Negative inserts

Medium machining

XM **P**

Double-sided chip breaker for semi-roughing in the P application range. Excellent chip control at high and low feed rates.

TK **K**

Double-sided chip breaker for semi-roughing in the K application range. Outstanding combination of cutting edge sharpness and impact resistance.

Coated cemented carbide CVD

Grade	ISO	Micro structure	Grade description
YBC103	P05–P15		P10 grade with excellent wear resistance at higher cutting speeds. Latest sinter processes and CVD coating technologies enable a wide range of applications in the P material range.
YB7305	K05–K10		New carbide substrate with improved sinter technology. The optimized combination of binder phase and hard phase improves the abrasion and impact resistance of the substrate. Highly effective cutting at high temperatures due to improved wear resistance.

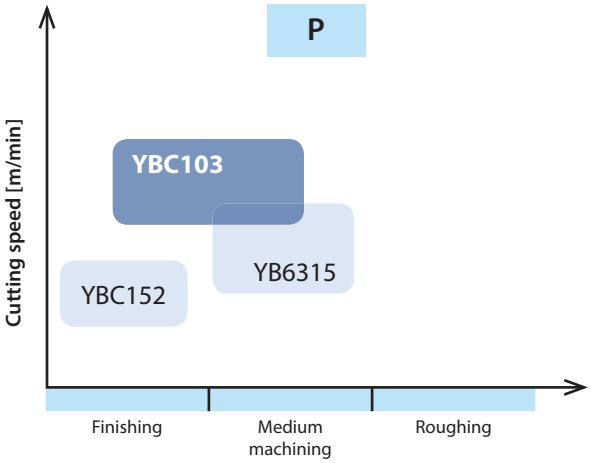
Coated cemented carbide PVD

Grade	ISO	Micro structure	Grade description
YB9315	M10–M30		Nano TiAlN coating technology with optimal coating adhesion and a good combination of toughness and hardness. The new grade also has high temperature resistance. For a wide range of applications in the M and S material range.
YPD201	S20–S30		Carbide grade for semi-roughing to chip breaking of high-strength and high-alloy materials. High-performance grade with high wear resistance. Balanced hardness and internal stress ratio provide a wide range of applications.
YBS103	S10–S20		Turning grade for processing nickel-base materials. A special carbide substrate and the latest PVD coating technology enable a very good wear behaviour and high thermal stability.
YBS203	S15–S25		Turning and milling grades for processing heat-resistant materials. A special carbon substrate and the latest PVD coating technology enable a very good wear behaviour, high fracture toughness and high thermal stability.

YBC103

Maximum productivity

Application field



The **YBC103** is manufactured using a new sinter technology and therefore can be utilised in an additional application range. High wear resistance is due to the new CVD coating system.

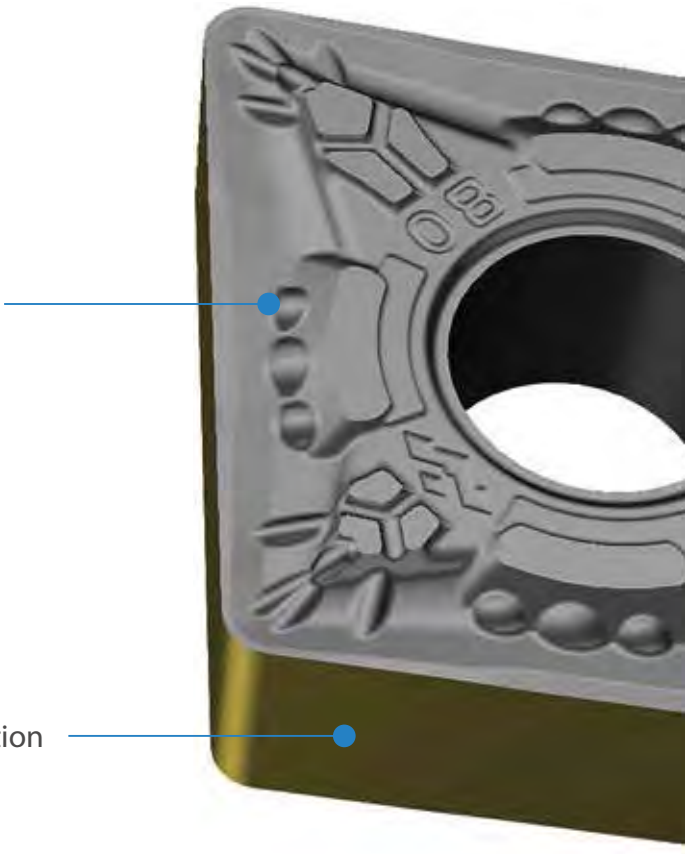
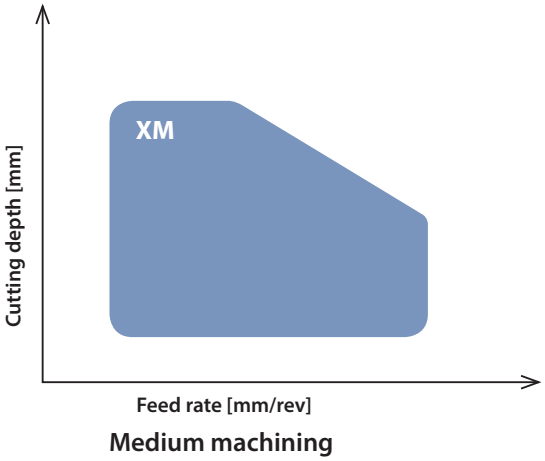


Fig.: CNMG120408-XM YBC103

XM chip breaker

High performance all-rounder

Application field



Medium machining

a_p [mm]	f [mm/rev]
1,0–5,0	0,2–0,5

YOUR BENEFITS

– Highest productivity with maximum process reliability
– Outstanding wear resistance at high cutting speeds
– Wide range of applications in P materials
– Application identification on the tool flank

