

hard material  
material matters



**HyperCoat CTCP115 / CTCP125**



EN



# CERATIZIT - secrets of success

## Secrets of success

- CERATIZIT is your partner for exceptional hard material solutions. Hard materials and tools from CERATIZIT - our solutions to complex problems are an integral part of our customers' success. Our products guarantee: economy - long life - speed! And it is precisely this combination which gives our business partners a direct competitive advantage.
  - Premier performance is only possible through a total appreciation of the requirements of our business partners. A performance achieved through flexible thinking and continuous dialogue with our customers. A pioneering
- spirit and a deep understanding of powder metallurgy characterize the history of CERATIZIT. One of the attributes of our company philosophy is the search for perfection: target oriented - sustainably - passionately!
- Intensive research and development activities, taking into account the precise requirements and working processes of the customer, are today's investment for the solutions of tomorrow - and beyond.

## Corporate values

- ① The views and focus of our business partners matter
- ② Innovative and flexible thinking matters
- ③ Communication matters
- ④ Employee development matters
- ⑤ Professionalism matters
- ⑥ Our environment matters



## Tailored cutting tool solutions

- Cutting materials, coatings, inserts, tooling systems and machining solutions - all this is included in the cutting tool division at CERATIZIT.
- Worldwide well-known companies process advanced materials applying cutting tool products from CERATIZIT: from the automotive

industry to the aerospace industry, mechanical engineering, and tool construction to the oil industry.

- The basis of these long-term business relations is the faith of the customers in the extensive know-how of the carbide specialists.

# CTCP115 / CTCP125

HYPER COAT



Consistent and reliable cutting performance  
for the ISO-P range.



**Security for your work piece**

# CTCP115 / CTCP125

Look no further - CTCP125 inserts show unbeatable performance.



**NEW**

**CTCP115** is the first choice for highly productive steel machining under stable conditions.

This grade guarantees maximum tool life and optimum process security for all applications with highest demands on both heat and wear resistance.

**CTCP125** satisfies the demands of steel machining better in terms of productivity and reliability and also offers a broader application range than all previous P25 grades.

This is the **universal steel turning grade**. It may be applied in all industries and for all applications from one-off components to high volume production and the manufacture of small parts or heavy duty machining.

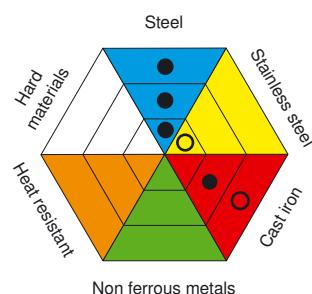


# The easy solution to hard steel problems

## CTCP115



**NEW**



### Material group

- Main application
- Extended application

#### Machining application type

F	M	R
●●●	●●●●	●●●

- F** Fine machining  
**M** Medium machining  
**R** Rough machining

- ideal
- good
- still possible

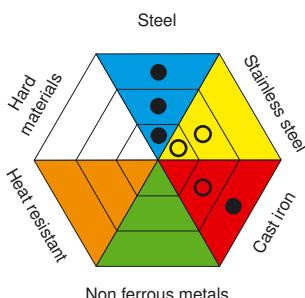
#### Stability / degree of interrupted cut

○	○	○	○
●●●	●●●●	●●	

- optimum  
 ● good

- medium  
 ● difficult

## CTCP125



### Material group

- Main application
- Extended application

#### Machining application type

F	M	R
●●	●●●●	●●●●

- F** Fine machining  
**M** Medium machining  
**R** Rough machining

- ideal
- good
- still possible

#### Stability / degree of interrupted cut

○	○	○	○
●●	●●●●	●●●●	●●●

- optimum  
 ● good

- medium  
 ● difficult

# Application range

## Industries

- Automotive industry and subcontractors
- General mechanical engineering
- Power generation
- Oil industry
- Railway vehicles
- Bearing industry
- Heavy duty machining

## Typical components

- Gear components
- Bearing rings
- Driveline and structural components
- Components produced on automatic lathes
- Tubes and couplings
- forgings
- Axles and shafts
- Rings

## For numerous steel alloys

- Constructional steels
- Tool steel in general
- Cold working steels
- Hot working steels
- Plastic mould steel
- Cementation steels
- Tempered steels
- Nitriding steels
- Ball bearing steels
- High-speed steels
- Spring steels
- Machining steel
- Valve steels
- Stainless steels

## Customer benefits

### Product advantages

High cutting edge stability  
Consistent results



### YOUR benefits

Much increased reliability

Longer tool life  
Higher metal removal rates



Enhanced productivity  
and economy

Wide application range  
Suitable for all steel alloys  
Good performance potential  
also on cast iron and stainless  
steels



Versatility  
Reduced storage

Ideal combinations of cutting  
materials and chip grooves



Maximum tool life,  
wide application range



# Recommended tooling systems

## MaxiLock S

- The centre screw guarantees a safe connection of the insert and the tool holder.
- Chip evacuation is not hindered by obstructive clamping elements.
- Due to the neutral insert position the effective rake angle is identical to that of the insert form and geometry.



## MaxiLock D

- Robust top clamp for safe positioning of the insert in the insert seat.
- Claw, spring and clamping screw (clamping element) = ONE SPARE PART.
- 'All-inclusive' concept with integrated spare shim and screw.
- Clamping key integrated in the shank to reduce packaging volume and storage.
- Reinforced shim, clamped with screw.
- TorxPlus® system. Torque is transmitted better giving safer clamping.
- Optimized insert seat so that precise insert positioning and clamping is possible despite adhesion and wear.



