CERATIZIT GROUP

NEW

NEW PRODUCTS FOR MACHINING

Perfection in price too

The new standard line for turning from CERATIZIT

TEAM CUTTING TOOLS

CUTTING SOLUTIONS BY CERATIZIT · KOMET · WNT · KLENK

CERATIZIT is a high-technology engineering group specialised in cutting tools and hard material solutions.

Tooling the Future

www.ceratizit.com

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CERATIZIT \ Standard

Quality tools for standard applications.

The quality tools of the **CERATIZIT Standard** product line are high quality, powerful and reliable and enjoy the highest trust of our customers worldwide. Tools from this product line are the first choice for many standard applications and guarantee optimal results.

Overview of inserts

Negative

			Steel P	Stainless steel M	Cast iron K	Non ferrous metals N	Heat resistant S	Geometry CN..	DN..	VN..	WN..
Fine – Medium	-FMS		●	o	o			3	4	5	6
Medium – Rough	-MRS		●	o	o			3	4		6

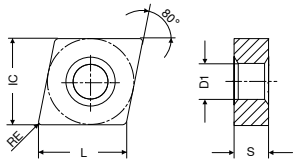
Positive

			Geometry CC..	DC..	VC..
Fine – Medium	-FMS		7	8	9
Medium – Rough	-MRS		7	8	9

Matching tool holders and boring bars can be found in our main catalogue → **Chapter 9, Turning tools**

CNMG

Designation	L	S	D1	IC
	mm	mm	mm	mm
CNMG 1204..	12,9	4,76	5,16	12,70
CNMG 1606..	16,1	6,35	6,35	15,87
CNMG 1906..	19,3	6,35	7,94	19,05

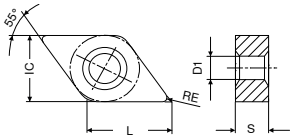


CNMG

		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F	F	M	M	M
		CNMG	CNMG	CNMG	CNMG	CNMG
		NEW	NEW	NEW	NEW	NEW
ISO	RE	Article no. 75 302 ...	Article no. 75 302 ...	Article no. 75 303 ...	Article no. 75 303 ...	Article no. 75 303 ...
	mm					
120404EN	0,4	02809	12809			
120408EN	0,8	03009	13009	03009	13009	23009
120412EN	1,2	03209	13209	03209	13209	23209
120416EN	1,6			03409	13409	23409
160612EN	1,2			04409	14409	24409
160616EN	1,6			04609	14609	24609
190612EN	1,2			05609	15609	25609
190616EN	1,6			05809	15809	25809
Steel		●	●	●	●	●
Stainless steel		o	o	o	o	o
Cast iron		o	o	o	o	
Non ferrous metals						
Heat resistant alloys						o

DNMG

Designation	L	S	D1	IC
	mm	mm	mm	mm
DNMG 1506..	15,5	6,35	5,16	12,7

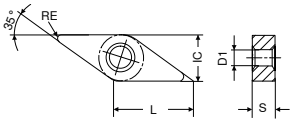


DNMG

		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F	F	M	M	M
		DNMG	DNMG	DNMG	DNMG	DNMG
		NEW	NEW	NEW	NEW	NEW
ISO	RE	Article no. 75 306 ...	Article no. 75 306 ...	Article no. 75 307 ...	Article no. 75 307 ...	Article no. 75 307 ...
	mm					
150604EN	0,4	02809	12809			
150608EN	0,8	03009	13009	03009	13009	23009
150612EN	1,2	03209	13209	03209	13209	23209
150616EN	1,6			03409	13409	23409
Steel		●	●	●	●	●
Stainless steel		○	○	○	○	○
Cast iron		○	○	○	○	
Non ferrous metals						
Heat resistant alloys						○

VNMG

Designation	L	S	D1	IC
	mm	mm	mm	mm
VNMG 1604..	16,6	4,76	3,81	9,52

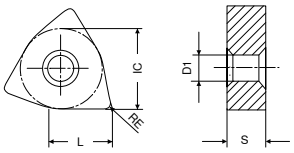


VNMG

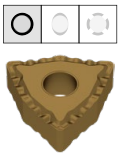
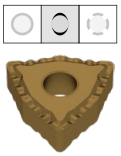
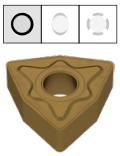
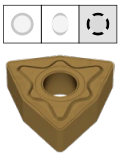
ISO	RE	-FMS CT-P15	-FMS CT-P25
			
		F	F
		VNMG	VNMG
		NEW	NEW
	mm	Article no. 75 310 ...	Article no. 75 310 ...
160404EN	0,4	01609	11609
160408EN	0,8	01809	11809
Steel		●	●
Stainless steel		○	○
Cast iron		○	○
Non ferrous metals			
Heat resistant alloys			