Excellent chip control at low and high feed rates

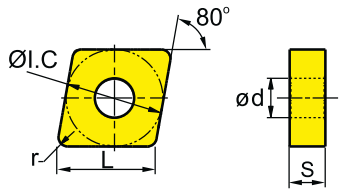
Soft cutting design provides for low cutting forces; recommended for machine tools with low spindle power

CNMG	L	I.C	S	d
09 03	9,7	9,525	3,18	3,81
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

CN** negative insert



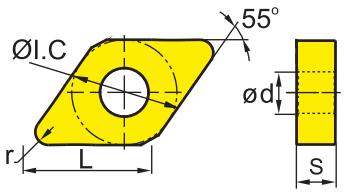
	ISO	r	a_p	f	YBC103	HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P ○					
					M					
					K					
					N					
					S					
					H					
XM	**CNMG120404-XM**	0,4	1-4,2	0,2-0,4	●					
	CNMG120408-XM	0,8	1-4,2	0,2-0,4	●					
	CNMG120412-XM	1,2	1-4,2	0,2-0,6	●					
	CNMG120416-XM	1,6	1-4,2	0,2-0,8	○					
	CNMG160608-XM	0,8	1-5,6	0,2-0,4	●					
	CNMG160612-XM	1,2	1-5,6	0,2-0,6	●					
	CNMG160616-XM	1,6	1-5,6	0,2-0,8	○					
Medium cut	**CNMG190608-XM**	0,8	1-6,65	0,2-0,4	○					
	CNMG190612-XM	1,2	1-6,65	0,2-0,6	○					
	CNMG190616-XM	1,6	1-6,65	0,2-0,8	○					

DNMG	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DN** negative insert



	ISO	r	a_p	f	YBC103	HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P ○					
					M					
					K					
					N					
					S					
					H					
XM	**DNMG110404-XM**	0,4	1-3,85	0,2-0,2	●					
	DNMG110408-XM	0,8	1-3,85	0,2-0,4	●					
	DNMG110412-XM	1,2	1-3,85	0,2-0,6	○					
	DNMG150604-XM	0,4	1-5,25	0,2-0,4	●					
	DNMG150608-XM	0,8	1-5,25	0,2-0,4	●					
Medium cut	**DNMG150612-XM**	1,2	1-5,25	0,2-0,6	○					
	DNMG150616-XM	1,6	1-5,25	0,2-0,8	○					

● Ex stock ○ On demand

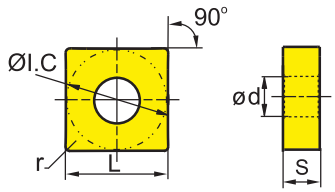
HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

SNMG	L	I.C	S	d
09 03	9,525	9,525	3,18	3,81
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SN** negative insert



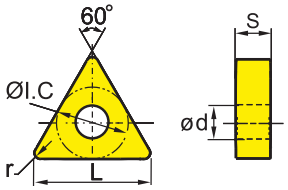
	ISO	r	a_p	f	YBC103	HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P	○				
					M					
					K					
					N					
					S					
					H					
XM	**SNMG120404-XM**	0,4	1-4,2	0,2-0,4	○					
	SNMG120408-XM	0,8	1-4,2	0,2-0,4	○					
	SNMG120412-XM	1,2	1-4,2	0,2-0,6	○					
	SNMG120416-XM	1,6	1-4,2	0,2-0,8	○					
	SNMG150608-XM	0,8	1-5,25	0,2-0,4	○					
	SNMG150612-XM	1,2	1-5,25	0,2-0,6	○					
	SNMG150616-XM	1,6	1-5,25	0,2-0,8	○					
Medium cut	**SNMG190608-XM**	0,8	1-6,65	0,2-0,4	○					
	SNMG190612-XM	1,2	1-6,65	0,2-0,6	○					
	SNMG190616-XM	1,6	1-6,65	0,2-0,8	○					
	SNMG190624-XM	2,4	1-6,65	0,2-1,0	○					

TN**	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

TN** negative insert



	ISO	r	a_p	f	YBC103	HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P	○				
					M					
					K					
					N					
					S					
					H					
XM	**TNMG160404-XM**	0,4	1-5,6	0,2-0,4	○					
	TNMG160408-XM	0,8	1-5,6	0,2-0,4	●					
	TNMG160412-XM	1,2	1-5,6	0,2-0,6	●					
	TNMG160416-XM	1,6	1-5,6	0,2-0,8	○					
	TNMG220408-XM	0,8	1-7,7	0,2-0,4	○					
Medium cut	**TNMG220412-XM**	1,2	1-7,7	0,2-0,6	○					
	TNMG220416-XM	1,6	1-7,7	0,2-0,8	○					

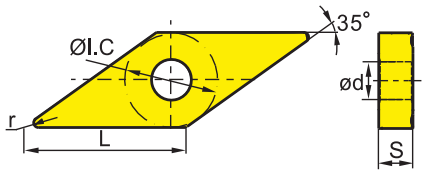
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

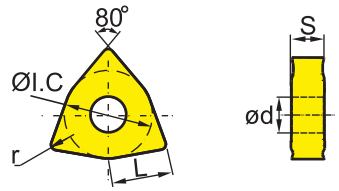
VNMG	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

VN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P	○				
					M					
					K					
					N					
					S					
					H					
	ISO	r	a_p	f	YBC103					
XM	**VNMG160404-XM**	0,4	1-5,6	0,2-0,4	●					
	**VNMG160408-XM**	0,8	1-5,6	0,2-0,4	●					
	VNMG160412-XM	1,2	1-5,6	0,2-0,6	○					
	VNMG160416-XM	1,6	1-5,6	0,2-0,8	○					
Medium cut										