# Lab tests

## Wear test

Maximum cutting speed, maximum thermal stress on the **CTCP115** cutting edge.

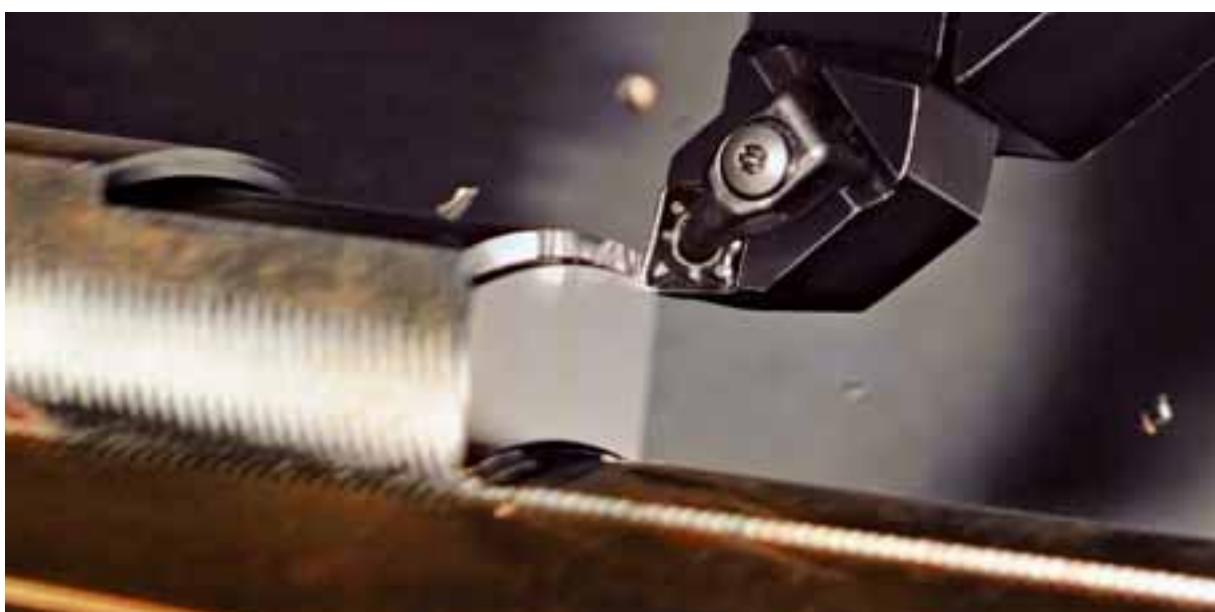
→ Reliability in extreme machining conditions.



## Toughness tests

Maximum impact stress in the standardized increasing feed rate test.  
When comparable cutting materials break, **CTCP125** shows its strengths.

→ Reliability in extreme machining conditions.



# Tests

## Practical examples

NEW



PIN C45V

**Cutting data:**  $v_c = 200$  m/min  
 $a_p = 2.50$  mm  
 $f = 0.38$  mm



**Competitor/benchmark**

Tool life: 14 min



**CERATIZIT CTCP115**

Tool life: 21 min

END PIECE 100Cr6

**Cutting data:**  $v_c = 200$  m/min  
 $a_p = 0.8 - 1.0$  mm  
 $f = 0.30$  mm



**Competitor/benchmark**

Tool life: 18 min



**CERATIZIT CTCP115**

Tool life: 24 min



# Tests

## Practical examples

**FLANGE** 16MnCr5

**Cutting data:**  $v_c = 220$  m/min  
 $a_p = 2.00$  mm  
 $f = 0.30$  mm



**Competitor/benchmark**

Tool life: 25 min



**CERATIZIT CTCP125**

Tool life: 45 min



**DIE** X38CrMoV5-3

**Cutting data:**  $v_c = 150$  m/min  
 $a_p = 3.00$  mm  
 $f = 0.25$  mm



**Competitor/benchmark**

Tool life: 15 min



**CERATIZIT CTCP125**

Tool life: 30 min



# The CERATIZIT designation system

# CTC P125

Manufacturer: CERATIZIT

## Cutting material

- W - Uncoated carbide
- C - CVD coated carbide
- P - PVD coated carbide
- T - Uncoated cermet
- E - Coated cermet
- N - Uncoated silicon nitride
- M - Coated silicon nitride
- S - Mixed ceramic
- I - Sialon
- D - PCD
- B - CBN
- L - CBN coated
- H - Sintered HSS

## Main application (material)

### Variant 1: number

- 1 - Steel
- 2 - Stainless steel
- 3 - Cast iron
- 4 - Light and non ferrous metals, non metals
- 5 - Heat resistant alloys, titanium
- 6 - Hard materials
- 7 - Universal grade

## Main application (material)

### Variant 2: ISO letter

- P - Steel
- M - Stainless steel
- K - Cast iron
- N - Light and non ferrous metals, non metals
- S - Super alloys/titanium
- H - Hard materials
- X - Universal grade for a variety of materials

## ISO 513 Application range

- e.g.
- 05 - ISO K05/P05
- 10 -
- 15 -
- 25 -

## Main application (machining method)

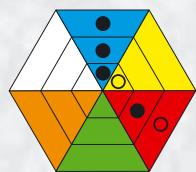
- 1 - Turning
- 2 - Milling
- 3 - Parting and grooving
- 4 - Drilling
- 5 - Threading
- 6 - Others
- 7 - Universal grade for a variety of applications

