SANDVIK Coromant

2019

Hard part turning

WITH THE NEW GENERATION OF CBN GRADES

GENERAL TURNING
PARTING AND GROOVING
THREAD TURNING

Hard part turning

Turning of steel with a hardness of typically 55-65 HRC is defined as hard part turning and is a cost-efficient alternative to grinding. Hard part turning has been proven to reduce machining time and costs by 70% or more, and offers improved flexibility, better lead times and higher quality.

- Simpler production process, like normal turning
- Flexible machine utilization; use the same machine for external and internal machining
- Increased productivity and lower costs per part
- Complex component shapes machined in one set-up
- Environmentally friendly - no coolant, no grinding waste

Components

Hard part turning is a well-accepted method. Typical parts are transmission gears, pinions, valve seats, pistons, cylinder liners, input/output shaft, crown wheel and CV-joint (inner/outer race & cage).

Cutting tool materials

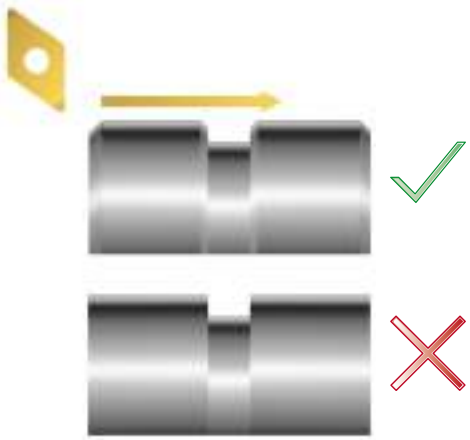
Cubic Boron Nitride grades (CBN) are the ultimate cutting tool material for hard part turning of case and induction hardened steels.

Key factors in hard part turning

Careful preparation of the component in the soft (unhardened) state will benefit the hard part turning process. Due to the relatively small depths of cut used in hard part turning, tight dimensional tolerances in soft machining are key to achieving a consistent process. This delivers longer tool life and high quality components. The use of features such as chamfers and radii on the component will optimise entry and exit paths for maximum tool life.

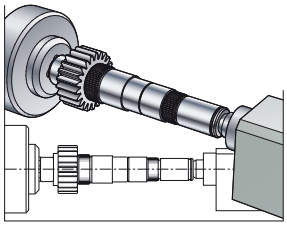
Points to remember when planning your soft machining conditions include:

- Avoid burrs
- Keep close dimensional tolerances
- Chamfer and make radii in the soft state
- Do not enter or leave cut abruptly
- Enter or leave by programming radius movement



Set-up

- Good machine stability, clamping and alignment of workpiece are crucial.
- As a guideline, a workpiece length-to-diameter ratio of up to 2:1 is normally acceptable for workpieces that are only supported on one end. If there is an additional tailstock support, this ratio can be extended.
- Use the Coromant Capto® system.
- Minimize all overhangs to maximize system rigidity.
- Always consider carbide bars for internal turning.

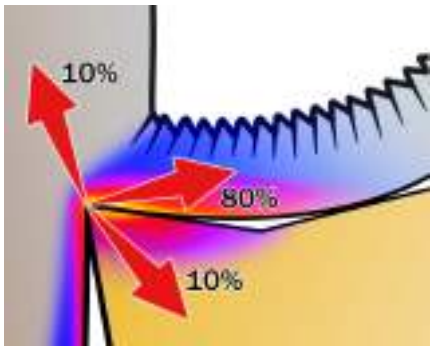


Wet or dry machining

Hard Part Turning (HPT) without coolant is the ideal situation, and is entirely feasible. Both CBN and ceramic inserts tolerate high cutting temperatures, which eliminate the costs and difficulties associated with coolants.

Some applications may require coolant, e.g. to control the thermal stability of the workpiece. In such cases, ensure a continuous flow of coolant throughout the entire turning operation.

Generally, the heat generated when machining is distributed into the chip (80%), workpiece (10%) and insert (10%). This shows the importance to evacuate the chips from the cutting-edge zone.

