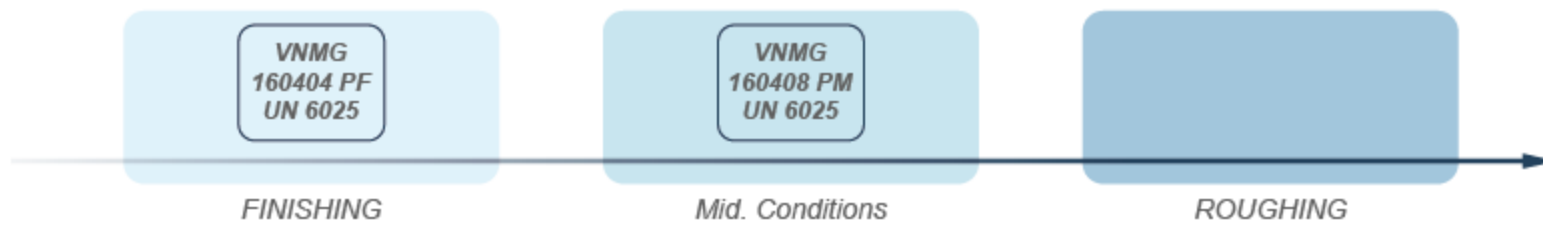


## FAMILY

|            |                |        | IC   | LE    | RE   | S    |
|------------|----------------|--------|------|-------|------|------|
| 5100000056 | VNMG 160404 PF | UN6025 | 9.52 | 16.60 | 0.40 | 4.76 |
| 5100000058 | VNMG 160408 PM | UN6025 | 9.52 | 16.50 | 0.80 | 4.76 |



## PRODUCT - LINE UP



## Chip Breakers

### PF

- Sharp Chip-breaker
- for Finishing and sticky material

• Starting Feed (Fz) : 0.12 (mm/Rev)

**P M K**

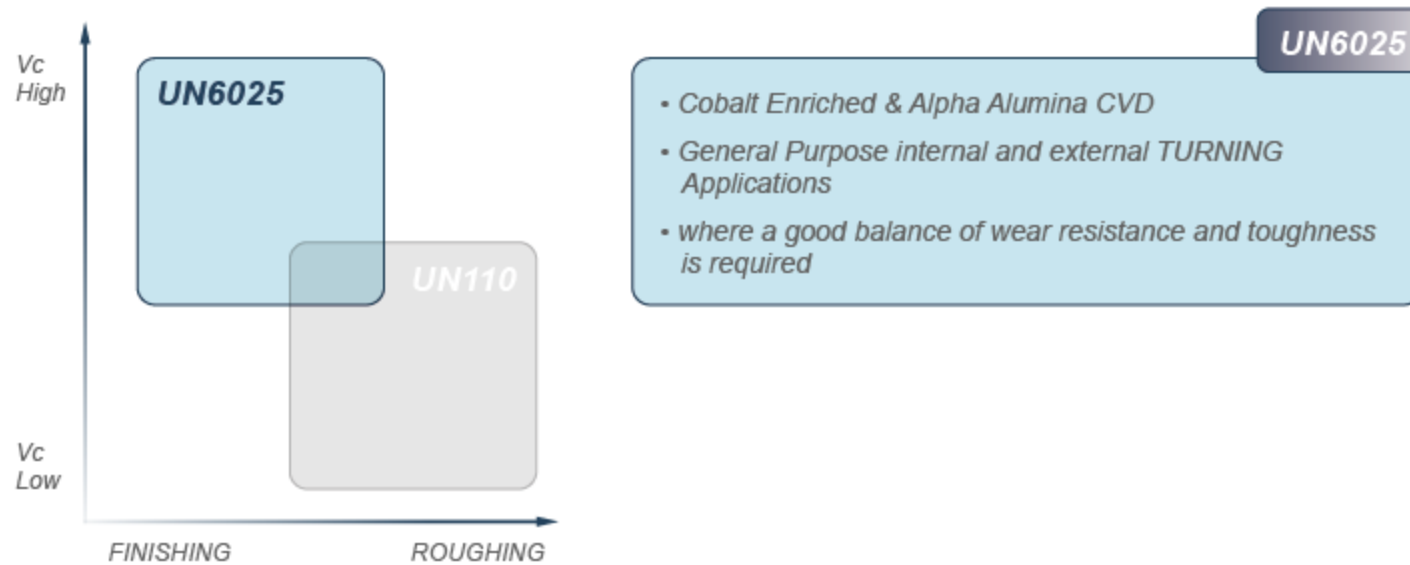
### PM

- Semi Finishing chip Breaker for General Machining
- First Choice for ALL conditions