# Grade description

**NEW**

## CTCP115

HC-P15  
HC-M10  
HC-K25



### Composition:

Co 5.8%; mixed carbides 6.4%; WC balance

### Grain size:

1 - 2  $\mu\text{m}$

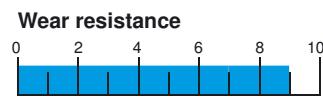
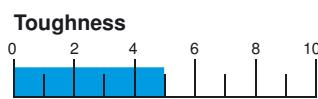
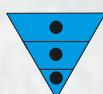
### Hardness:

HV 1550

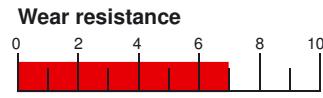
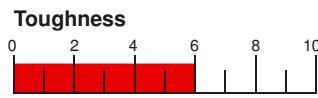
### Coating specification:

CVD  
Ti (C,N) + Al<sub>2</sub>O<sub>3</sub>; 18.5  $\mu\text{m}$

#### Steel

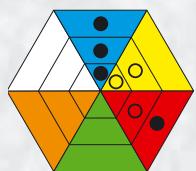


#### Cast iron



## CTCP125

HC-P25  
HC-M20  
HC-K25



### Composition:

Co 7.0%; mixed carbides 8.0%; WC balance

### Grain size:

1 - 2  $\mu\text{m}$

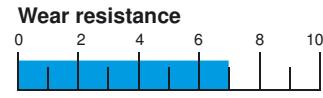
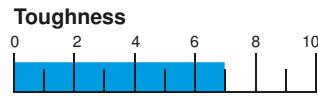
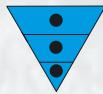
### Hardness:

HV 1450

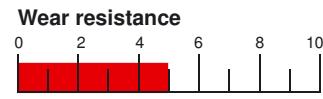
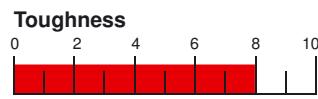
### Coating specification:

CVD  
Ti (C,N) + Al<sub>2</sub>O<sub>3</sub>; 15  $\mu\text{m}$

#### Steel



#### Cast iron



# Grade overview

Grade designation	Standard designation	Type of cutting material	Application range									A	R	F	N	S	H	
			01	05	10	15	20	25	30	35	40							
CTCP115	HC-P15	C					■■■■■					●		○				
	HC-M10	C						■■■■■						○				
	HC-K25	C							■■■■■				●	○	●			
CTCP125	HC-P25	C							■■■■■			●		○				
	HC-M20	C							■■■■■					○				
	HC-K30	C							■■■■■			●		●				
			01	05	10	15	20	25	30	35	40	45	50	● Main application ○ Extended application				

Application range -R28 / -R58 / -R88

NEW

Chip groove	Material	Machining situation and stability				Machining type
		○	○	○	○	
 R28		●●●	●●●●	●●●	●	R  a <sub>p</sub> : 1,0 – 12,0 mm f: 0,25 – 1,1 mm
 R58		●●	●●●●	●●●●●	●●●●	R  a <sub>p</sub> : 1,5 – 16,0 mm f: 0,3 – 1,3 mm
 R88		●	●●	●●●●	●●●●●	R  a <sub>p</sub> : 2,5 – 23,0 mm f: 0,5 – 1,9 mm

MasterGuide:



- Steel
- Stainless
- Heat resistant
- Main application
- Extended application

Machining situation and stability:

- excellent
- good
- acceptable
- difficult

Recommendation:

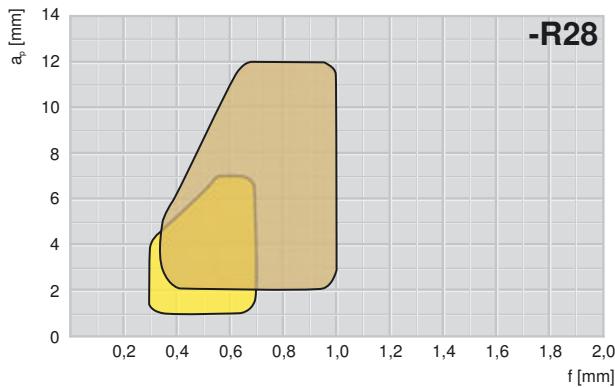
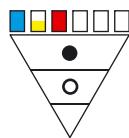
- ideal
- good
- still possible

Machining type:

- F Fine machining
- M Medium machining
- R Rough machining

# Chip groove application range

**NEW**



CNMM 120412EN-R28

a<sub>p</sub>: 1,0 – 7,0 mm

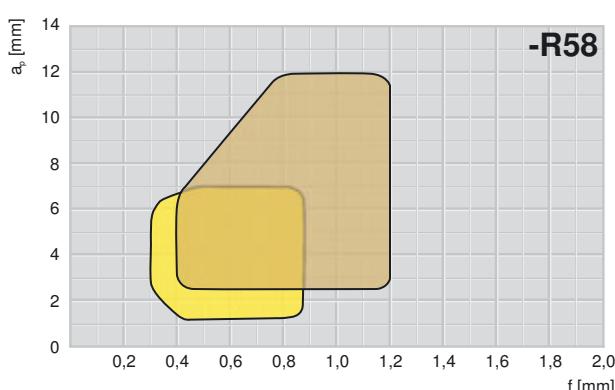
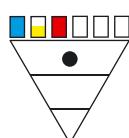
f: 0,3 – 0,7 mm

