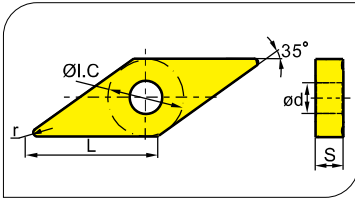


# Turning · Drehen

Cemented carbide and cermet Inserts · Hartmetall und Cermet WSP

## VN\*\* Negative Insert · Negative WSP

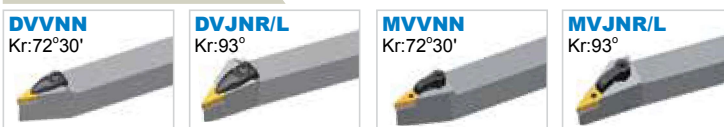
Ideal Machining Condition  
 Gute Bearbeitungsbedingungen
 Normal Machining Condition  
 Normale Bearbeitungsbedingungen
 Unfavorable Machining Condition  
 Ungünstige Bearbeitungsbedingungen



| Workpiece Material<br>Werkstoff           | P | M | K | N | S |
|-------------------------------------------|---|---|---|---|---|
| Steel<br>Stahl                            |   |   |   |   |   |
| Stainless Steel<br>Rostfreier Stahl       |   |   |   |   |   |
| Cast iron<br>Gusseisen                    |   |   |   |   |   |
| Non-ferrous material<br>Ne Metalle        |   |   |   |   |   |
| Heat-resistant steel<br>Wärmefester Stahl |   |   |   |   |   |

| Insert Shape<br>Schneid<br>plattenform                                                                                                           | Type<br>Typ    | Dimension (mm)<br>Abmessung |       |      |      |     | CVD Coating<br>CVD Beschicht. |        |        |        |        |        |        |        |        |        | PVD Coating<br>PVD Beschicht. |        |         |        | Cermet<br>unbeschichtet | Cermet<br>Coated<br>beschicht. Cermet. | Uncoated<br>Carbide<br>unbeschicht.<br>Hartmetall |        |        |        |        |        |        |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------|-------|------|------|-----|-------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------------------|--------|---------|--------|-------------------------|----------------------------------------|---------------------------------------------------|--------|--------|--------|--------|--------|--------|---------|
|                                                                                                                                                  |                | L                           | I.C   | S    | d    | r   | YB6315                        | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315                        | YBD152 | YBD152C | YBG101 |                         |                                        | YBG102                                            | YBG105 | YBG320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C |
| <div>SF</div> <div></div> <div>Finishing<br/>Schichten</div>    | VNMG160404-SF  | 16.6                        | 9.525 | 4.76 | 3.81 | 0.4 |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        | ●      |        |         |
|                                                                                                                                                  | VNMG160408-SF  | 16.6                        | 9.525 | 4.76 | 3.81 | 0.8 |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        | ○      |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
| <div>DF</div> <div></div> <div>Finishing<br/>Schichten</div>   | VNMG160404-DF  | 16.6                        | 9.525 | 4.76 | 3.81 | 0.4 | ●                             | ●      | ●      |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  | VNMG160408-DF  | 16.6                        | 9.525 | 4.76 | 3.81 | 0.8 | ●                             | ●      | ●      |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
| <div>ADF</div> <div></div> <div>Finishing<br/>Schichten</div> | VNMG160404-ADF | 16.6                        | 9.525 | 4.76 | 3.81 | 0.4 | ●                             |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         | ●                                      |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  | VNMG160408-ADF | 16.6                        | 9.525 | 4.76 | 3.81 | 0.8 | ●                             |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         | ●                                      |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
| <div>EF</div> <div></div> <div>Finishing<br/>Schichten</div>  | VNMG160404-EF  | 16.6                        | 9.525 | 4.76 | 3.81 | 0.4 |                               |        |        |        |        | ●      |        |        |        |        |                               |        |         |        |                         | ●                                      |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  | VNMG160408-EF  | 16.6                        | 9.525 | 4.76 | 3.81 | 0.8 |                               |        |        |        |        | ●      |        |        |        |        |                               |        |         |        |                         |                                        | ●                                                 | ○      |        |        |        |        |        |         |
|                                                                                                                                                  | VNMG160412-EF  | 16.6                        | 9.525 | 4.76 | 3.81 | 1.2 |                               |        |        |        |        |        | ○      |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
| <div>NF</div> <div></div> <div>Finishing<br/>Schichten</div>  | VNEG160404-NF  | 16.6                        | 9.525 | 4.76 | 3.81 | 0.4 |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        | ●                       | ●                                      |                                                   |        |        |        |        |        | ○      |         |
|                                                                                                                                                  | VNEG160408-NF  | 16.6                        | 9.525 | 4.76 | 3.81 | 0.8 |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         | ○                                      | ●                                                 |        |        |        |        |        | ○      |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
| <div>NGF</div> <div></div> <div>Finishing<br/>Schichten</div> | VNEG160408-NGF | 16.6                        | 9.525 | 4.76 | 3.81 | 0.8 |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        | ○                       | ●                                      |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  | VNEG160412-NGF | 16.6                        | 9.525 | 4.76 | 4.76 | 1.2 |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         | ○                                      | ●                                                 |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |
|                                                                                                                                                  |                |                             |       |      |      |     |                               |        |        |        |        |        |        |        |        |        |                               |        |         |        |                         |                                        |                                                   |        |        |        |        |        |        |         |