• Starting Feed (Fz) : 0.18 (mm/Rev)

**P K**

## GRADES



## Cutting Conditions

### VNMG 160404 PF UN6025

| (P)<br>STEEL              | (M)<br>STAINLESS STEEL | (K)<br>CAST IRON |
|---------------------------|------------------------|------------------|
| Vc 140 - 250              | Vc 140 - 230           | Vc 140 - 250     |
| Fz 0.08 - 0.30            | Fz 0.08 - 0.30         | Fz 0.08 - 0.30   |
| Ap 0.3 - 1.0              | Ap 0.3 - 1.0           | Ap 0.3 - 1.0     |
| TOOL HOLDER COMPATABILITY | ISO Standard           |                  |

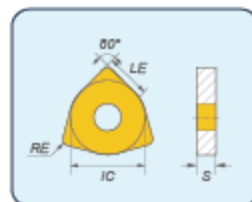
### VNMG 160408 PM UN6025

| STEEL                     | STAINLESS STEEL | CAST IRON      |
|---------------------------|-----------------|----------------|
| Vc 140 - 250              | Vc 140 - 230    | Vc 140 - 250   |
| Fz 0.08 - 0.30            | Fz 0.08 - 0.30  | Fz 0.08 - 0.30 |
| Ap 0.4 - 1.0              | Ap 0.4 - 1.0    | Ap 0.4 - 1.0   |
| TOOL HOLDER COMPATABILITY | ISO Standard    |                |

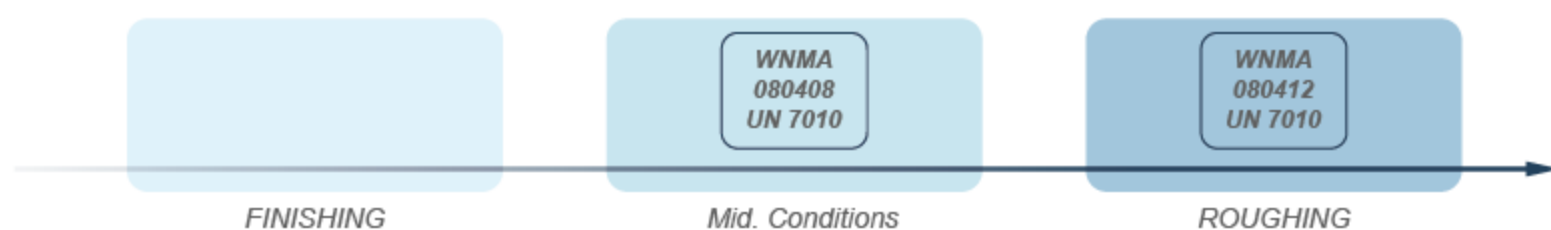


## FAMILY

|            |             |        | IC    | LE   | RE   | S    |
|------------|-------------|--------|-------|------|------|------|
| 5100000102 | WNMA 080408 | UN7010 | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000104 | WNMA 080412 | UN7010 | 12.70 | 8.70 | 1.20 | 4.76 |



## PRODUCT - LINE UP



## Chip Breakers

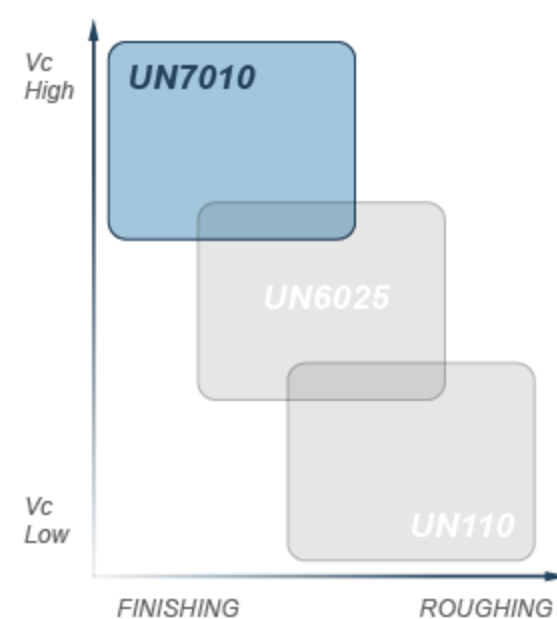
## A

- Flat top chip breaker
- For all cast iron application

• Starting Feed (Fz) : 0.15 (mm/Rev)