CNMM 190624EN-R28

a<sub>p</sub>: 2,0 – 12,0 mm

f: 0,35 – 1,0 mm

**NEW**



CNMM 120412EN-R58

a<sub>p</sub>: 1,5 – 7,0 mm

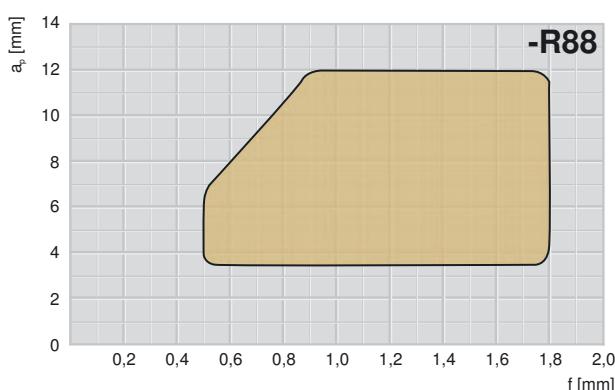
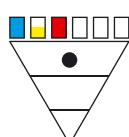
f: 0,3 – 0,85 mm

CNMG 190624EN-R58

a<sub>p</sub>: 2,5 – 12,0 mm

f: 0,4 – 1,2 mm

**NEW**



CNMM 190624SN-R88

a<sub>p</sub>: 3,5 – 12,0 mm

f: 0,5 – 1,5 mm





# Inserts

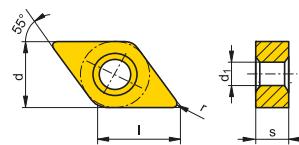
## DNMG



r [mm]	Type, description	L N R	CTCP115	CTCP125		I [mm]	d [mm]	s [mm]	d <sub>1</sub> [mm]
0.40	DNMG 110404EN-M50	N	●	●		11.60	9.52	4.76	3.81
0.40	DNMG 110404EN-TF		●	●		11.60	9.52	4.76	3.81
0.40	DNMG 110404EN-TMF		●	●		11.60	9.52	4.76	3.81
0.80	DNMG 110408EN-M50		●	●		11.60	9.52	4.76	3.81
0.80	DNMG 110408EN-TF			●		11.60	9.52	4.76	3.81
0.80	DNMG 110408EN-TM		●	●		11.60	9.52	4.76	3.81
0.80	DNMG 110408EN-TMF		●			11.60	9.52	4.76	3.81
0.80	DNMG 110408EN-TRM			●		11.60	9.52	4.76	3.81
1.20	DNMG 110412EN-TMF		●			11.60	9.52	4.76	3.81
1.20	DNMG 110412EN-TMR			●		11.60	9.52	4.76	3.81



Steel  
Stainless  
Cast iron  
Non ferrous metals  
Heat resistant  
Hard materials

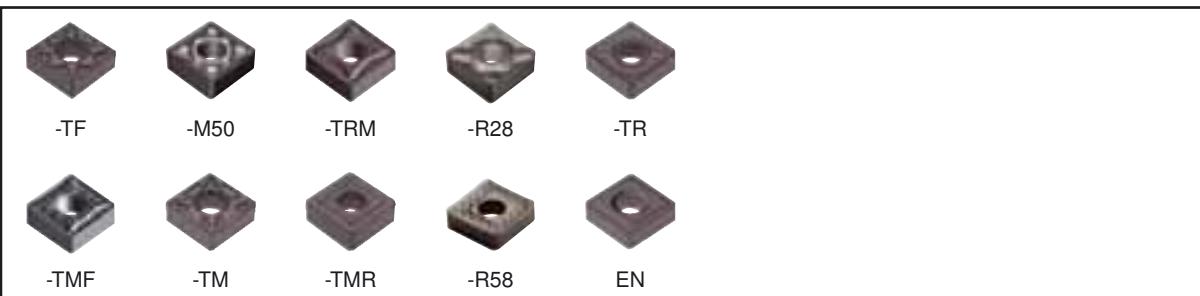


- Main application
- Extended application
- International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces DNMG 110404EN-M50 CTCP115



# Inserts SNMG, SNMM



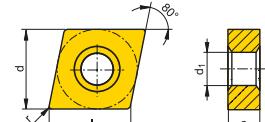
r [mm]	Type, description	L N R	CTCP115	CTCP125			I [mm]	d [mm]	s [mm]	d <sub>1</sub> [mm]
0.80	SNMG 090308EN	N	●				9.52	9.52	3.18	3.81
0.40	SNMG 120404EN-TF		●				12.70	12.70	4.76	5.16
0.80	SNMG 120408EN-M50		●	●			12.70	12.70	4.76	5.16
0.80	SNMG 120408EN-TM		●	●			12.70	12.70	4.76	5.16
0.80	SNMG 120408EN-TMF		●				12.70	12.70	4.76	5.16
0.80	SNMG 120408EN-TMR		●	●			12.70	12.70	4.76	5.16
0.80	SNMM 120408EN-TR		●	●			12.70	12.70	4.76	5.16
1.20	SNMG 120412EN-M50		●	●			12.70	12.70	4.76	5.16
1.20	SNMG 120412EN-TM		●	●			12.70	12.70	4.76	5.16
1.20	SNMG 120412EN-TMR		●	●			12.70	12.70	4.76	5.16
1.20	SNMG 120412EN-TRM		●	●			12.70	12.70	4.76	5.16
1.20	SNMM 120412EN-TR		●	●			12.70	12.70	4.76	5.16
1.60	SNMG 120416EN-TM		●	●			12.70	12.70	4.76	5.16
1.20	SNMG 150612EN-TMR	N	●				15.88	15.88	6.35	6.35
1.20	SNMM 150612EN-R28		●	●			15.88	15.88	6.35	6.35
1.20	SNMM 150612EN-R58		●	●			15.88	15.88	6.35	6.35
1.20	SNMM 150612EN-TR		●	●			15.88	15.88	6.35	6.35
1.60	SNMG 150616EN-TMR		●	●			15.88	15.88	6.35	6.35
1.60	SNMM 150616EN-R28		●	●			15.88	15.88	6.35	6.35
1.60	SNMM 150616EN-R58		●	●			15.88	15.88	6.35	6.35