Tool holder / Klemmhalter



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Insert code key  
ISO Code

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Grade selection reference  
Sortenauswahl

A17/A44-A59

Chip breaker selection reference  
Spanbrecherauswahl

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Recommended cutting parameters  
Empfohlene Schnittparameter

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A

General Turning  
Allgemeine Drehbearbeitung

# Turning · Drehen

Recommended Grade Overview (Inserts) · Empfohlene Sorten Übersicht (WSP)

| ISO                                              |    | General Turning · Allgemeine Drehbearbeitung |        |         |        |                         |                       |                    |                                   |        |        | Threading<br>Gewinde  | Parting and Grooving<br>Ab- und Einstechen |        |                                   |  |
|--------------------------------------------------|----|----------------------------------------------|--------|---------|--------|-------------------------|-----------------------|--------------------|-----------------------------------|--------|--------|-----------------------|--------------------------------------------|--------|-----------------------------------|--|
| Code                                             |    | Coating · Beschichtung                       |        |         |        | Cermet<br>unbeschichtet | Cermet<br>beschichtet | Ceramic<br>Keramik | cemented<br>carbide<br>Hartmetall | PCBN   | PCD    | Coated<br>beschichtet | Coated ·<br>beschichtet                    |        | cemented<br>carbide<br>Hartmetall |  |
|                                                  |    | CVD                                          |        | PVD     |        |                         |                       |                    |                                   |        |        | PVD                   | CVD                                        | PVD    |                                   |  |
| P<br>Steel · Stahl                               | 01 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        |                                   |  |
|                                                  | 10 | YB6315                                       | YBC152 |         |        | YNG151                  | YNG151C               | CA1000             |                                   |        |        | YBG205                | YBG201                                     | YBG202 | YBG202                            |  |
|                                                  | 20 | YBC251                                       | YBC252 |         |        |                         |                       |                    |                                   |        |        |                       |                                            | YBC251 | YBG202                            |  |
|                                                  | 30 |                                              | YBC351 | YBC352  |        |                         |                       |                    |                                   |        |        |                       |                                            |        | YBG202                            |  |
|                                                  | 40 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        | YBG302                            |  |
| M<br>Stainless Steel · Rostfreier Stahl          | 01 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        |                                   |  |
|                                                  | 10 | YBM153                                       |        |         | YBG105 |                         | YNG151C               |                    |                                   |        |        | YBG205                | YBG201                                     | YBG202 |                                   |  |
|                                                  | 20 |                                              | YBM253 |         | YBG202 | YBG205                  |                       |                    |                                   |        |        |                       |                                            | YBG202 |                                   |  |
|                                                  | 30 |                                              |        |         | YB9320 |                         |                       |                    |                                   |        |        |                       |                                            | YBG202 | YBG302                            |  |
|                                                  | 40 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        |                                   |  |
| K<br>Cast Iron · Gusseisen                       | 01 | YBD052                                       |        |         |        |                         |                       | CN1000             | CA1000                            |        |        |                       |                                            |        |                                   |  |
|                                                  | 10 | YBD102                                       | YBD152 | YBD152C | YB7315 |                         |                       |                    |                                   |        | YCB211 | YCB221                |                                            |        |                                   |  |
|                                                  | 20 |                                              |        |         |        |                         |                       | CN2000             |                                   | YD201  |        |                       |                                            | YBG205 | YBG201                            |  |