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

WN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P	○				
					M					
					K					
					N					
					S					
					H					
	ISO	r	a_p	f	YBC103					
XM	**WNMG060404-XM**	0,4	1-2,1	0,2-0,4	●					
	**WNMG060408-XM**	0,8	1-2,1	0,2-0,4	●					
	WNMG060412-XM	1,2	1-2,1	0,2-0,6	○					
	WNMG080404-XM	0,4	1-2,8	0,2-0,4	●					
	WNMG080408-XM	0,8	1-2,8	0,2-0,4	●					
	WNMG080412-XM	1,2	1-2,8	0,2-0,6	●					
Medium cut	**WNMG080416-XM**	1,6	1-2,8	0,2-0,8	●					

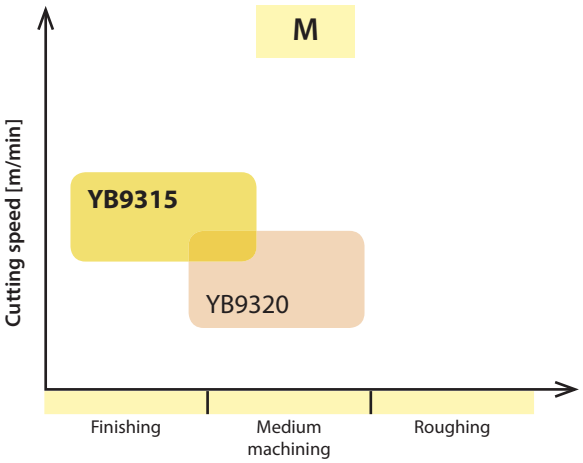
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

YB9315

PVD all round grade for maximum efficiency

Application field



YOUR BENEFITS

– Even wear due to optimum coating adhesion
– Excellent surface finish and dimensional accuracy
– Flexible range of applications
– Significant increase in tool life

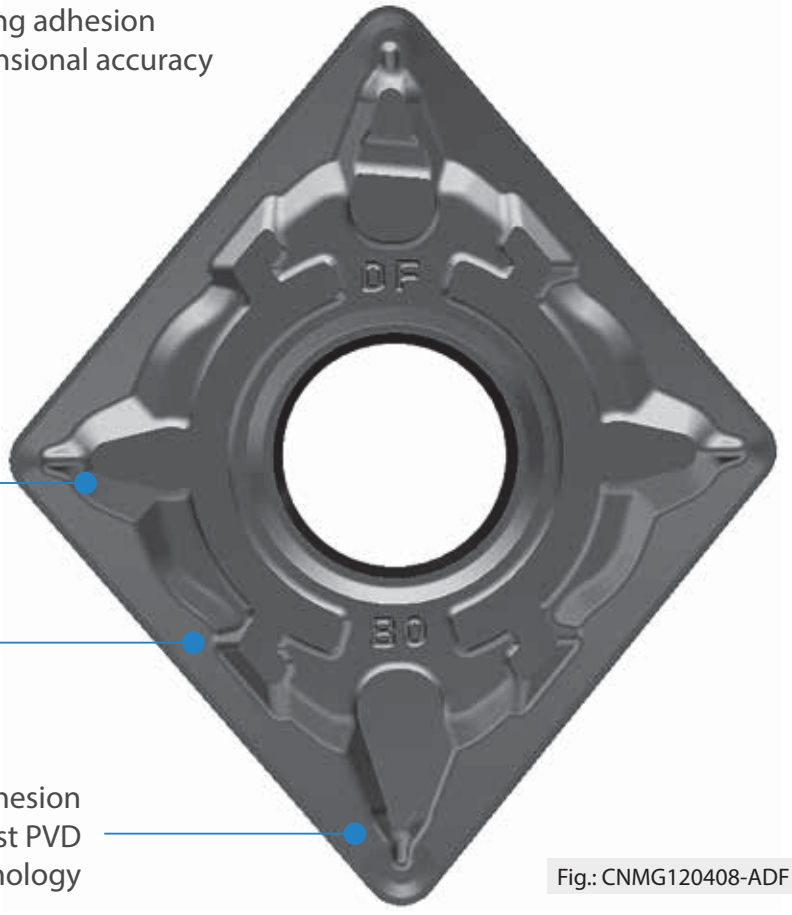
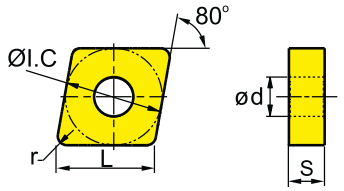


Fig.: CNMG120408-ADF YB9315

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

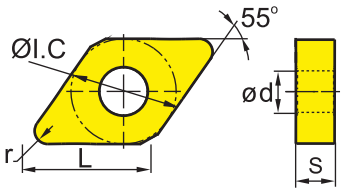
CNMG	L	I.C	S	d
09 03	9,7	9,525	3,18	3,81
12 04	12,9	12,7	4,76	5,16

CN** negative insert						HC¹ (CVD)	HC¹ (PVD)		HT	HC²	HW
					P		⊛	⊛			
					M		○	⊛			
					K						
					N						
					S		○	⊛			
					H						
	ISO		r	a_p	f		YB9315	YB9320			
ADF	**CNMG120404-ADF**		0,4	0,8-3,0	0,1-0,35		●	●			
	**CNMG120408-ADF**		0,8	0,8-3,0	0,1-0,40		●	●			
	CNMG120412-ADF		1,2	0,8-3,0	0,1-0,45		○	●			
Finishing											

DN**	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DN** negative insert						HC¹ (CVD)	HC¹ (PVD)		HT	HC²	HW
					P		⊛	⊛			
					M		○	⊛			
					K						
					N						
					S		○	⊛			
					H						
	ISO		r	a_p	f		YB9315	YB9320			
ADF	**DNMG110404-ADF**		0,4	0,8-2,5	0,1-0,35		○	●			
	**DNMG110408-ADF**		0,8	0,8-3,0	0,1-0,40		●	●			
	DNMG150604-ADF		0,4	0,8-2,5	0,1-0,35		●	●			
	DNMG150608-ADF		0,8	0,8-3,0	0,1-0,40		●	●			
Finishing	**DNMG150612-ADF**		1,2	0,8-3,5	0,1-0,45		○	●			