Steel	●	●	●	●
Stainless	○	○	○	○
Cast iron	●	●	●	●
Non ferrous metals	●	●	●	●
Heat resistant	●	●	●	●
Hard materials	●	●	●	●

- Main application
- Extended application
- International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces SNMG 090308EN CTCP125



# Inserts

## SNMG, SNMM, SNMT

		L N R [mm]		CTCP115 CTCP125			I [mm]	d [mm]	s [mm]	d <sub>1</sub> [mm]
1.20	SNMG 190612EN-TMR	N		●			19.05	19.05	6.35	7.94
1.20	SNMM 190612EN-R58		●	●			19.05	19.05	6.35	7.94
1.60	SNMG 190616EN-TMR		●				19.05	19.05	6.35	7.94
1.60	SNMM 190616EN-R58		●	●			19.05	19.05	6.35	7.94
1.60	SNMM 190616EN-TR		●				19.05	19.05	6.35	7.94
1.60	SNMM 190616SN-R88		●	●			19.05	19.05	6.35	7.94
1.60	SNMM 190616SN-TRR		●				19.05	19.05	6.35	7.94
2.40	SNMM 190624EN-R58		●	●			19.05	19.05	6.35	7.94
2.40	SNMM 190624SN-R88		●	●			19.05	19.05	6.35	7.94
2.40	SNMM 250724EN-R58	N	●	●			25.40	25.40	7.94	9.12
2.40	SNMM 250724EN-TR		●				25.40	25.40	7.94	9.12
2.40	SNMM 250724SN-R88		●				25.40	25.40	7.94	9.12
2.40	SNMM 250724SN-TRR		●				25.40	25.40	7.94	9.12
2.40	SNMM 250924EN-R58		●	●			25.40	25.40	9.52	9.12
2.40	SNMM 250924SN-R88		●	●			25.40	25.40	9.52	9.12
3.20	SNMM 250732SN-R88	N	●	●			25.40	25.40	7.94	9.12
3.20	SNMM 250932SN-R88		●	●			25.40	25.40	9.52	9.12
3.20	SNMM 310932SN-R88	N	●	●			31.75	31.75	9.52	9.12
3.20	SNMT 310932SN-R88		●	●			31.75	31.75	9.52	9.12
 Steel      Stainless      Cast iron Non ferrous metals      Heat resistant      Hard materials										

● Main application

○ Extended application

● International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces SNMG 090308EN CTCP125