|                                                  | 30 |                                              |        |         |        |                         |                       |                    |                                   |        | YCB231 |                       |                                            | YBG202 | YBG202                            |  |
|                                                  | 40 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            | YBG202 | YBG202                            |  |
| N<br>Non-Ferrous Materials<br>NE Metalle         | 01 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        |                                   |  |
|                                                  | 10 |                                              |        |         |        | YBG102                  |                       |                    |                                   |        |        | YCD421                |                                            |        |                                   |  |
|                                                  | 20 |                                              |        |         |        |                         |                       |                    | YD101                             |        |        | YBG205                | YBG201                                     | YBG202 |                                   |  |
|                                                  | 30 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        | YD201                             |  |
|                                                  | 40 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        |                                   |  |
| S<br>Heat-Resistant Steel<br>Superlegierungen    | 01 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        |                                   |  |
|                                                  | 10 | YB9320                                       | YBG102 | YBG105  | YBG202 | YBG205                  | YNT251                | YNG151C            | YD101                             | YD201  |        |                       |                                            |        |                                   |  |
|                                                  | 20 |                                              |        |         |        |                         |                       |                    |                                   |        |        | YBG205                | YBG201                                     | YBG202 |                                   |  |
|                                                  | 30 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        | YBG102                            |  |
|                                                  | 40 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        | YD201                             |  |
| H<br>Super Hard Material<br>Gehärtete Werkstoffe | 01 |                                              |        |         |        |                         |                       |                    |                                   | YCB121 | YCB111 |                       |                                            |        |                                   |  |
|                                                  | 10 |                                              |        |         |        |                         |                       |                    |                                   |        | YCB121 |                       |                                            |        |                                   |  |
|                                                  | 20 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        |                                   |  |
|                                                  | 30 |                                              |        |         |        |                         |                       |                    |                                   |        | YCB131 |                       |                                            |        |                                   |  |
|                                                  | 40 |                                              |        |         |        |                         |                       |                    |                                   |        |        |                       |                                            |        |                                   |  |

|   |                                    |
|---|------------------------------------|
| P | Steel / Stahl                      |
| M | Stainless steel / Rostfreier Stahl |
| K | Cast iron / Gusseisen              |

|   |                                          |
|---|------------------------------------------|
| N | Non ferrous materials · Ne Metalle       |
| S | Heat-resistant steel · Warmfester Stahl  |
| H | Hardened material · Gehärtete Werkstoffe |

A

General Turning  
Allgemeine Drehbearbeitung

### Chip Breaker Overview · Spanbrecher Übersicht

Negative Inserts  
Negative Wendeschneidplatten

**P M K**

ap·d.o.c. = 0.05~1,5(mm)  
f=0.05~0.35(mm/r)



Special chip breaker in combination with cermet grades. Sharp cutting edge with excellent chip control at small depth of cut and small feed rate. Enable high surface finishing.

**SF**



Spezieller Spanbrecher in Kombination mit Cermetsorten. Mit scharfer Schneide für exzellenten Spanbruch bei kleinen Schnitttiefen und Vorschüben und sehr guter Oberflächengüte.

**P M**

ap·d.o.c. = 0.3~2,5 (mm)  
f=0.05~0.35(mm/r)



**DF**



Chip breaker for finishing and semi-finishing of steel and stainless steel.