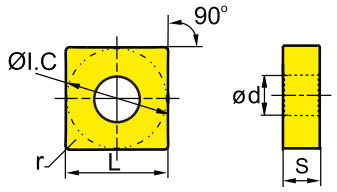
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

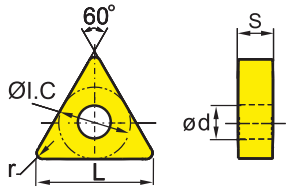
SNMG	L	I.C	S	d
09 03	9,525	9,525	3,18	3,81
12 04	12,7	12,7	4,76	5,16

SN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P		◉ ◉			
					M		○ ◉			
					K					
					N					
					S		○ ◉			
					H					
	ISO	r	a_p	f			YB9315 YB9320			
ADF	**SNMG120404-ADF**	0,4	0,8-2,5	0,1-0,35			● ●			
	**SNMG120408-ADF**	0,8	0,8-3,0	0,1-0,40			● ●			
	SNMG120412-ADF	1,2	0,8-3,5	0,1-0,45			○ ●			
Finishing										

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TN**	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

TN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P		◉ ◉			
					M		○ ◉			
					K					
					N					
					S		○ ◉			
					H					
	ISO	r	a_p	f			YB9315 YB9320			
ADF	**TNMG160404-ADF**	0,4	0,8-2,5	0,1-0,35			● ●			
	**TNMG160408-ADF**	0,8	0,8-3,0	0,1-0,40			● ●			
	TNMG160412-ADF	1,2	0,8-3,5	0,1-0,45			○ ●			
Finishing										

● Ex stock ○ On demand

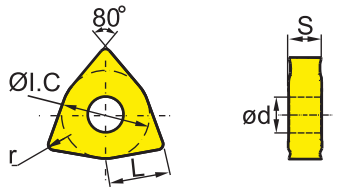
HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

WN** negative insert



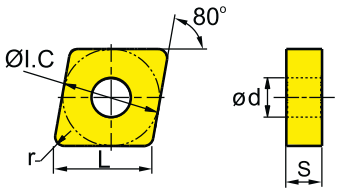
	ISO	r	a_p	f	HC¹ (CVD)	HC¹ (PVD) YB9315	HC¹ (PVD) YB9320	HT	HC²	HW
ADF	**WNMG060404-ADF**	0,4	0,8-2,5	0,1-0,35		●	●			
	WNMG060408-ADF	0,8	0,8-3,0	0,1-0,40		●	●			
	WNMG080404-ADF	0,4	0,8-2,5	0,1-0,35		●	●			
	WNMG080408-ADF	0,8	0,8-3,0	0,1-0,40		●	●			
Finishing	**WNMG080412-ADF**	1,2	0,8-3,5	0,1-0,45		○	●			

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

CNMG	L	I.C	S	d
09 03	9,7	9,525	3,18	3,81
12 04	12,9	12,7	4,76	5,16

CN** negative insert



	ISO	r	a_p	f	HC¹ (CVD)	HC¹ (PVD) YB9315	HC¹ (PVD) YB9320	HT	HC²	HW
EG	**CNMG120404-EG**	0,4	1-3,0	0,1-0,35		●	●			
	CNMG120408-EG	0,8	1-3,5	0,1-0,4		●	●			
Finishing	**CNMG120412-EG**	1,2	1-4,0	0,1-0,45		●	●			

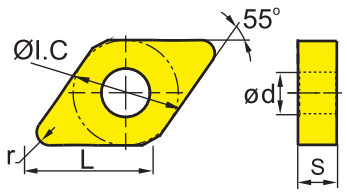
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

DNMG	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16

Turning inserts

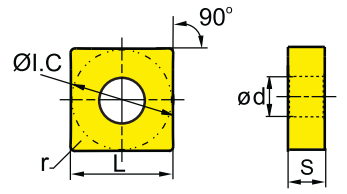
Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DN** negative insert						HC[1] (CVD)	HC[1] (PVD)		HT	HC[2]	HW
					P						
					M						
					K						
					N						
					S						
					H						
	ISO		r	a_p	f		YB9315	YB9320			
EG	**DNMG150604-EG**		0,4	1-3,0	0,1-0,35		●	●			
	**DNMG150608-EG**		0,8	1-3,5	0,1-0,4		●	●			
	DNMG150612-EG		1,2	1-4,0	0,1-0,45		●	●			
Finishing											

SNMG	L	I.C	S	d
09 03	9,525	9,525	3,18	3,81
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

SN** negative insert						HC[1] (CVD)	HC[1] (PVD)		HT	HC[2]	HW
					P						
					M						
					K						
					N						
					S						
					H						
	ISO		r	a_p	f		YB9315	YB9320			
EG	**SNMG120404-EG**		0,4	1-3,0	0,1-0,35		●	●			
	**SNMG120408-EG**		0,8	1-3,5	0,1-0,4		●	●			
	SNMG120412-EG		1,2	1-4,0	0,2-0,45		●	●			
Finishing											

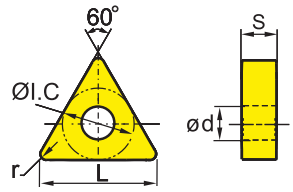
● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

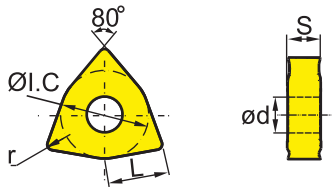
TNMG	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

TN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P		● ●			
					M		○ ●			
					K					
					N					
					S		○ ●			
					H					
	ISO		r	a_p	f		YB9315 YB9320			
EG	**TNMG160404-EG**		0,4	1-3,0	0,1-0,35		● ●			
	**TNMG160408-EG**		0,8	1-3,5	0,1-0,4		● ●			
	TNMG160412-EG		1,2	1-4,0	0,2-0,45		● ●			
Finishing										