K

## GRADES



## UN7010

- Hard K10 substrate with Thick Alumina (Alpha) CVD coating
- For high speed CAST IRON TURNING Applications
- Where the focus is on very high abrasive wear resistance and high speed machining.
- First Choice for cast iron application

## Cutting Conditions

## WNMA 080408 UN 7010

(P)  
STEEL

TOOL HOLDER COMPATABILITY

(M)  
STAINLESS STEEL

ISO Standard

(K)  
CAST IRON

|    |             |
|----|-------------|
| Vc | 140 - 300   |
| Fz | 0.15 - 0.60 |
| Ap | 0.2 - 8.0   |

## WNMA 080412 UN 7010

STEEL



TOOL HOLDER COMPATABILITY

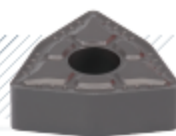
STAINLESS STEEL



ISO Standard

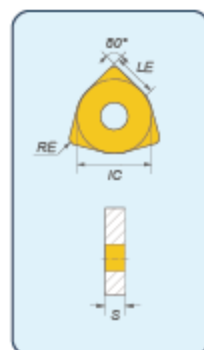
CAST IRON

|    |             |
|----|-------------|
| Vc | 140 - 300   |
| Fz | 0.15 - 0.60 |
| Ap | 0.4 - 8.0   |



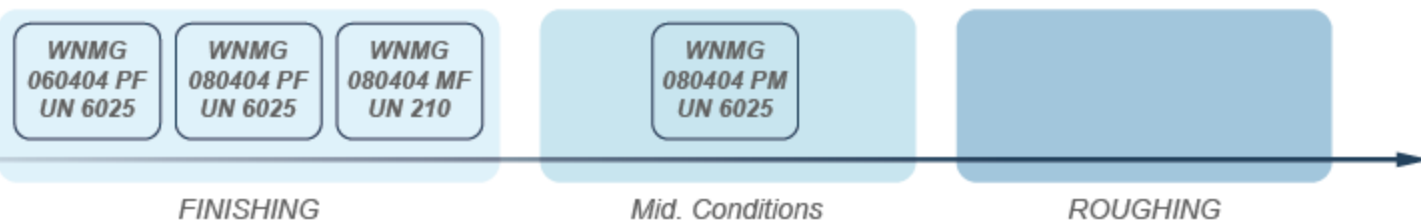
## FAMILY

|            |                |        | IC    | LE   | RE   | S    |
|------------|----------------|--------|-------|------|------|------|
| 5100000248 | WNMG 060404 PF | UN6025 | 9.53  | 6.52 | 0.40 | 4.76 |
| 5100000250 | WNMG 060408 PM | UN6025 | 9.53  | 6.52 | 0.80 | 4.76 |
| 5100000082 | WNMG 080404 MF | UN210  | 12.70 | 8.70 | 0.40 | 4.76 |
| 5100000066 | WNMG 080404 PF | UN6025 | 12.70 | 8.70 | 0.40 | 4.76 |
| 5100000214 | WNMG 080404 PM | UN6025 | 12.70 | 8.70 | 0.40 | 4.76 |
| 5100000240 | WNMG 080408 MF | UN210  | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000070 | WNMG 080408 PF | UN6025 | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000074 | WNMG 080408 PM | UN6025 | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000076 | WNMG 080408 MM | UN210  | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000170 | WNMG 080408    | UN6025 | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000168 | WNMG 080408    | UN6010 | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000080 | WNMG 080408 PR | UN6025 | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000078 | WNMG 080408 PR | UN6010 | 12.70 | 8.70 | 0.80 | 4.76 |
| 5100000204 | WNMG 080412    | UN6025 | 12.70 | 8.70 | 1.20 | 4.76 |
| 5100000180 | WNMG 080412    | UN6010 | 12.70 | 8.70 | 1.20 | 4.76 |
| 5100000086 | WNMG 080412 PR | UN6025 | 12.70 | 8.70 | 1.20 | 4.76 |
| 5100000084 | WNMG 080412 PR | UN6010 | 12.70 | 8.70 | 1.20 | 4.76 |