# Inserts

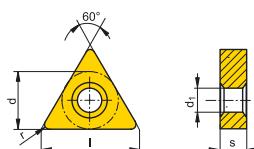
## TNMG, TNMM

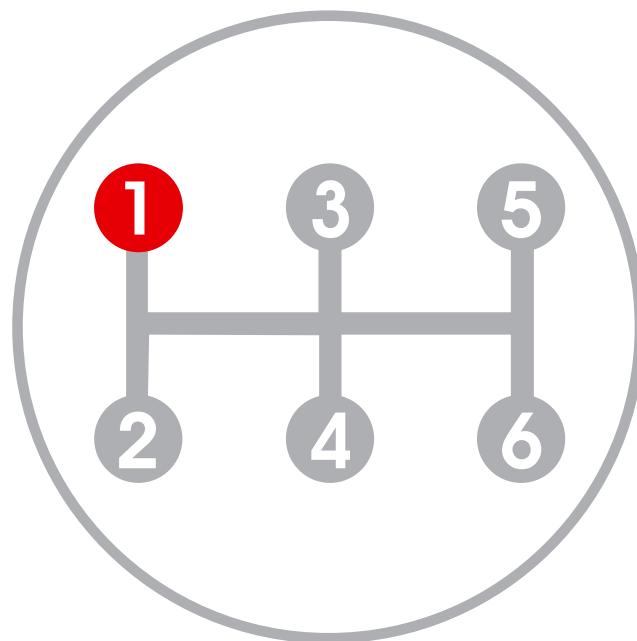
	-TF	-M50	-TRM	-TR	EN			
	-TMF	-TM	-TMR	-TRR	ER-EL			
r [mm]	Type, description	L	N	R	CTCP115	CTCP125		
0.40	TNMG 110304EN-TF	N			●			
0.40							11.00	6.35
0.40	TNMG 160404EN-M50		N		●	●		
0.40	TNMG 160404EN-TF		N		●	●	16.50	9.52
0.40	TNMG 160404EN-TMF		N		●	●	16.50	9.52
0.40	TNMG 160404ER	R			●		16.50	9.52
0.80	TNMG 160408EL	L			●		16.50	9.52
0.80	TNMG 160408EN-M50			N	●	●	16.50	9.52
0.80	TNMG 160408EN-TF			N	●	●	16.50	9.52
0.80	TNMG 160408EN-TM			N	●	●	16.50	9.52
0.80	TNMG 160408EN-TMF			N	●	●	16.50	9.52
0.80	TNMG 160408EN-TMR			N	●	●	16.50	9.52
0.80	TNMG 160408EN-TRM			N	●	●	16.50	9.52
0.80	TNMG 160408EN-TR			N	●	●	16.50	9.52
0.80	TNMG 160408ER	R			●		16.50	9.52
0.80	TNMM 160408SN-TRR			N		●	16.50	9.52
1.20	TNMG 160412EN-M50			N	●	●	16.50	9.52
1.20	TNMG 160412EN-TM			N	●	●	16.50	9.52
1.20	TNMG 160412EN-TMF			N	●		16.50	9.52
1.20	TNMG 160412EN-TMR			N	●	●	16.50	9.52
1.20	TNMG 160412EN-TRM			N	●	●	16.50	9.52
1.20	TNMM 160412EN-TR			N	●	●	16.50	9.52
0.80	TNMG 220408EN-TM			N	●	●	22.00	12.70
0.80	TNMG 220408EN-TMR			N	●	●	22.00	12.70
0.80	TNMG 220408EN-TRM			N	●	●	22.00	12.70
0.80	TNMM 220408EN-TR			N	●		22.00	12.70
1.20	TNMG 220412EN-TM			N	●		22.00	12.70
1.20	TNMG 220412EN-TMR			N	●		22.00	12.70
1.20	TNMG 220412EN-TRM			N	●		22.00	12.70
1.20	TNMM 220412EN-TR			N	●		22.00	12.70
1.20	TNMM 220412SN-TRR			N	●		22.00	12.70
1.60	TNMG 220416EN-TMR			N	●		22.00	12.70
1.60	TNMG 220416EN-TRM			N	●		22.00	12.70
1.60	TNMM 220416EN-TR			N	●		22.00	12.70
1.60	TNMM 270616EN-TR	N			●		27.50	15.88
2.40	TNMG 330924EN	N			●		33.00	19.05
	Steel				●	●		
	Stainless				○	○		
	Cast iron				●	●		
	Non ferrous metals				●	●		
	Heat resistant				●	●		
	Hard materials							



- Main application
- Extended application
- International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces TNMG 110304EN-TF CTCP125





# 1

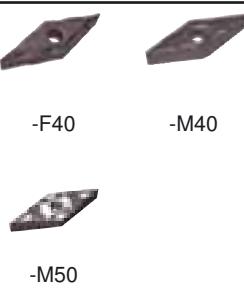
## The views and focus of our business partners matters

- Instead of talking product with customers, we work on real solutions for business partners.

h a r d   m a t e r i a l   m a t t e r s

# Inserts

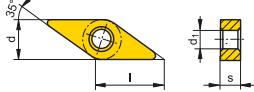
## VNMG



r [mm]	Type, description	L N R	CTCP115	CTCP125			I [mm]	d [mm]	s [mm]	d <sub>1</sub> [mm]
0.40	VNMG 160404EN-F40	N	●				16.60	9.52	4.76	3.81
0.40	VNMG 160404EN-M40		●				16.60	9.52	4.76	3.81
0.40	VNMG 160404EN-M50		●	●			16.60	9.52	4.76	3.81
0.80	VNMG 160408EN-F40		●				16.60	9.52	4.76	3.81
0.80	VNMG 160408EN-M40		●				16.60	9.52	4.76	3.81
0.80	VNMG 160408EN-M50		●	●			16.60	9.52	4.76	3.81
1.20	VNMG 160412EN-M50		●				16.60	9.52	4.76	3.81
		Steel	●	●						
		Stainless	○	○						
		Cast iron	●	●						
		Non ferrous metals	■	■						
		Heat resistant	■	■						
		Hard materials	■	■						

● Main application  
 ○ Extended application  
 ■ International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces VNMG 160404EN-F40 CTCP125









# Inserts

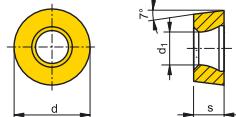
## RCGT, RCMT, RCMX



<b>r [mm]</b>	<b>Type, description</b>	<b>L N R</b>	<b>CTCP115</b>	<b>CTCP125</b>			<b>l [mm]</b>	<b>d [mm]</b>	<b>s [mm]</b>	<b>d<sub>1</sub> [mm]</b>
3.00	RCGT 0602MOEN-SM	N		●			6.00	6.00	2.38	2.80
4.00	RCGT 0803MOEN-SM	N		●			8.00	8.00	3.18	3.40
5.00	RCMT 1003MOSN-SM	N		●			10.00	10.00	3.18	4.00
6.00	RCMT 1204MOSN-SM	N	●	●			12.00	12.00	4.76	4.90
8.00	RCMT 1606MOSN-SM	N	●	●			16.00	16.00	6.35	5.30
10.00	RCMT 2006MOSN-SM	N		●			20.00	20.00	6.35	6.50
12.50	RCMT 2507MOSN-SM	N		●			25.00	25.00	7.94	7.20
16.00	RCMT 3209MOSN-SM		●	●			32.00	32.00	9.52	9.50
16.00	RCMX 3209MOSN-R83	N	●	●			32.00	32.00	9.52	9.50



Steel	●	●	●	●
Stainless	○	○	○	○
Cast iron	●	●	●	●
Non ferrous metals	■	■	■	■
Heat resistant	■	■	■	■
Hard materials	■	■	■	■



