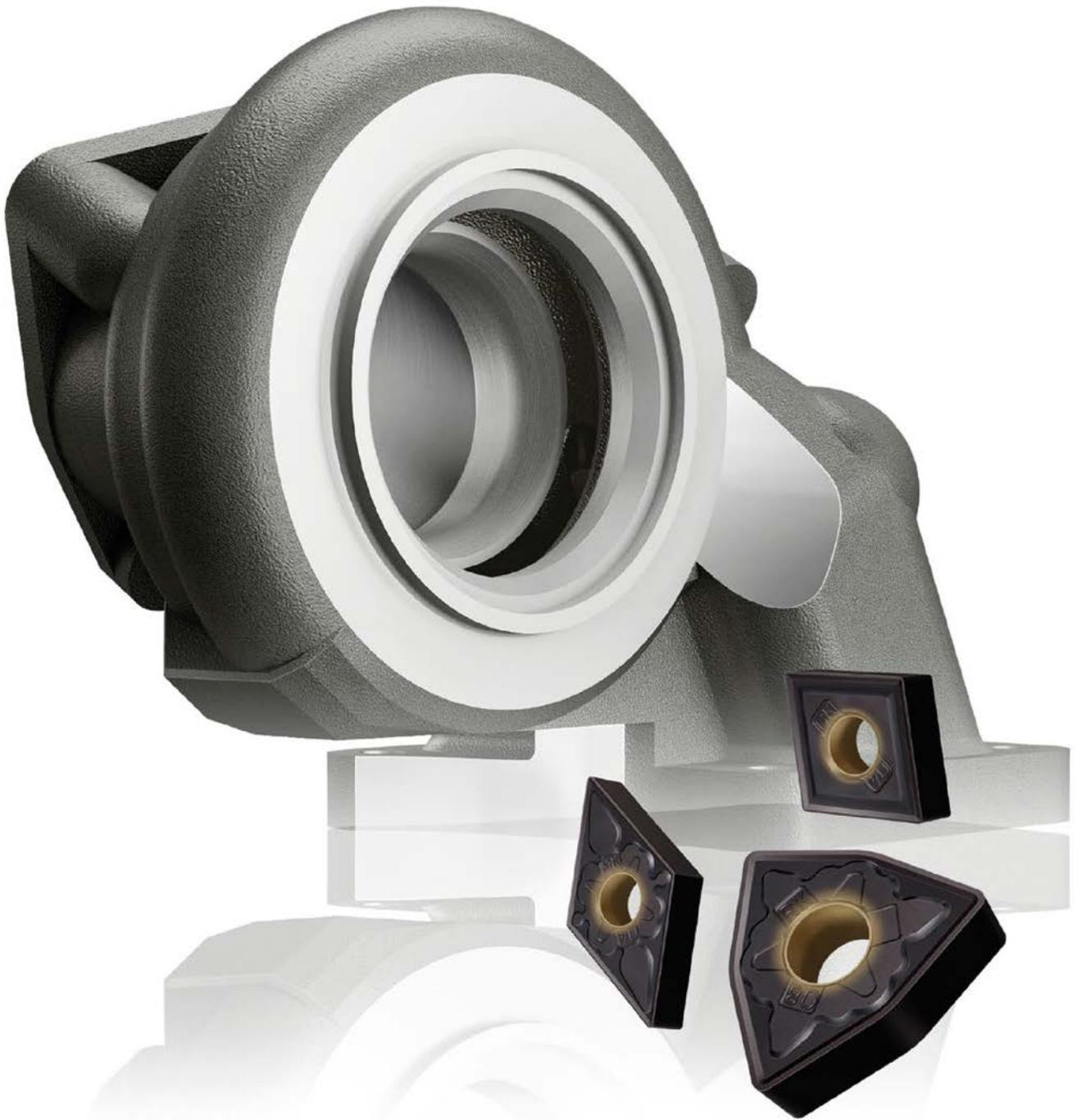

MH515

SPECIALLY DESIGNED FOR MACHINING CAST
AUSTENITIC STAINLESS STEEL AND DUCTILE CAST IRON
COMPONENTS SUCH AS TURBOCHARGER HOUSINGS

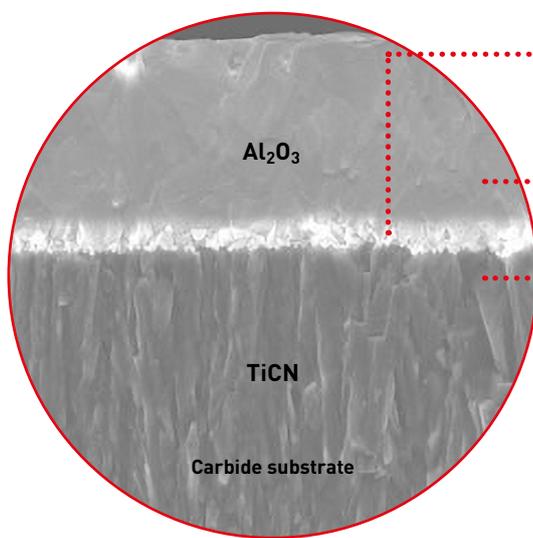


MH515

IMPROVED PEELING RESISTANCE WHEN MACHINING CAST AUSTENITIC STAINLESS STEEL AND DUCTILE CAST IRON

COATING FEATURES

Technologically specialised coating greatly improves adhesion to the carbide substrate, thereby preventing plastic deformation of the cutting edge and increasing tool life.