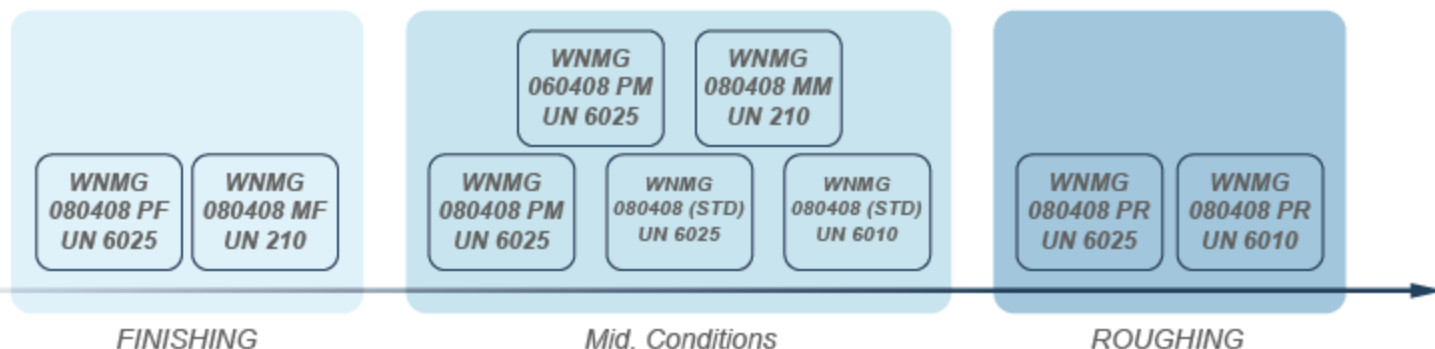


## PRODUCT - LINE UP

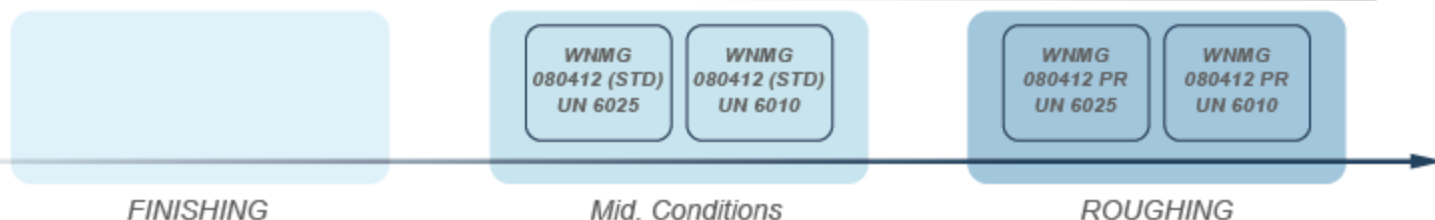
### RADIUS 0.4



### RADIUS 0.8



### RADIUS 1.2



## Chip Breakers

### PF

- Sharp Chip-breaker
- for Finishing and sticky material

• Starting Feed (Fz) : 0.12 (mm/Rev)

P M K

### PM

- Semi Finishing chip Breaker for General Machining
- First Choice for stable conditions

• Starting Feed (Fz) : 0.18 (mm/Rev)

P M K

### (STD)

- Mid. conditions Chip-breaker
- for General-tough or unstable machining conditions

• Starting Feed (Fz) : 0.25 (mm/Rev)

P K

### PR

- Tough Chip-breaker
- for tough, Interrupted or very unstable conditions

• Starting Feed (Fz) : 0.35 (mm/Rev)

P K

### MF

- Unique and very Sharp Chip-breaker
- for Finishing of Stainless steel and Aerospace material