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

WN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
							● ●			
							○ ●			
							○ ●			
	ISO		r	a_p	f		YB9315 YB9320			
EG	**WNMG080404-EG**		0,4	1-3,0	0,1-0,35		● ●			
	**WNMG080408-EG**		0,8	1-3,5	0,1-0,4		● ●			
	WNMG080412-EG		1,2	1-4,0	0,1-0,45		● ●			
Finishing										

● Ex stock ○ On demand

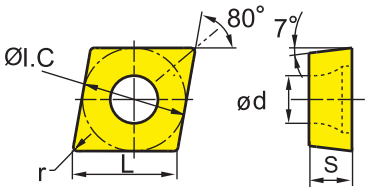
HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

CCMT	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

CC** positive insert

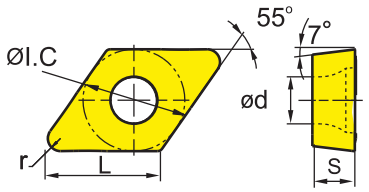


	ISO	r	a_p	f	HC¹ (CVD)	HC¹ (PVD) YB9315	HC¹ (PVD) YB9320	HT	HC²	HW
AHF	**CCMT060204-AHF**	0,4	0,5-2,5	0,08-0,25		●	●			
	CCMT060208-AHF	0,8	0,5-3,0	0,08-0,30		●	●			
	CCMT09T304-AHF	0,4	0,5-3,0	0,08-0,25		●	●			
	CCMT09T308-AHF	0,8	0,5-4,0	0,08-0,30		●	●			
Finishing	**CCMT120404-AHF**	0,4	0,5-3,0	0,08-0,25		●	●			
	CCMT120408-AHF	0,8	0,5-4,0	0,08-0,30		●	●			

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DC**	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** positive insert



	ISO	r	a_p	f	HC¹ (CVD)	HC¹ (PVD) YB9315	HC¹ (PVD) YB9320	HT	HC²	HW
AHF	**DCMT070204-AHF**	0,4	0,2-2,5	0,05-0,20		○	●			
	DCMT070208-AHF	0,8	0,2-2,5	0,05-0,25		○	●			
	DCMT11T302-AHF	0,2	0,5-3,0	0,05-0,15		●	●			
	DCMT11T304-AHF	0,4	0,5-3,0	0,05-0,30		●	●			
Finishing	**DCMT11T308-AHF**	0,8	0,5-3,0	0,05-0,40		●	●			

● Ex stock ○ On demand

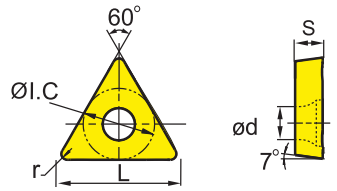
HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TCMT	L	I.C	S	d
09 02	9,63	5,56	2,38	2,5
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4

TC** positive insert



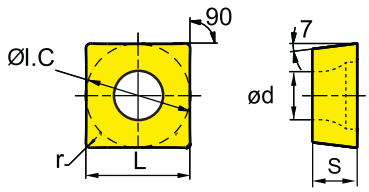
	ISO	r	a_p	f	HC¹ (CVD)	HC¹ (PVD) YB9315	HC¹ (PVD) YB9320	HT	HC²	HW
P										
M										
K										
N										
S										
H										
AHF	**TCMT110204-AHF**	0,4	0,5-2,5	0,08-0,25			○ ●			
	TCMT110208-AHF	0,8	0,5-2,5	0,08-0,30			○ ●			
	TCMT16T304-AHF	0,4	0,5-2,5	0,08-0,20			● ●			
	TCMT16T308-AHF	0,8	0,5-3,0	0,08-0,25			● ●			
Finishing										

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

SCMT	L	I.C	S	d
09 T3	9,525	9,525	3,97	4,4
12 04	12,7	12,7	4,76	5,56

SC** positive insert



	ISO	r	a_p	f	HC¹ (CVD)	HC¹ (PVD) YB9315	HC¹ (PVD) YB9320	HT	HC²	HW
P										
M										
K										
N										
S										
H										
AHF	**SCMT09T304-AHF**	0,4	0,5-2,5	0,08-0,20			● ●			
	SCMT09T308-AHF	0,8	0,5-3,0	0,08-0,25			● ●			
Finishing										

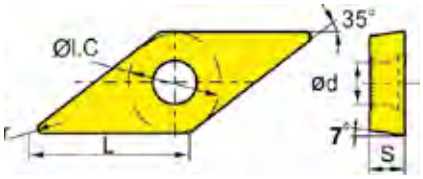
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

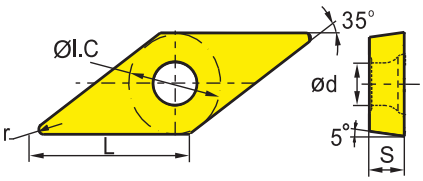
VCMT	L	I.C	S	d
16 04	16	9,525	4,76	4,4

VC** positive insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P		⊛			
					M		○			
					K					
					N					
					S		◐			
					H					
	ISO	r	a_p	f			YB9315			
AHF	**VCMT160404-AHF**	0,4	0,5-2,5	0,08-0,20			●			
	**VCMT160408-AHF**	0,8	0,5-3,0	0,08-0,25			●			
Finishing										

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VB**	L	I.C	S	d
11 02	11	6,35	2,38	2,8
11 03	11	6,35	3,18	2,8
16 04	16,5	9,525	4,76	4,4

VB** positive insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P		⊛ ⊛			
					M		○ ⊛			
					K					
					N					
					S		◐ ⊛			
					H					
	ISO	r	a_p	f			YB9315 YB9320			
AHF	**VBMT160402-AHF**	0,2	0,5-2,0	0,08-0,20			● ●			
	VBMT160404-AHF	0,4	0,5-2,5	0,08-0,20			● ●			
	**VBMT160408-AHF**	0,8	0,5-3,0	0,08-0,25			● ●			
							● ●			
Finishing										