WNMG

Designation	L	S	D1	IC
	mm	mm	mm	mm
WNMG 0804..	8,6	4,76	5,16	12,7

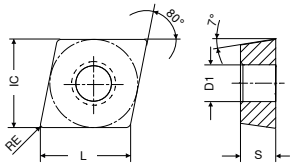


WNMG

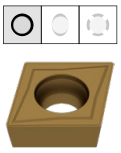
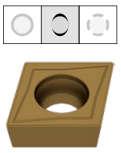
		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F	F	M	M	M
		WNMG	WNMG	WNMG	WNMG	WNMG
		NEW	NEW	NEW	NEW	NEW
ISO	RE	Article no. 75 311 ...	Article no. 75 311 ...	Article no. 75 312 ...	Article no. 75 312 ...	Article no. 75 312 ...
	mm					
080404EN	0,4	01609	11609			
080408EN	0,8	01809	11809	01809	11809	21809
080412EN	1,2	02009	12009	02009	12009	22009
Steel		●	●	●	●	●
Stainless steel		○	○	○	○	○
Cast iron		○	○	○	○	
Non ferrous metals						
Heat resistant alloys						○

CCMT

Designation	L	S	D1	IC
	mm	mm	mm	mm
CCMT 09T3..	9,7	3,97	4,4	9,52
CCMT 1204..	12,9	4,76	5,5	12,70

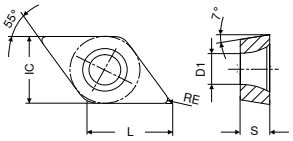


CCMT

		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25
					
		F CCMT	F CCMT	M CCMT	M CCMT
		NEW	NEW	NEW	NEW
ISO	RE mm	Article no. 75 300 ...	Article no. 75 300 ...	Article no. 75 301 ...	Article no. 75 301 ...
09T304EN	0,4	01609	11609	01609	11609
09T308EN	0,8	01809	11809	01809	11809
120404EN	0,4	02809	12809	02809	12809
120408EN	0,8	03009	13009	03009	13009
120412EN	1,2			03209	13209
Steel		●	●	●	●
Stainless steel		○	○	○	○
Cast iron		○	○	○	○
Non ferrous metals					
Heat resistant alloys					

DCMT

Designation	L	S	D1	IC
	mm	mm	mm	mm
DCMT 0702..	7,75	2,38	2,8	6,35
DCMT 11T3..	11,60	3,97	4,4	9,52

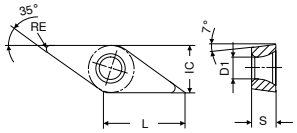


DCMT

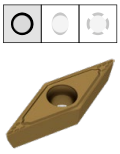
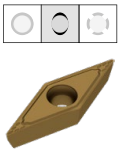
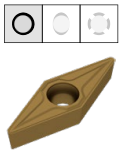
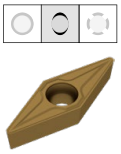
	-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25
				
	F	F	M	M
	DCMT	DCMT	DCMT	DCMT
	NEW	NEW	NEW	NEW
ISO / RE mm	Article no. 75 304 ...	Article no. 75 304 ...	Article no. 75 305 ...	Article no. 75 305 ...
070204EN / 0,4	00409	10409	00409	10409
070208EN / 0,8	00609	10609	00609	10609
11T304EN / 0,4	01609	11609	01609	11609
11T308EN / 0,8	01809	11809	01809	11809
Steel	●	●	●	●
Stainless steel	○	○	○	○
Cast iron	○	○	○	○
Non ferrous metals				
Heat resistant alloys				

VCMT

Designation	L	S	D1	IC
	mm	mm	mm	mm
VCMT 1103..	11,1	3,18	2,9	6,35
VCMT 1604..	16,6	4,76	4,4	9,52



VCMT

		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25
					
		F VCMT	F VCMT	M VCMT	M VCMT
		NEW Article no. 75 308 ...	NEW Article no. 75 308 ...	NEW Article no. 75 309 ...	NEW Article no. 75 309 ...
ISO	RE mm				
110304EN	0,4	01609	11609		
160404EN	0,4	02809	12809	02809	12809
160408EN	0,8	03009	13009	03009	13009
Steel		●	●	●	●
Stainless steel		○	○	○	○
Cast iron		○	○	○	○
Non ferrous metals					
Heat resistant alloys					

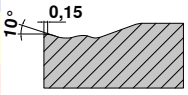
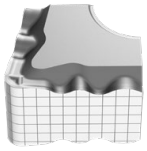
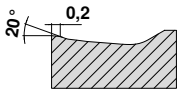
Cutting data approximate values