• Starting Feed (Fz) : 0.11 (mm/Rev)

M S

### MM

- Unique and Mid. conditions Chip-breaker
- First Choice for Stainless steel and Aerospace material

• Starting Feed (Fz) : 0.15 (mm/Rev)

M S

## GRADES

Vc  
High

UN6010

- Hard P10 substrate with Thick Alumina (Alpha) CVD coating
- For high speed TURNING and Cast Iron Applications
- where a focus is on wear resistance and high speed machining
- First Choice for Turning in stable condition

UN6010

UN6025

- Cobalt Enriched & Alpha Alumina CVD
- General Purpose TURNING Applications
- where a good balance of wear resistance and toughness is required
- First Choice for Turning in all condition

UN6025

UN210

- Sub Micron Substrate & unique and Patented Hyper Pulsed PVD Coating
- Suitable for all STAINLESS STEEL applications
- Especially developed to delay Notch wear damage

UN210

Vc  
Low

FINISHING

ROUGHING

## Cutting Conditions

RADIUS 0.4

### WNMG 060404 PF UN6025

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 240<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 270<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080404 MF UN210

| STEEL                                         | STAINLESS STEEL                               | CAST IRON |
|-----------------------------------------------|-----------------------------------------------|-----------|
| Vc 80 - 160<br>Fz 0.08 - 0.18<br>Ap 0.2 - 4.0 | Vc 80 - 160<br>Fz 0.08 - 0.18<br>Ap 0.2 - 4.0 |           |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080404 PF UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 240<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 270<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080404 PM UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 260<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 230<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 250<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080408 PF UN6025

| (P)<br>STEEL                                   | (M)<br>STAINLESS STEEL                         | (K)<br>CAST IRON                               |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 240<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 | Vc 120 - 270<br>Fz 0.10 - 0.40<br>Ap 0.4 - 1.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080408 PM UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 240<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 270<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080408 MM UN210

| STEEL                                         | STAINLESS STEEL                               | CAST IRON |
|-----------------------------------------------|-----------------------------------------------|-----------|
| Vc 80 - 160<br>Fz 0.12 - 0.24<br>Ap 0.4 - 4.0 | Vc 80 - 160<br>Fz 0.12 - 0.24<br>Ap 0.4 - 4.0 |           |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080408 PR UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 | Vc 140 - 210<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 | Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080408 PR UN6010

| STEEL                                          | STAINLESS STEEL | CAST IRON                                      |
|------------------------------------------------|-----------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 |                 | Vc 140 - 220<br>Fz 0.34 - 0.50<br>Ap 0.7 - 7.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080408 UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.5 - 7.0 | Vc 140 - 210<br>Fz 0.24 - 0.45<br>Ap 0.5 - 7.0 | Vc 140 - 220<br>Fz 0.24 - 0.45<br>Ap 0.5 - 7.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

RADIUS 0.8

### WNMG 060408 PM UN6025

| STEEL                                          | STAINLESS STEEL                                | CAST IRON                                      |
|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Vc 120 - 280<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 240<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 | Vc 120 - 270<br>Fz 0.14 - 0.30<br>Ap 0.4 - 5.0 |

TOOL HOLDER COMPATABILITY

ISO Standard

### WNMG 080408 MF UN210

| STEEL                                         | STAINLESS STEEL                               | CAST IRON |
|-----------------------------------------------|-----------------------------------------------|-----------|
| Vc 80 - 160<br>Fz 0.08 - 0.18<br>Ap 0.4 - 4.0 | Vc 80 - 160<br>Fz 0.08 - 0.18<br>Ap 0.4 - 4.0 |           |

TOOL HOLDER COMPATABILITY

ISO Standard

SWISS BLUE

SWISS BLUE

**WNMG 080408 UN6010****(P)**  
STEELVc 140 - 220  
Fz 0.24 - 0.45  
Ap 0.5 - 7.0**(M)**  
STAINLESS STEEL**(K)**  
CAST IRONVc 140 - 220  
Fz 0.24 - 0.45  
Ap 0.5 - 7.0