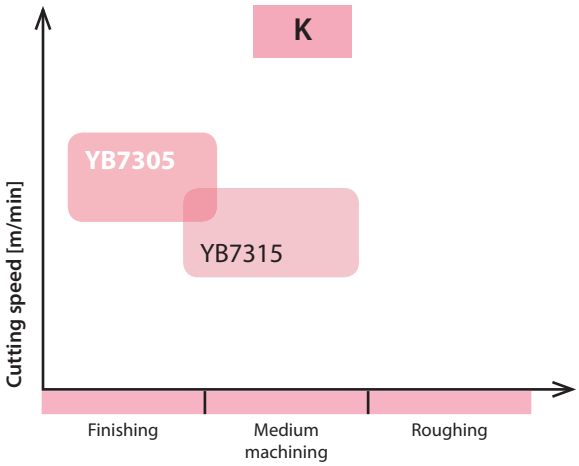
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

YB7305

Maximum performance for cast iron materials

Application field



High temperature resistance due to the latest CVD coating technology

Ultramicron substrate and latest sinter technology

Outstanding combination of cutting edge sharpness and impact resistance

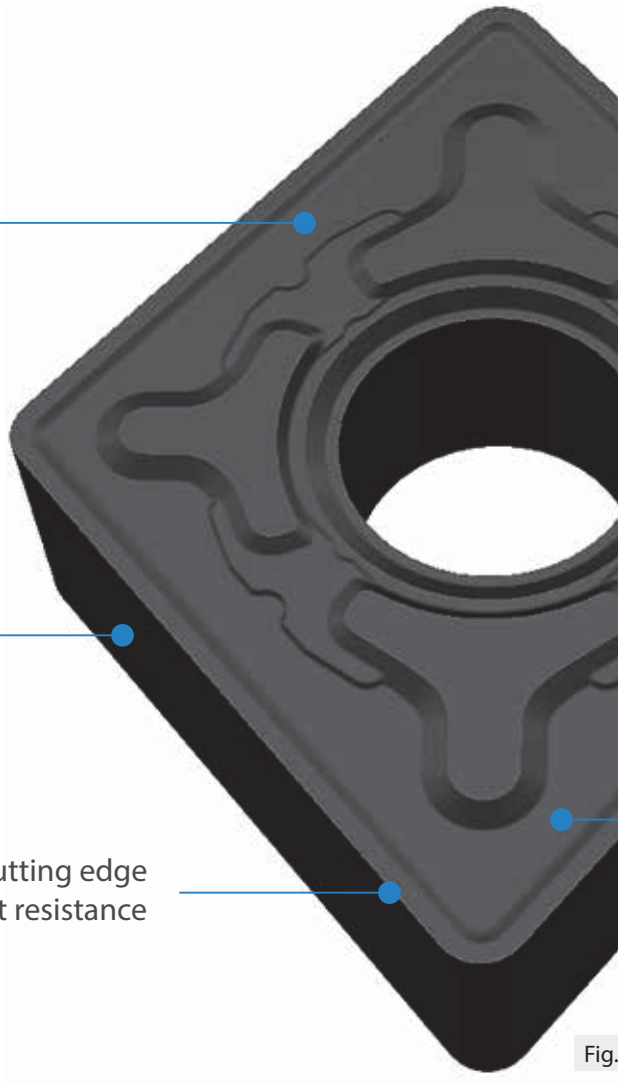
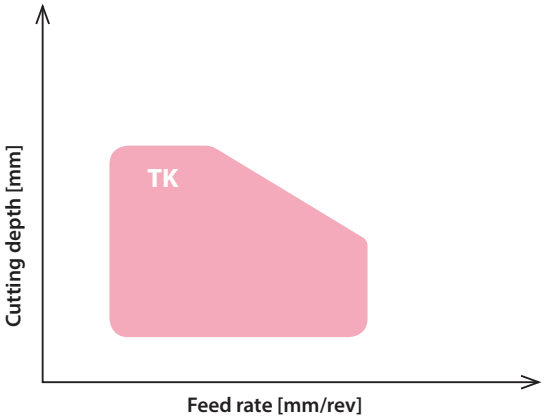


Fig.

TK chip breaker

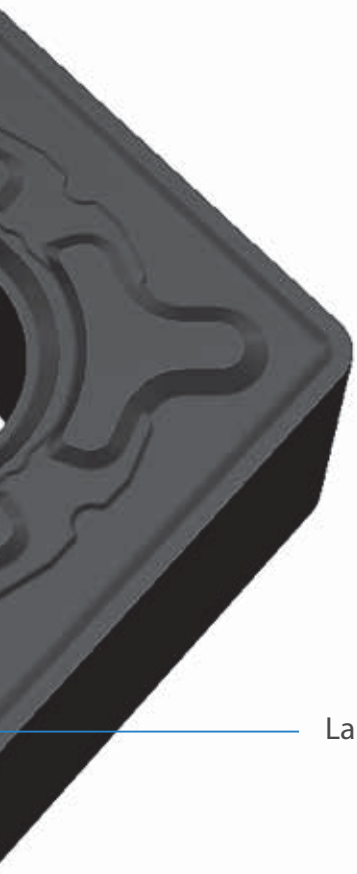
The universal tool for cast iron materials

Application field



Finishing to medium machining

a_p [mm]	f [mm/U]
1,0–4,0	0,2–0,4



Large chip space for improved chip removal

YOUR BENEFITS

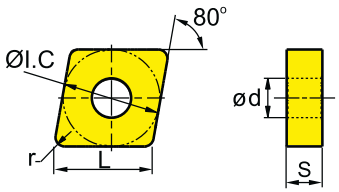
– Highly efficient machining with maximum tool life
– Range of application: finishing to semi-roughing
– Increase in productivity
– Maximum process reliability
– Optimum wear resistance
– Problem solver for hardened steels

: CNMG120408-TK YB7305

CN**	L	I.C	S	d
09 03	9,7	9,525	3,18	3,81
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94