- Main application
- Extended application
- International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces RCGT 0602MOEN-SM CTCP125

# Inserts

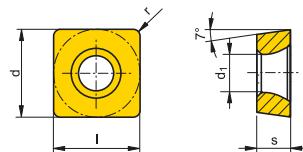
## SCMT



r [mm]	Type, description	L N R 	CTCP115 	CTCP125 	I [mm]	d [mm]	s [mm]	d <sub>1</sub> [mm]
0.40	SCMT 09T304EN-SF	N	●		9.52	9.52	3.97	4.40
0.40	SCMT 09T304EN-SM		● ●		9.52	9.52	3.97	4.40
0.40	SCMT 09T304EN-SMF		●		9.52	9.52	3.97	4.40
0.80	SCMT 09T308EN-SF			●	9.52	9.52	3.97	4.40
0.80	SCMT 09T308EN-SM		● ●		9.52	9.52	3.97	4.40
0.80	SCMT 09T308EN-SMF		●		9.52	9.52	3.97	4.40
0.80	SCMT 120408EN-SF	N		●	12.70	12.70	4.76	5.30
0.80	SCMT 120408EN-SM		● ●		12.70	12.70	4.76	5.30
1.20	SCMT 120412EN-SM		●		12.70	12.70	4.76	5.30



Steel	●	●	●	●
Stainless	○ ○		○	
Cast iron	● ●		●	
Non ferrous metals	●	●	●	●
Heat resistant	●	●	●	●
Hard materials				



● Main application

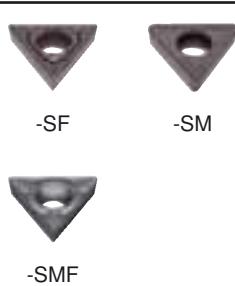
○ Extended application

● International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces SCMT 09T304EN-SF CTCP125

# Inserts

## TCMT



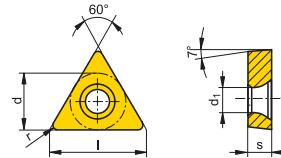
r [mm]	Type, description	L N R	CTCP115	CTCP125			I [mm]	d [mm]	s [mm]	d <sub>1</sub> [mm]
0.40	TCMT 090204EN-SM	N	●				9.60	5.56	2.38	2.50
0.40	TCMT 110204EN-SF		●				11.00	6.35	2.38	2.80
0.40	TCMT 110204EN-SM		● ●				11.00	6.35	2.38	2.80
0.80	TCMT 110208EN-SF		●				11.00	6.35	2.38	2.80
0.80	TCMT 110208EN-SM		●				11.00	6.35	2.38	2.80
0.80	TCMT 110208EN-SMF		●				11.00	6.35	2.38	2.80
0.40	TCMT 16T304EN-SF		●				16.50	9.52	3.97	4.40
0.40	TCMT 16T304EN-SM		● ●				16.50	9.52	3.97	4.40
0.80	TCMT 16T308EN-SF		● ●				16.50	9.52	3.97	4.40
0.80	TCMT 16T308EN-SM		● ●				16.50	9.52	3.97	4.40
0.80	TCMT 220408EN-SM	N	●				22.00	12.70	4.76	5.30



Steel	●	●	●	●
Stainless	○	○	○	○
Cast iron	●	●	●	●
Non ferrous metals	●	●	●	●
Heat resistant	●	●	●	●
Hard materials	—	—	—	—

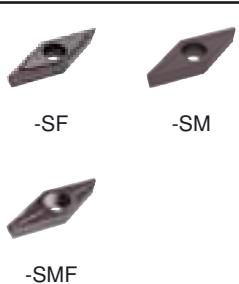
- Main application
- Extended application
- International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces TCMT 090204EN-SM CTCP125



# Inserts

## VCGT, VCMT



r [mm]	Type, description	L N R 	CTCP115 	CTCP125 	I [mm]	d [mm]	s [mm]	d <sub>1</sub> [mm]
0.20	VCGT 110302EN-SF	N	● ●		11.10	6.35	3.18	2.80
0.40	VCGT 110304EN-SF		● ●		11.10	6.35	3.18	2.90
0.40	VCMT 110304EN-SMF		● ●		11.10	6.35	3.18	2.90
0.80	VCGT 110308EN-SF		● ●		11.10	6.35	3.18	2.90
0.40	VCMT 160404EN-SF	N	● ●		16.60	9.52	4.76	4.40
0.40	VCMT 160404EN-SM		● ●		16.60	9.52	4.76	4.40
0.40	VCMT 160404EN-SMF		● ●		16.60	9.52	4.76	4.40
0.60	VCMT 160406EN-SM		●		16.60	9.52	4.76	4.40
0.80	VCMT 160408EN-SF		● ●		16.60	9.52	4.76	4.40
0.80	VCMT 160408EN-SM		● ●		16.60	9.52	4.76	4.40
0.80	VCMT 160408EN-SMF		● ●		16.60	9.52	4.76	4.40