TOOL HOLDER COMPATABILITY

ISO Standard

RADIUS 1.2

**WNMG 080412 PR UN6025**

STEEL

Vc 140 - 220  
Fz 0.34 - 0.50  
Ap 0.1 - 7.0

STAINLESS STEEL

Vc 140 - 210  
Fz 0.34 - 0.50  
Ap 0.1 - 7.0

CAST IRON

Vc 140 - 220  
Fz 0.34 - 0.50  
Ap 0.1 - 7.0

TOOL HOLDER COMPATABILITY

ISO Standard

**WNMG 080412 PR UN6010**

STEEL

Vc 140 - 220  
Fz 0.34 - 0.50  
Ap 0.1 - 7.0

STAINLESS STEEL

CAST IRON

Vc 140 - 220  
Fz 0.34 - 0.50  
Ap 0.1 - 7.0

TOOL HOLDER COMPATABILITY

ISO Standard

**WNMG 080412 UN6025**

STEEL

Vc 140 - 220  
Fz 0.24 - 0.45  
Ap 0.8 - 7.0

STAINLESS STEEL

Vc 140 - 210  
Fz 0.24 - 0.45  
Ap 0.8 - 7.0

CAST IRON

Vc 140 - 220  
Fz 0.24 - 0.45  
Ap 0.8 - 7.0

TOOL HOLDER COMPATABILITY

ISO Standard

**WNMG 080412 UN6010**

STEEL

Vc 140 - 220  
Fz 0.24 - 0.45  
Ap 0.8 - 7.0

STAINLESS STEEL

CAST IRON

Vc 140 - 220  
Fz 0.24 - 0.45  
Ap 0.8 - 7.0

TOOL HOLDER COMPATABILITY

ISO Standard

GRADES CONVERSION-CVD GRADES

*Pg.095-096*

GRADES CONVERSION-PVD GRADES

*Pg.097-098*

CHIP BREAKERS - CONVERSION

*Pg.099-100*

# GRADES CONVERSION - CVD GRADES

SWISS BLUE

Kennametal

Mitsubishi

TaeguTec

Sandvik

Tungaloy

ISCAR

P

|            |         |                               |               |               |               |             |                                |
|------------|---------|-------------------------------|---------------|---------------|---------------|-------------|--------------------------------|
| Finish     | UN 6010 | KCP05 KC9105                  | UC5115        | TT8115 TT1100 | GC4010 GC4210 | T9005       | IC9150 IC8150                  |
| Medium     | UN 6025 | KCP10 KC9110<br>TN7005 TN7010 | UC5115 UE6020 | TT8125 TT1300 | GC4215 GC4325 | T9005 T9015 | IC9150 IC9015<br>IC8150        |
| Semi Rough | UN 6025 | KCP25 KC9025<br>KC9125 TN7015 | UE 6020       | TT8135 TT1500 | GC 4225       | T9015 T9025 | IC9025 IC9250<br>IC9054 IC8350 |

M

|        |         |               |        |        |        |             |                         |
|--------|---------|---------------|--------|--------|--------|-------------|-------------------------|
| Finish | UN 6025 | KCM15 TN7010  | MC7015 | TT2500 | GC2015 | T9015       | IC9250                  |
| Medium | UN 6025 | KC9225 TN7015 | MC7025 | TT3500 | GC2025 | T6020 T9025 | IC9250 IC9025<br>IC9054 |

K

|        |         |                                        |        |        |                         |       |                                        |
|--------|---------|----------------------------------------|--------|--------|-------------------------|-------|----------------------------------------|
| Medium | UN 6025 | KVK15 KCK20<br>KC9315 KC9110<br>TN5015 | MC5005 | TT1300 | GC3205 GC3210<br>GC3215 | T5010 | IC9150                                 |
| Rough  | UN 7010 | KCK20 KC9320<br>TN5020                 | MC5015 | TT1500 | GC3215                  | T5020 | IC9150 IC9015<br>IC418 IC428<br>IC4010 |

# GRADES CONVERSION - PVD GRADES

P

|            | SWISS BLUE | Kennametal | Mitsubishi | TaeguTec      | Sandvik       | Tungaloy    | ISCAR       |
|------------|------------|------------|------------|---------------|---------------|-------------|-------------|
| Finish     | UN 110     | KC715M     | VP10TF     | TT9030        | GC1015        | AH 8015     | IC907 IC428 |
| Medium     | UN 330     | KC715M     | VP15TF     | TT8020        | GC1025 GC1130 | AH 725      | IC 908      |
| Semi Rough | UN 330     | KC522M     | VP30RT     | TT8020 TT9030 | GC1015 GC1025 | GH330 AH330 | IC 908      |
| Rough      |            |            |            |               |               |             |             |