Turning inserts

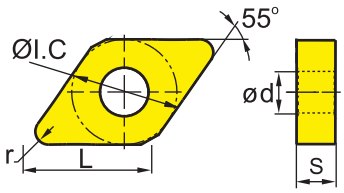
Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

CN** negative insert						HC¹ (CVD)		HC¹ (PVD)	HT	HC²	HW
					P						
					M						
					K						
					N						
					S						
					H						
	ISO		r	a_p	f		YB7305 YB7315				
TK	**CNMG120408-TK**		0,8	0,2-0,4	0,2-0,4		○ ○				
	**CNMG120412-TK**		1,2	0,2-0,4	0,2-0,45		● ●				
	CNMG120416-TK		1,6	0,2-0,4	0,2-0,5		○ ●				
Medium cut											

DNMG	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16

Turning inserts

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

DN** negative insert						HC¹ (CVD)		HC¹ (PVD)	HT	HC²	HW
					P						
					M						
					K						
					N						
					S						
					H						
	ISO		r	a_p	f		YB7305 YB7315				
TK	**DNMG150608-TK**		0,8	0,2-0,4	0,2-0,4		○ ●				
	**DNMG150612-TK**		1,2	0,2-0,4	0,2-0,45		○ ●				
Medium cut											

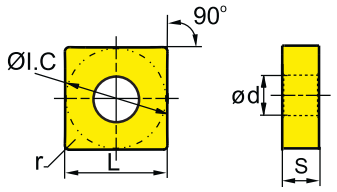
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

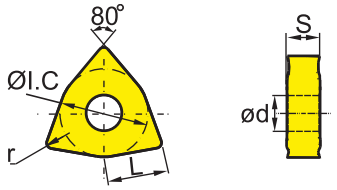
SNMG	L	I.C	S	d
09 03	9,525	9,525	3,18	3,81
12 04	12,7	12,7	4,76	5,16

SN** negative insert						HC¹ (CVD)		HC¹ (PVD)	HT	HC²	HW
					P						
					M						
					K						
					N						
					S						
					H						
	ISO	r	a_p	f		YB7305	YB7315				
TK	**SNMG120412-TK**	1,2	0,2-0,4	0,2-0,45		○	●				
											
Medium cut											

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

WN** negative insert						HC¹ (CVD)		HC¹ (PVD)	HT	HC²	HW
					P						
					M						
					K						
					N						
					S						
					H						
	ISO	r	a_p	f		YB7305	YB7315				
TK	**WNMG080408-TK**	0,8	0,2-0,4	0,2-0,4		●	●				
	**WNMG080412-TK**	1,2	0,2-0,4	0,2-0,45		○	●				
	WNMG080416-TK	1,6	0,2-0,4	0,2-0,5		○	●				
Medium cut											

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

YBS103

PVD high performance grade for nickel-base alloys

YOUR BENEFITS

– Higher cutting speeds for higher productivity
– Outstanding wear resistance
– Reduced adhesion tendency
– High thermal stability

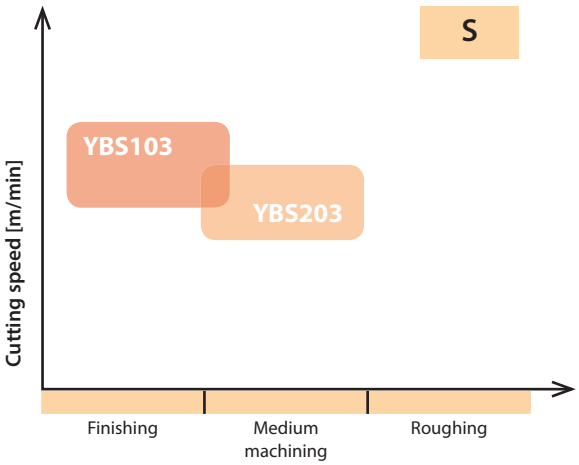
YBS203

PVD all round grade for turning and milling

YOUR BENEFITS

– Great impact resistance
– Outstanding thermal stability
– Well balanced wear resistance and fracture toughness

Application field



YBS103 and YBS203 – Highly efficient cutting with maximum tool life

Latest generation grades for heat-resistant and titanium alloys. Maximum productivity due to advanced sinter and coating technology.

YBS103 Wear-resistant grade for high-speed processing
YBS203 Universal grade with well-balanced wear resistance and fracture toughness

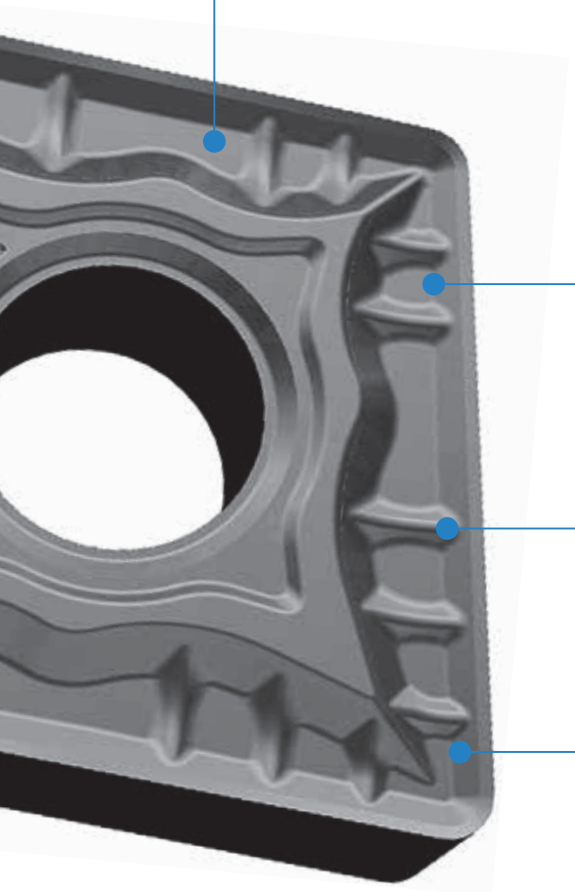
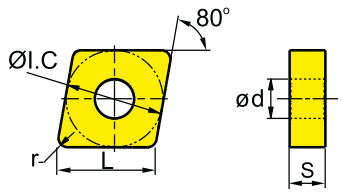