TOUGH-GRIP TECHNOLOGY

The degree of adhesion between the coating layers was maximised, enabling a toughening effect that is highly resistant to peeling.

NANO-TEXTURE COATING TECHNOLOGY

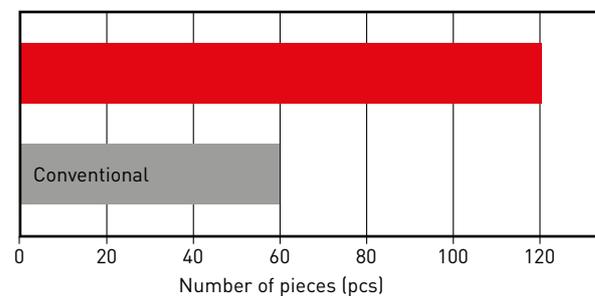
The optimised crystal growth, Nano-texture coating technology gives outstanding wear and chipping resistance.

CUTTING PERFORMANCE

EXTERNAL MACHINING OF TURBINE HOUSING FLANGE (HEAT RESISTANT CAST STEEL)

Superior coating provides double tool life.

| | |
|-------------|---------------------------|
| Material | Heat resistant cast steel |
| Inserts | WNMG080412-00 |
| Vc (m/min) | 130 |
| f (mm/rev.) | 0.25 |
| ap (mm) | 1.5 |
| Coolant | Wet cutting |

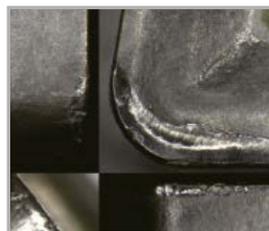


MH515+GK



120 Pieces

Conventional



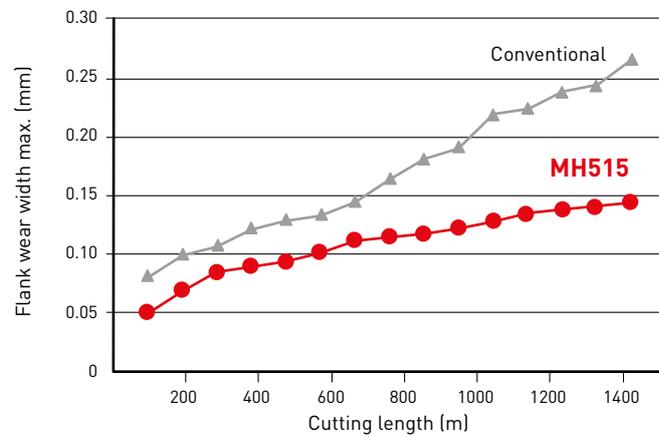
60 Pieces

CUTTING PERFORMANCE

CONTINUOUS TURNING TEST OF CAST AUSTENITIC STAINLESS STEEL

Peeling of the coating layer due to plastic deformation was greatly reduced.

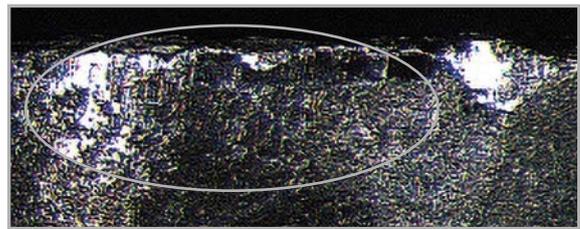
| | |
|------------------|---------------------------------|
| Material | Cast austenitic stainless steel |
| Inserts | WNMG080412-00 |
| Machining method | Continuous facing |
| Vc (m/min) | 120 |
| f (mm/rev.) | 0.2 |
| ap (mm) | 2.0 |
| Coolant | Wet cutting |



CUTTING EDGE AFTER 1425 M



MH515



Conventional

Damage due to peeling of the coating



NEGATIVE INSERTS

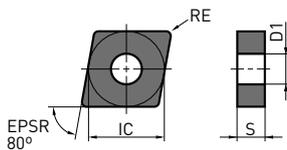
(WITH HOLE)