				F			M		
				CT-P15	CT-P25	CT-P35	CT-P15	CT-P25	CT-P35
	Index	Material	Strength N/mm² / HB / HRC	v_c in m/min			v_c in m/min		
P	1.1	General construction steel	< 800 N/mm²	260–310	210–250	180–210	250–300	200–240	170–200
P	1.2	Free cutting steel	< 800 N/mm²	270–320	230–260	190–230	260–310	230–260	180–220
P	1.3	Hardened steel, non alloyed	< 800 N/mm²	200–310	230–270	170–200	220–300	240–270	160–200
P	1.4	Alloyed hardened steel	< 1000 N/mm²	240–280	200–250	180–210	240–290	190–230	160–190
P	1.5	Tempering steel, unalloyed	< 850 N/mm²	230–270	210–240	160–190	230–280	200–230	150–180
P	1.6	Tempering steel, unalloyed	< 1000 N/mm²	200–240	200–230	180–210	210–260	190–220	160–200
P	1.7	Tempering steel, alloyed	< 800 N/mm²	240–280	220–260	170–200	230–270	200–250	160–180
P	1.8	Tempering steel, alloyed	< 1300 N/mm²	200–240	190–220	150–180	190–240	180–210	130–150
P	1.9	Steel castings	< 850 N/mm²	210–270	170–210	170–190	200–250	160–190	150–170
P	1.10	Nitriding steel	< 1000 N/mm²	210–250	180–220	150–180	190–230	180–210	140–170
P	1.11	Nitriding steel	< 1200 N/mm²	200–240	170–210	140–170	180–240	180–220	130–160
P	1.12	Roller bearing steel	< 1200 N/mm²	210–270	210–250	160–180	200–250	200–240	150–180
P	1.13	Spring steel	< 1200 N/mm²	180–230	170–210	150–180	180–220	170–210	130–160
P	1.14	High-speed steel	< 1300 N/mm²	180–220	180–210	130–160	170–210	160–190	120–140
P	1.15	Cold working tool steel	< 1300 N/mm²	160–200	150–200	120–150	160–200	140–190	110–130
P	1.16	Hot working tool steel	< 1300 N/mm²	150–210	140–190	130–160	130–180	130–200	110–130
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	200–250	200–250	160–190	200–250	210–260	150–190
M	2.2	Stainless steel, ferritic	< 750 N/mm²	200–250	200–250	160–180	200–250	200–260	150–170
M	2.3	Stainless steel, martensitic	< 900 N/mm²	190–230	190–230	140–170	190–230	190–240	120–150
M	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	180–220	190–220	120–180	180–220	190–220	110–170
M	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²			100–140			90–130
M	2.6	Stainless steel, austenitic	< 750 N/mm²			60–80			60–75
M	2.7	Heat resistant steel	< 1100 N/mm²			60–80			60–75
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	220–250	200–240		140–200	120–190	
K	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	200–240	190–220		160–210	150–180	
K	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	170–220	170–210		150–1910	150–180	
K	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	180–230	140–170		140–180	130–170	
K	3.5	White malleable cast iron	270–450 N/mm²	260–300	240–270		190–240	160–210	
K	3.6	White malleable cast iron	500–650 N/mm²	210–280	180–250		180–220	150–190	
K	3.7	Black malleable cast iron	300–450 N/mm²	240–290	240–270		180–250	160–210	
K	3.8	Black malleable cast iron	500–800 N/mm²	210–280	180–250		170–220	150–190	
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²						
N	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²						
N	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²						
N	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²						
N	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²						
N	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²						
N	4.7	Copper wrought alloys	< 700 N/mm²						
N	4.8	Special copper alloys	< 200 HB						
N	4.9	Special copper alloys	< 300 HB						
N	4.10	Special copper alloys	> 300 HB						
N	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²						
N	4.12	Long-chipping brass	< 600 N/mm²						
N	4.13	Thermoplastics							
N	4.14	Duroplastics							
N	4.15	Fibre-reinforced plastics							
N	4.16	Magnesium and magnesium alloys	< 850 N/mm²						
N	4.17	Graphite							
N	4.18	Tungsten and tungsten alloys							
N	4.19	Molybdenum and molybdenum alloys							
S	5.1	Pure nickel							20–35
S	5.2	Nickel alloys							20–35
S	5.3	Nickel alloys	< 850 N/mm²						8–20
S	5.4	Nickel molybdenum alloys							8–20
S	5.5	Nickel-chromium alloys	< 1300 N/mm²						4–12
S	5.6	Cobalt Chrome Alloys	< 1300 N/mm²						4–12
S	5.7	Heat resistant alloys	< 1300 N/mm²						4–12
S	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²						4–10
S	5.9	Pure titanium	< 900 N/mm²						80–100
S	5.10	Titanium alloys	< 700 N/mm²						15–30
S	5.11	Titanium alloys	< 1200 N/mm²						15–30
H	6.1		< 45 HRC						
H	6.2		46–55 HRC						
H	6.3	Tempered steel	56–60 HRC						
H	6.4		61–65 HRC						
H	6.5		65–70 HRC						