M

|        |        |        |        |               |               |       |        |
|--------|--------|--------|--------|---------------|---------------|-------|--------|
| Finish | UN 210 | KC715M | VP15TF | TT8020 TT9030 | GC1025 GC1030 | GH330 | IC 907 |
| Medium | UN 330 | KC522M | VP20RT | TT8030        | GC1025 GC1030 | AH120 | IC 908 |

K

|        |        |        |        |        |               |       |        |
|--------|--------|--------|--------|--------|---------------|-------|--------|
| Medium | UN 110 | KC510M | VP15TF |        | GC1010 GC1020 | AH110 | IC 907 |
| Rough  | UN 330 | KC520M | VP20RT | TT6030 | GC1020        | AH120 | IC 908 |

S

|        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| Light  | UN 110 | KC510M | VP15TF | TT6030 | GC1025 | AH120  | IC 907 |
| Medium | UN 330 | KC522M | VP15TF |        | GC1025 | AH 120 | IC 908 |
| Heavy  |        |        |        |        |        |        |        |

# CHIP BREAKERS – CONVERSION

P

|               | SWISS BLUE | Kennametal | Seco Tools                   | Mitsubishi Carbide   | Walter             | TaeguTec                | Sandvik        | Tungaloy                   | Kyocera                |
|---------------|------------|------------|------------------------------|----------------------|--------------------|-------------------------|----------------|----------------------------|------------------------|
| Finish        | PF         | FF         | FF1 FF2                      | PK FH<br>FP FY       | FP5                | FA                      | QF PF          | 01 TF<br>11 ZF             | DP GP PP<br>XP XP-T XF |
| Medium        | PM         | P MN       | MF3 MF5<br>M3 M5             | MP MA MH             | MP5                | PC MP<br>MT SM          | PM QM XM       | NM ZM TM AM<br>DM 33 37 38 | PG CJ GS<br>PS HS PT   |
| Semi<br>Rough | (STD)      | RN RP      | MR6 MR7                      | RP GH Std.           | RP5 RP7<br>NM6 NM9 | RT                      | PR HM XMR      | TH Std.                    | PH GT Std.             |
| Rough         | PR         | MR RM RH   | R4 R5 R6 57<br>RR6 R7 R8 RR9 | HR HZ HL<br>HM HX HV | NR6 NRF NRR        | RX RH HD HY<br>HT HZ EH | QR PR<br>HR MR | TRS TU TUS                 | PX                     |

M

|        |    |       |     |                   |         |          |            |            |                      |
|--------|----|-------|-----|-------------------|---------|----------|------------|------------|----------------------|
| Finish | MF | FP LF | MF1 | SH LM             | NF4     | SF       | MF         | SS         | MQ GU                |
| Medium | MM | MP    | MF4 | MS GM MM<br>MA ES | RM5 NM4 | ML EM VF | MM QM XM K | SA SF SM S | MS MU SU<br>HU TK ST |

K

|        |         |       |    |            |         |  |    |         |           |
|--------|---------|-------|----|------------|---------|--|----|---------|-----------|
| Medium | (STD)   | RP UN | M5 | MK GK Std. | RK5 NM5 |  | KM | CM Std. | KG Std. C |
| Rough  | (A)Flat |       |    | RK         | RK7     |  | KR |         | KH GC     |

S

|        |    |          |            |          |         |    |        |            |          |
|--------|----|----------|------------|----------|---------|----|--------|------------|----------|
| Light  | PF | MS       | MF4 MF5    | LS MJ MJ | NF4 NFT | EA | SGF    | HRF        |          |
| Medium | PM | UP P NGP | M1         | MS       | NMS NMT |    | NGP SM | HRM SA HMM | MS MU TK |
| Heavy  | PR | RP       | M5 MR3 MR4 | RS GJ    | NRS NRT | ET | SR SMR |            |          |

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DRILLING

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