● Main application

○ Extended application

● International CERATIZIT range, for present availability see price list

Ordering example: 10 pieces VCGT 110302EN-SF CTCP115

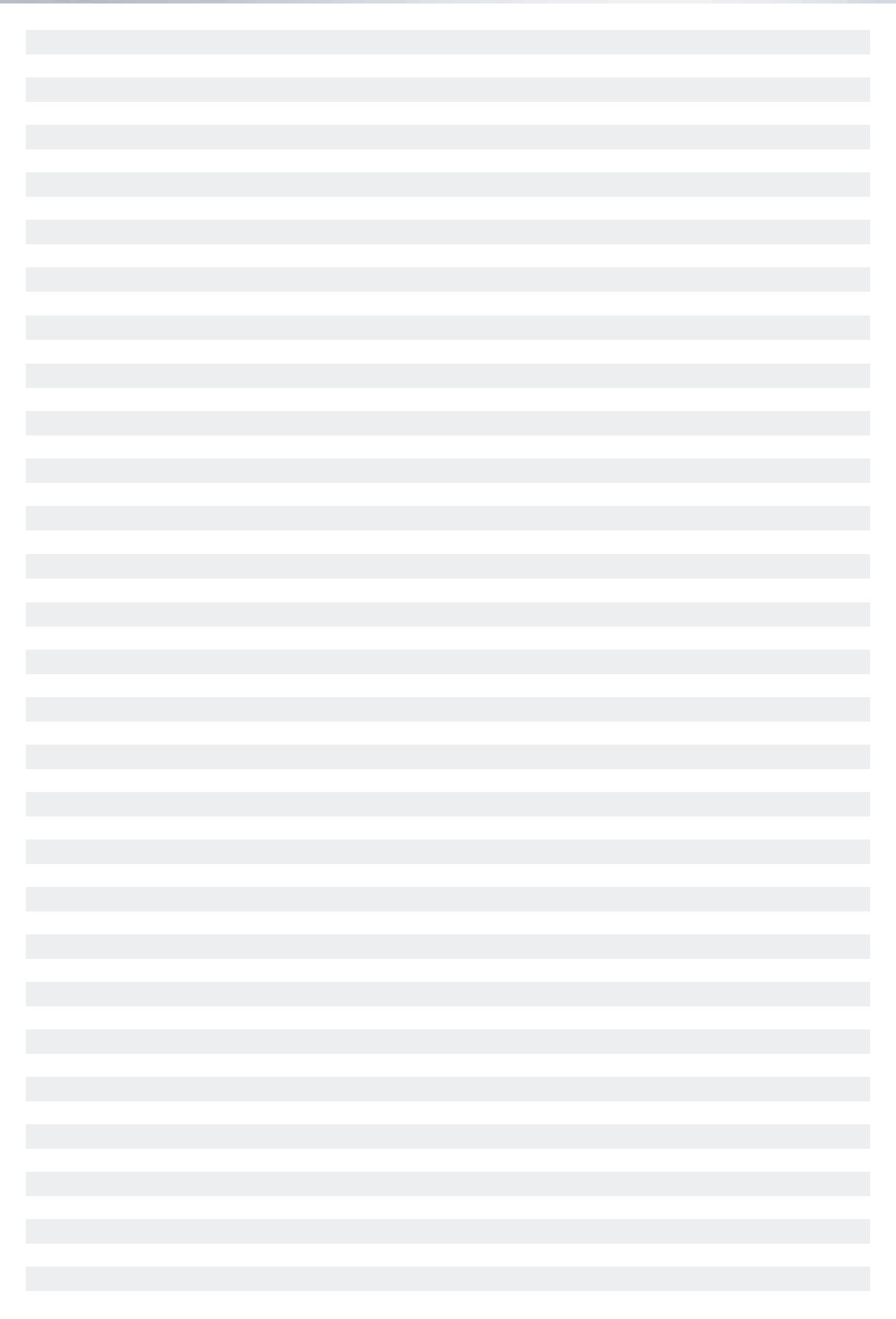
# Cutting data

## Grades / materials

Work piece material		Type of treatment / alloy		VDI 3323 group	Hardness HB
<b>A</b>	Non alloyed steel	annealed	≤ 0.15% C	1	125
		annealed	0.15% - 0.45% C	2	150 - 250
		tempered	≥ 0.45% C	3	300
	Low alloyed steel	annealed		6	180
		tempered		7 / 8	250 - 300
		tempered		9	350
	High alloyed steel	annealed		10	200
		temp ered		11	350
	Stainless steel	annealed	ferritic	12	200
		tempered	martensitic	13	325
<b>R</b>	Stainless steel	annealed	ferritic / martensitic	14	200
		quenched	austenitic	14	180
		quenched	duplex	14	230 - 260
		hardened	martensitic / austenitic	14	330
<b>F</b>	Grey cast iron		pearlitic / ferritic	15	180
			pearlitic / martensitic	16	260
	Spheroidal cast iron		ferritic	17	160
			pearlitic	18	-
	Malleable cast iron		ferritic	19	130
			pearlitic	20	230

# Cutting data

Coated carbide			
CTCP115 v <sub>c</sub> [m/min]	CTCP125 v <sub>c</sub> [m/min]		
250 - 500	190 - 400		
220 - 400	170 - 320		
180 - 300	130 - 240		
250 - 400	170 - 320		
200 - 320	100 - 260		
150 - 280	80 - 220		
180 - 320	130 - 260		
120 - 280	80 - 220		
200 - 320	130 - 260		
150 - 280	110 - 220		
220 - 300	180 - 260		
–	160 - 250		
–	–		
–	80 - 130		
140 - 370	130 - 350		
140 - 330	130 - 300		
190 - 430	180 - 400		
140 - 270	120 - 240		
180 - 520	160 - 480		
150 - 330	140 - 300		



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- CERATIZIT worldwide production sites and support centres
- CERATIZIT worldwide sales centres
- CERATIZIT worldwide distribution partner network

## CERATIZIT - worldwide

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