M

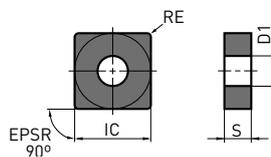
K

M Class

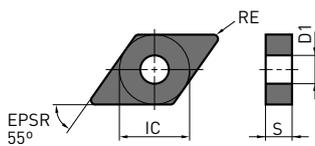
CNMG, CNMA



SNMG



DNMG



CHIPBREAKER IDENTIFICATION

APPLICATION



LK

MA, GK,
StandardRK
Flat top

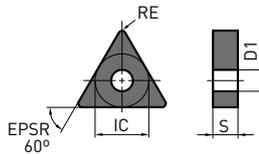
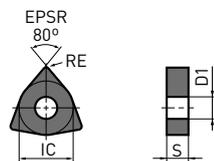
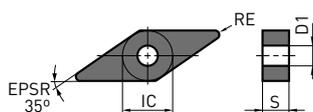
| Order number |  | | MH515 | IC | S | RE | D1 |
|---------------|---|--|-------|-------|------|-----|------|
| | | | | | | | |
| CNMG120408-LK | L | | ★ | 12.7 | 4.76 | 0.8 | 5.16 |
| CNMG120412-LK | L | | ★ | 12.7 | 4.76 | 1.2 | 5.16 |
| CNMG120408-MA | M | | ★ | 12.7 | 4.76 | 0.8 | 5.16 |
| CNMG120412-MA | M | | ★ | 12.7 | 4.76 | 1.2 | 5.16 |
| CNMG120408-GK | M | | ★ | 12.7 | 4.76 | 0.8 | 5.16 |
| CNMG120412-GK | M | | ★ | 12.7 | 4.76 | 1.2 | 5.16 |
| CNMG120408-RK | R | | ★ | 12.7 | 4.76 | 0.8 | 5.16 |
| CNMG120412-RK | R | | ★ | 12.7 | 4.76 | 1.2 | 5.16 |
| CNMA120408 | R | | ★ | 12.7 | 4.76 | 0.8 | 5.16 |
| CNMA120412 | R | | ★ | 12.7 | 4.76 | 1.2 | 5.16 |
| DNMG150404-LK | L | | ★ | 12.7 | 4.76 | 0.4 | 5.16 |
| DNMG150404-GK | M | | ★ | 12.7 | 4.76 | 0.4 | 5.16 |
| DNMG110408 | M | | ★ | 9.525 | 4.76 | 0.8 | 3.81 |
| SNMG120404-GK | M | | ★ | 12.7 | 4.76 | 0.4 | 5.16 |
| SNMG120412-GK | M | | ★ | 12.7 | 4.76 | 1.2 | 5.16 |

NEGATIVE INSERTS

(WITH HOLE)

M

K

M Class
TNMG

WNMG

VNMG

CHIPBREAKER IDENTIFICATION
APPLICATION


LK

GK, MK

RK

Order number

MH515
IC
S
RE
D1

| | | | | | | |
|---------------|---|---|-------|------|-----|------|
| TNMG160412-GK | M | ★ | 9.525 | 4.76 | 1.2 | 3.81 |
| VNMG160408-MK | M | ★ | 9.525 | 4.76 | 0.8 | 3.81 |
| WNMG080408-LK | L | ★ | 12.7 | 4.76 | 0.8 | 5.16 |
| WNMG080412-LK | L | ★ | 12.7 | 4.76 | 1.2 | 5.16 |
| WNMG080408-GK | M | ★ | 12.7 | 4.76 | 0.8 | 5.16 |
| WNMG080412-GK | M | ★ | 12.7 | 4.76 | 1.2 | 5.16 |
| WNMG080412-RK | R | ★ | 12.7 | 4.76 | 1.2 | 5.16 |
| WNMG080416-RK | R | ★ | 12.7 | 4.76 | 1.6 | 5.16 |



7° POSITIVE INSERTS

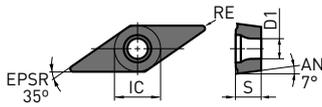
(WITH HOLE)

M

K

M Class

VCMT, VCMW



CHIPBREAKER IDENTIFICATION

APPLICATION



MK

Flat top

Order number



MH515

IC

S

RE

D1

VCMT160404-MK

M

★

9.525

4.76

0.4

4.4

VCMW160408

R

★

9.525

4.76

0.8

4.4

MH515

RECOMMENDED CUTTING CONDITIONS

NEGATIVE INSERTS

Cutting conditions : ●: Stable cutting ●: General cutting ✘: Unstable cutting

| Material | Properties | Conditions |  | | Vc | f | ap |
|--|---------------------------|------------|---|--------|---------|-----------|---------|
| | | | | | | | |
| M Cast austenitic stainless steel JIS SCH12, DIN 1.4826, DIN 1.4837 | Ni ≤ 18 % | ● | M | GK, MK | 60-130 | 0.10-0.30 | 1.5-2.5 |
| | | | R | RK * | 60-130 | 0.10-0.30 | 1.5-2.5 |
| S Ductile cast iron | Tensile strength < 500MPa | ● | L | LK, MA | 150-250 | 0.10-0.30 | 0.3-1.0 |
| | | | M | MK, GK | 150-250 | 0.10-0.35 | 0.3-2.5 |
| | Tensile strength ≥ 500MPa | ● | R | RK | 150-250 | 0.15-0.35 | 1.0-2.5 |
| | | | L | LK, MA | 130-230 | 0.10-0.20 | 0.3-1.0 |
| | | ✘ | M | MK, GK | 130-230 | 0.10-0.30 | 0.3-2.5 |
| | | | R | RK | 130-230 | 0.20-0.30 | 1.0-2.5 |

* Flat Top

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GERMANY

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