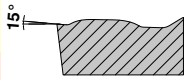
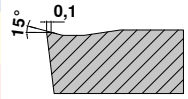
The cutting data depends extremely on the external conditions, e.g. stability of the tool and tool clamping, material and machine type.
The indicated values are possible cutting data which have to be increased or reduced according to the application conditions.

Standard chip breakers / application notes

Negative

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
-FMS ▲ Finishing to medium machining ▲ very good chip control ▲ universal chip breaker ▲ low cutting forces	**CT-P15 / CT-P25**	CT-P15 / **CT-P25**	**CT-P25**			CN.. DN.. VN.. WN..
	CT-P15 / CT-P25	CT-P25				
	CT-P15 / CT-P25	CT-P15 / **CT-P25**				
				0,40–3,00	0,10–0,30	
 **F** **M**						
-MRS ▲ medium to rough machining ▲ well suited for components with cast crust or forged skin ▲ works well with interrupted cuts	**CT-P15 / CT-P25 /** CT-P35	**CT-P15 / CT-P25 / CT-P35**	**CT-P25 / CT-P35**			CN.. DN.. WN..
	CT-P15 / CT-P25	CT-P25 / CT-P35	CT-P35			
	CT-P15 / CT-P25	CT-P15 / **CT-P25** / CT-P35	CT-P25 / CT-P35			
				0,50–4,50	0,20–0,60	
 **M** **R**						

Positive

Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
-FMS ▲ Finishing to medium machining ▲ very good chip control ▲ universal chip breaker ▲ low cutting forces	**CT-P15 / CT-P25**	CT-P15 / **CT-P25**	CT-P25			CC.. DC.. VC..
	CT-P15 / CT-P25	CT-P15 / CT-P25				
	CT-P15 / **CT-P25**	**CT-P25**				
				0,10–2,00	0,05–0,20	
 **F** **M**						
-MRS ▲ light to medium roughing ▲ universal chip breaker ▲ stable cutting edge	**CT-P15 / CT-P25**	**CT-P15 / CT-P25**	CT-P15 / **CT-P25**			CC.. DC.. VC..
	CT-P15 / CT-P25	CT-P15 / CT-P25				
	CT-P15 / CT-P25	CT-P15 / **CT-P25**	CT-P25			
				0,15–3,50	0,15–0,35	
 **M** **R**						

Grade description

CT-P15
- ▲ Carbide, coated
- ▲ ISO | **P15** | M10 | K25
- ▲ Wear-resistant standard steel grade for smooth cut

CT-P25
- ▲ Carbide, coated
- ▲ ISO | **P25** | M20 | K30
- ▲ Standard steel grade for universal steel machining

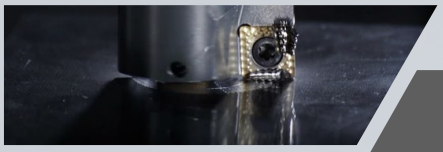
CT-P35
- ▲ Carbide, coated
- ▲ ISO | **P35** | M25
- ▲ Tough standard steel grade for interrupted cutting

UNITED. EXPERIENCED. METAL CUTTING.

CUTTING SOLUTIONS BY CERATIZIT

SPECIALIST FOR INDEXABLE INSERT TOOLS FOR TURNING, MILLING AND GROOVING

The product brand CERATIZIT stands for high-quality indexable insert tools. The products are characterized by their high quality and contain the DNA of many years of experience in the development and production of carbide tools.



KOMET

THE QUALITY LABEL FOR EFFICIENT BORE PRODUCTION

High-precision drilling, reaming, countersinking and boring is a matter of expertise: efficient tooling solutions for drilling and mechatronic tools are therefore part of the KOMET brand name.

WNT

EXPERTS FOR ROTATING TOOLS, TOOL HOLDERS AND CLAMPING SOLUTIONS

WNT is synonymous with product diversity: solid carbide and HSS rotating tools, tool holders and efficient workholding solutions are all part of this brand.

KLENK

CUTTING TOOLS FOR THE AEROSPACE INDUSTRY

Solid carbide drills specially developed for the aerospace industry bear the product name KLENK. The highly specialized products are specifically designed for machining lightweight materials.

CERATIZIT GROUP

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