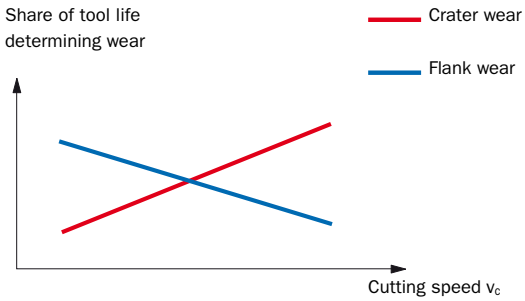


Cutting data and wear

High heat in the cutting-edge zone reduces the cutting forces. Therefore, a cutting speed that is too low generates less heat and can cause insert breakage.

Crater wear gradually affects the insert strength, but does not affect the surface finish as much.

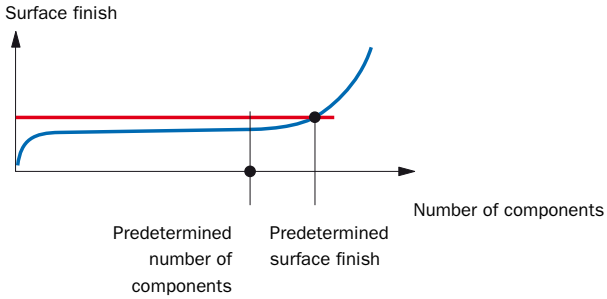
In contrast, flank wear gradually affects the dimensional tolerance.



Insert change criteria

Predetermined surface finish is a frequent and practical insert change criterion. Surface finish is automatically measured in a separate station and a value is given to a specified finish quality.

When this set value is reached, it is time to change the tool. Set the predetermined number of components to 10–20% less than the average tool life of an optimized process. The exact figure will need to be determined on a case-to-case basis.



One- or two-cut strategy

When deciding between a one- or a two-cut strategy, these factors must be considered:

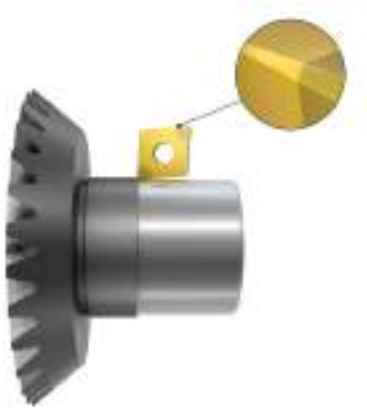
- Machine capability
- What the most important process measures are

It is very often a balance between accuracy and productivity.

One-cut strategy

With a high quality machine tool and a stable setup, a single cut can produce acceptable levels of surface quality and dimensional tolerance.

One-cut strategy



Two-cut strategy

When the machine setup is unstable, if there is any inconsistency in the component or if a very high final tolerance or surface quality is required, a two-cut strategy is likely to be the best option.