Spanbrecher für die Schlicht- bis mittlere Bearbeitung von Stahl und rostfreiem Stahl.

**NEU**

**P M**

ap·d.o.c. = 1~3 (mm)  
f=0.1~0.4 (mm/r)



**NEW**

**ADF**



Optimized geometry for finishing and semi-finishing of steel and stainless steel.

Optimierte Geometrie zum Schlichten bis zum mittlerer Bearbeitung von Stahl und rostfreien Stählen.

**M S**

ap·d.o.c. = 0.05~2,5(mm)  
f=0.05~0.3 (mm/r)



**EF**

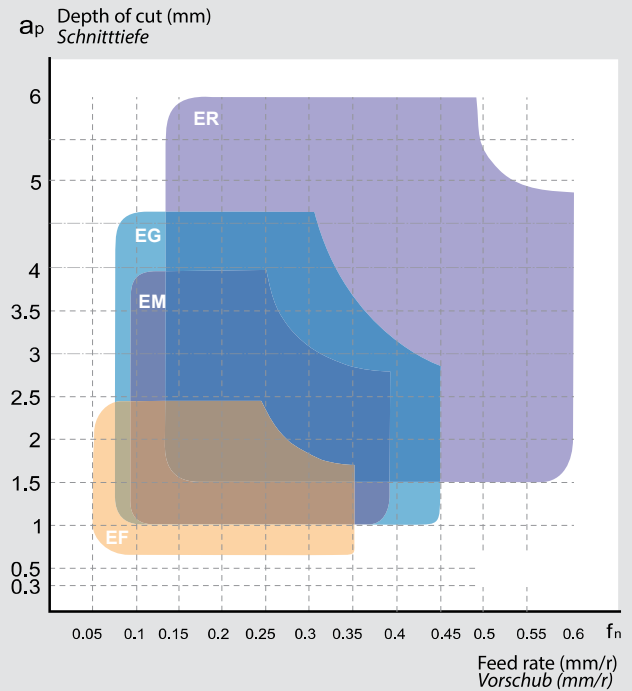
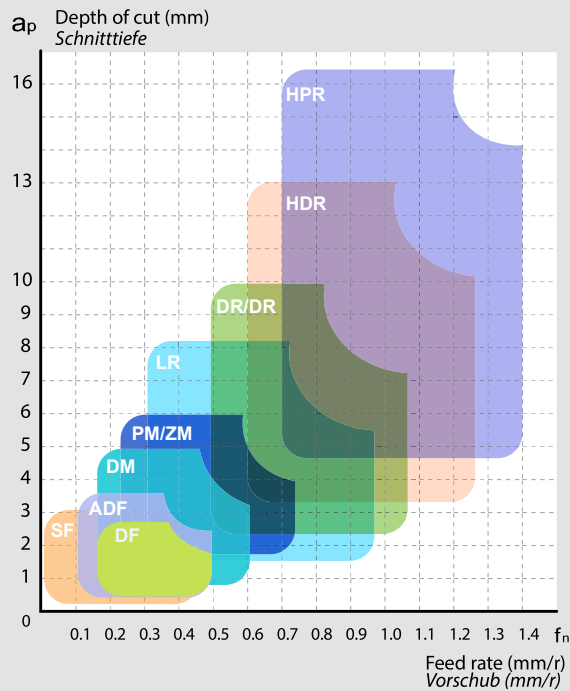


Sharp and positive cutting edge for finishing and semi-finishing of austenitic stainless steel, soft steel, low carbon steel and heat resistant super alloy. Suitable for continuous to light interrupted cut.