Fig.: CNMG120408-SNR YBS103

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

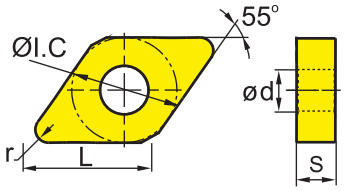
CNMG	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94

CN** negative insert						HC[1] (CVD)	HC[1] (PVD)	HT	HC[2]	HW
					P					
					M		○ ○ ◐			
					K					
					N					◐
					S		○ ○ ◐			◐
					H					
ISO		r	a_p	f			YBS103 YBG105 YPD201			YD201
SNR	**CNMG120408-SNR**	0,8	1-3	0,1-0,4			● ● ●			
	**CNMG120412-SNR**	1,2	1-3	0,2-0,6			● ● ●			
	CNMG160608-SNR	0,8	2-6	0,1-0,4			● ● ●			
	CNMG190616-SNR	1,6	2-7	0,2-0,6			● ● ●			○
Roughing										

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

DNMG	L	I.C	S	d
15 06	15,5	12,7	6,35	5,16

DN** negative insert						HC[1] (CVD)	HC[1] (PVD)	HT	HC[2]	HW
					P					
					M		○ ○ ◐			
					K					
					N					◐
					S		○ ○ ◐			◐
					H					
ISO		r	a_p	f			YBS103 YBG105 YPD201			YD201
SNR	**DNMG150608-SNR**	0,8	0,2-6,0	0,1-0,5			● ● ●			○
	**DNMG150612-SNR**	1,2	0,2-6,0	0,2-0,6			● ● ●			○
Roughing										

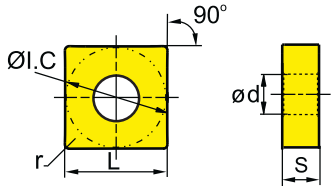
● Ex stock ○ On demand

HC[1] Coated carbide
HT Uncoated cermet
HC[2] Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

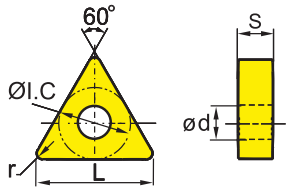
SNMM	L	I.C	S	d
19 06	19,05	19,05	6,35	7,94
25 09	25,4	25,4	9,525	9,12

SN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P					
					M		○○✲			
					K					
					N					✲
					S		○○✲			✲
					H					
ISO		r	a_p	f			YBS103 YBG105 YPD201			YD201
SNR	**SNMG120408-SNR**	0,8	1-4	0,2-0,6			●			○
										
Roughing										

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

TNMG	L	I.C	S	d
11 03	11	6,35	3,18	2,26
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

TN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P					
					M		○○✲			
					K					
					N					✲
					S		○○✲			✲
					H					
ISO		r	a_p	f			YBS103 YBG105 YPD201			YD201
SNR	**TNMG160408-SNR**	0,8	1-5,6	0,1-0,5			● ○ ○			○
										
Roughing										

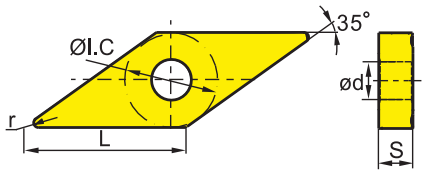
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

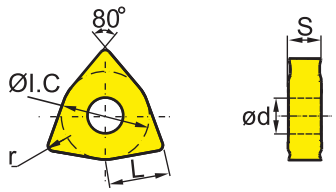
VNMG	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

VN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P					
					M		○ ○ ⊛			
					K					
					N					⊛
					S		○ ○ ⊛			⊛
					H					
	ISO	r	a_p	f			YBS103 YBG105 YPD201			YD201
SNR	**VNMG160408-SNR**	0,8	0,2-2,0	0,1-0,4			● ○ ○			○
	**VNMG160412-SNR**	1,2	0,2-2,0	0,1-0,5			● ○ ○			○
Roughing										

Turning inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

WNMG	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

WN** negative insert						HC¹ (CVD)	HC¹ (PVD)	HT	HC²	HW
					P					
					M		○ ○ ⊛			
					K					
					N					⊛
					S		○ ○ ⊛			⊛
					H					
	ISO	r	a_p	f			YBS103 YBG105 YPD201			YD201
SNR	**WNMG080408-SNR**	0,8	1-3	0,1-0,5			● ○ ○			○
	**WNMG080412-SNR**	1,2	1-3	0,2-0,6			● ○ ○			○
Roughing										

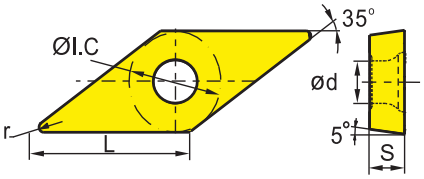
● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

VBMT	L	I.C	S	d
16 04	16,5	9,525	4,76	4,4

Turning inserts



VB** positive insert						HC¹ (CVD)			HC¹ (PVD)			HT	HC²	HW
					P									
					M				○	○	✲			
					K									
					N									✲
					S				○	○	✲			✲
					H									
	ISO		r	a_p	f				YBS103	YBG105	YPD201			YD201
SNR	**VBMT160408-SNR**		0,8	0,5-2,5	0,15-0,3				○	●	○			○
	VBMT160412-SNR		1,2	0,5-2,5	0,15-0,35				○	●	○			○
Roughing														

● Ex stock ○ On demand

HC¹ Coated carbide
HT Uncoated cermet
HC² Coated cermet
HW Uncoated carbide