Two-cut strategy

Choose the right tool

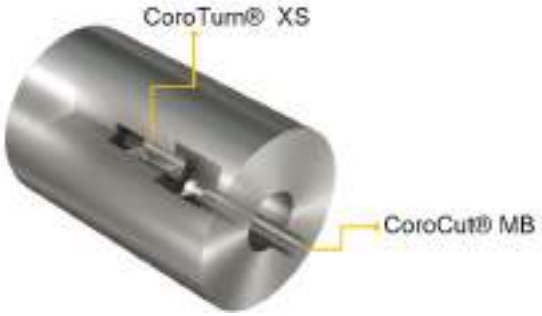
External turning

Longitudinal and facing

Grooving, threading and profiling

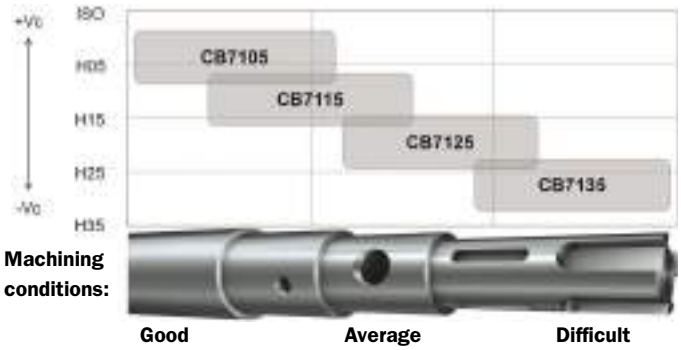
Internal turning

Longitudinal, profiling and threading

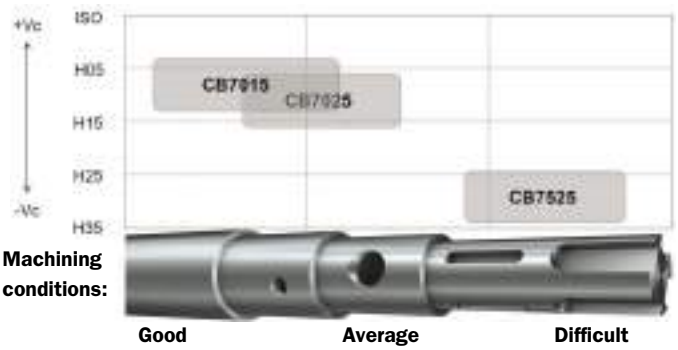


Choose the right grade

Our CBN grade assortment consists of uncoated and PVD-coated inserts for various machining conditions. Use the information below to find the right grade for your application

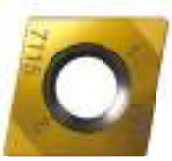


Machining conditions: Good — Average — Difficult



Machining conditions: Good — Average — Difficult

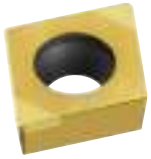
CB7105 (H05)
First-choice CBN grade for low feed and continuous cuts in stable conditions at highest speed in case and induction hardened steels.



CB7115 (H15)
First-choice CBN grade for high feed and/or depth of cut in continuous to light interrupted cuts at high speed in case and induction hardened steels.

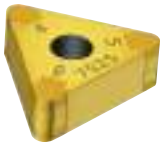
CB7125 (H25)
First choice CBN-grade designed to deliver stable and predictable tool life while machining case and induction hardened steels with light to medium interrupted cuts (chamfered component edges).

CB7135 (H35)
First choice CBN-grade designed to deliver stable and predictable tool life while machining case and induction hardened steels with heavy interrupted cuts (un-chamfered component edges).



CB7015 (H10)
CBN grade with low CBN content. Use in continuous cuts to light interrupted at high speed in case and induction hardened steels

CB7025 (H20)
CBN grade for medium to light interruptions and continuous cuts at medium speeds in case and induction hardened steels



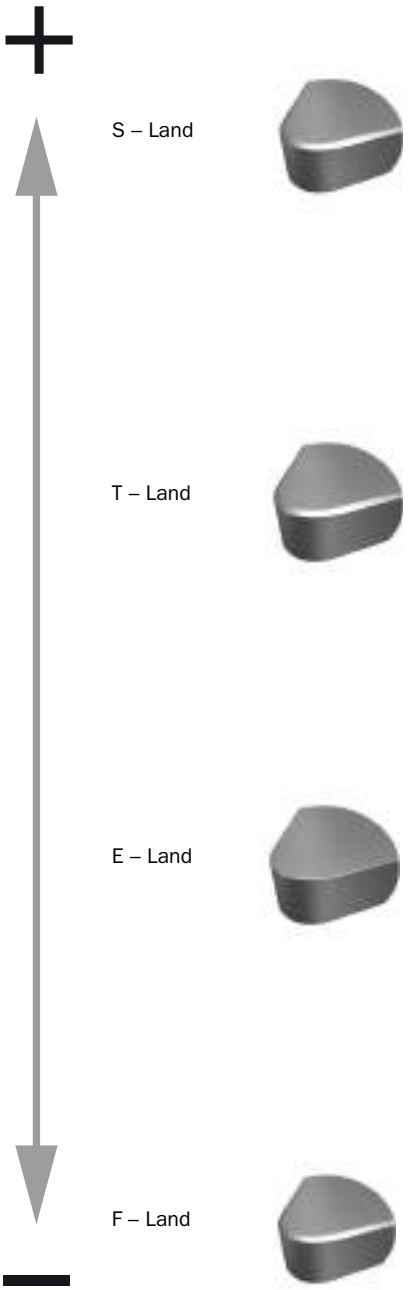
CB7525 (H30)
CBN grade designed for grey cast iron machining and heavy interrupted hard part turning at low to medium speed.