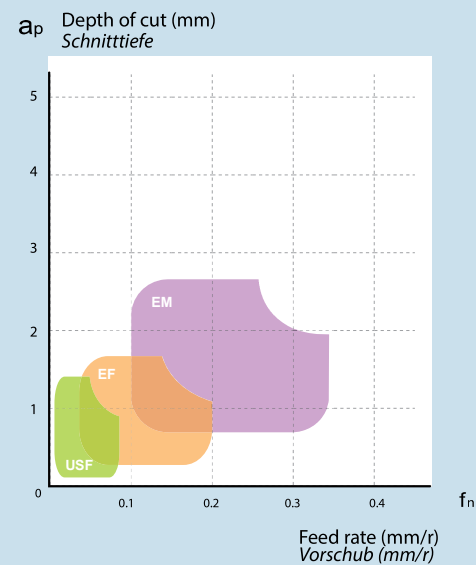
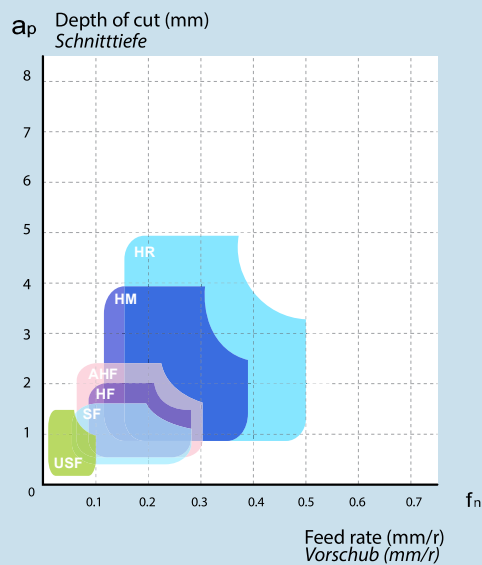
Sehr scharfe und positive Schneidkante für die Schlicht- bis mittlere Bearbeitung von austenitischem, rostfreiem Stahl, weichem Baustahl und Stahl mit niedrigem Kohlenstoffgehalt und warmfesten Superlegierungen.

Main Chip breaker for general turning ·  
Hauptspanbrecher für allgemeine Drehbearbeitung

### Negative Inserts · Negative Wendeschneidplatten



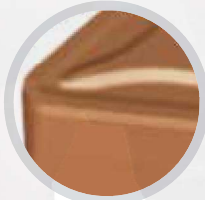
### Positive Inserts · Positive Wendeschneidplatten



# ADF·AHF **NEW**

**Optimised geometry series for stainless steel.**

**Optimale Geometrie besonders für die Zerspanung von rostfreien Stählen.**



## **-ADF**

Negative inserts  
Negative WSP  
e.g. **CNMG** ...

Optimised geometry for negative inserts giving perfect chip control at a wide range of cutting data. Mainly applied for finishing and semi-finishing machining of steels and stainless steel materials. The precision grinding techniques gives high dimension accuracy and high indexing repeatability. Specially designed rake face structure ensures insert strength while greatly reducing the cutting forces. Advanced edge preparation and new coating for excellent surface finish.

*Neu entwickelter Spanbrecher für negative Wendeschneidplatten mit verbessertem Spanbruchverhalten für ein größeres Anwendungsspektrum. Zum Schlichten- bis mittlere Zerspanung von Stahl, rostfreiem Stahl. Umfangsgeschliffene Platte für hohe Qualität und Wiederholgenauigkeit. Optimierte 3-D Spanbrecherdesign für besseres Verschleißverhalten und höhere Plattenstabilität. Verbesserte Kantenpräparation und neue Beschichtungstechnologie für bessere Oberflächengüte.*



## **-AHF**

Positive inserts  
Positive WSP  
e.g. **CCMT** ...

New chip breaker for positive inserts giving good surface quality and precision. With rigid design and sharpe edge to reduce vibration especially on long slender parts. Excellent chip control in a wide range of application. For finishing and semi-finishing machining of steel and stainless steel materials. Improved edge geometry for high productivity and stability.

*Neu entwickelter Spanbrecher für positive Wendeschneidplatten für hohe Oberflächengüte und Genauigkeit durch weniger Vibrationen. Perfekte Spankontrolle in großem Anwendungsspektrum. Für Schlicht- bis mittlere Bearbeitung von P und M Materialien. Positive Platten mit verbesserter Kantenausbildung. Hohe Produktivität und Stabilität.*

Range of chip breaker  
Anwendungsbereich  
Spanbrecher

**-ADF**

**-AHF**