CB7925 (H35)
Solid CBN grade originally designed for high alloyed cast iron but also works as a complement in hardened steels with bigger depth of cut or higher feed at low to medium speed.

Choose the right geometry

The insert geometry and edge preparation are extremely important in hard part turning as they have a significant influence on tool life and productivity. The Sandvik Coromant CBN product range includes inserts with standard nose radius, wipers and the unique Xcel design. The standard nose radius generates the lowest cutting forces and has the lowest stability requirements while wipers and Xcel give an unbeatable combination of high productivity and excellent surface finish.

Edge condition: There are four edge conditions available in the Sandvik Coromant CBN range:



Cutting forces
Edge strength

S – Land (Chamfer + Hone)

- First choice for hard part turning
- Stronger edge than T-land, with more resistance to chipping and fracture, resulting in more predictable tool life
- Generates consistent surface finish
- Critical in interrupted cutting and when using large depth of cut

T – Land (Chamfer)

- T-land is a common edge preparation for CBN
- Preferred choice for cast iron
- Good alternative to S-land in hard part turning when reduced cutting forces and tighter tolerances are required

E – Land (Edge hone)

- Recommended for HRSA finishing operations
- Honing helps strengthen the edge, giving resistance to chipping and fracturing

F – Land (Sharp)

- Lowest cutting force but also most fragile cutting edge
- To be applied with ultra-low feed and depth of cut

Insert corner geometry

1. Radius - For poor to stable conditions
2. WH / WG - For improved surface finish or increased feed at average to stable conditions
3. Xcel (XA) - For high productivity at stable conditions
4. XB - Geometry for highest feed rate or best surface finish tolerances with normal feed rate at stable conditions

The Xcel geometry is a good complement for finishing. It has a straight cutting edge with a low entry angle which helps in producing thinner chips and lower cutting temperatures, reducing crater wear development and increasing feed capacity.

1. Standard radius
2. Wiper

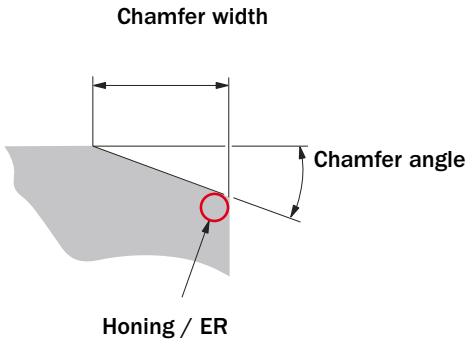
3. Xcel
4. -XB geometry

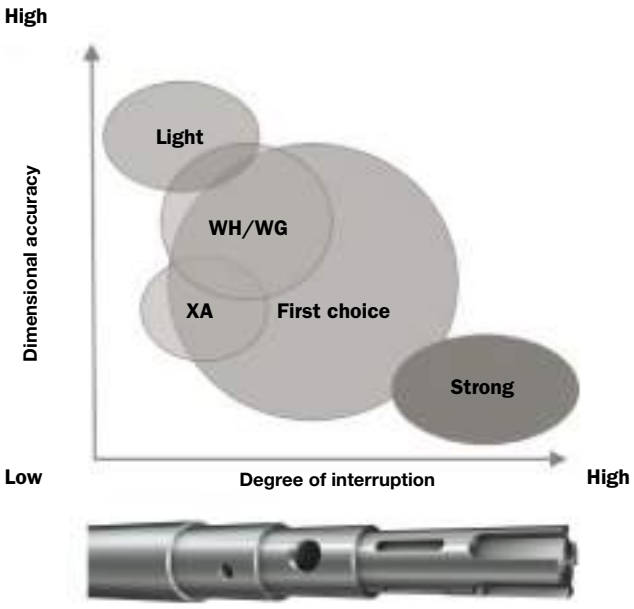
Edge preparations

The strength of the cutting edge increases with increasing chamfer angle and width. A wide chamfer spreads the cutting forces over a larger area, which provides a more robust cutting edge, allowing for higher feed rates.

If surface finish and dimensional accuracy are the main requirements, a small chamfer will provide the best results.
Cutting forces and temperature will be reduced and therefore pose less risk for vibration.

Apply first choice edge preparation or strong edge preparation if long tool life and/or process security is of most importance.





Edge preparations CB7015 and CB7025

Product family	T-Max® P		CoroTurn® 107		CoroTurn® TR	
Grade	CB7015	CB7025	CB7015	CB7025	CB7015	CB7025
First choice	S01030	S01030	S01020	S01020	S01020	S01020
WH/WG	S01030 T01030	S01030	S01020 T01020 T01030	S01020 S01530 T01030	-	-
XA	S01515	S01515	S01515	S01515	-	-
Light	E F	S01020	T01020	-	-	-
Strong	S02035	S02035	S01530 T01030	S01530 T01030	-	-

Edge preparations CB7525

Product family	T-Max® P / T-Max®	CoroTurn® 107
Grade	CB7525	CB7525
First choice	S01530	S01030
WH/WG	T01020	-
XA	-	-
Light	T01020	T01020
Strong	S02035	S01530

Edge preparations CB7105 and CB7115

Product family	T-Max® P		CoroTurn® 107		CoroTurn® TR		CoroCut® 1-2	
Grade	CB7105	CB7115	CB7105	CB7115	CB7105	CB7115	CB7105	CB7115
First choice	S01525	S01525	S01020	S01020	S01020	S01020		-
WH/WG	S01520	S01520	S01520	S01520	-	-	-	-
XA	S01515	S01515	S01515	S01515	-	-	-	-
XB	-	-	-	-	-	-	S01025	S01025
Light	S01020	-	-	-	-	-	-	-
Strong	-	S02030	-	S02030	-	-	-	-

Edge preparations CB7125 and CB7135

Product family	T-Max® P		CoroTurn® 107		CoroTurn® TR	
Grade	CB7125	CB7135	CB7125	CB7135	CB7125	CB7135
First choice	S01525 S01230*	S01530	S01020 T01020	S01530	S01020	-
WH/WG	S01520	S01520	S01520	-	-	-
XA	S01515	-	S01515	-	-	-
Light	S01025	S01025	-	-	-	-
Strong	S02035	-	S02030	-	-	-

*=HGR

Cutting data recommendations for CB7015 / CB7025 / CB7525 / CB7925

Valid for H1.3.Z.HA

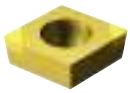
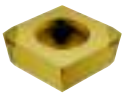
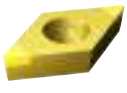
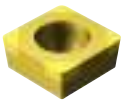
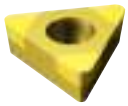
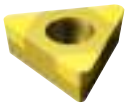
Grade	CB7015		CB7025		CB7525		CB7925	
v_c m/min (ft/min)	120-220	(394-722)	90-150	(295-492)	80-150	(262-492)	60-110	(197-361)
f_n mm/rev (inch/rev)	0.05-0.25	(.002-.010)	0.05-0.25	(.002-.010)	0.05-0.3	(.002-.012)	0.1-0.40	(.004-.016)
f_n WH/WG mm/rev (inch/rev)	0.05-0.35	(.002-.014)	0.05-0.35	(.002-.014)	0.05-0.35	(.002-.014)	-	
f_n Xcel - T-max P mm/rev (inch/rev)	0.25-0.45	(.010-.018)	0.25-0.45	(.010-.018)	-		-	
f_n Xcel - CoroTurn 107 mm/rev (inch/rev)	0.15-0.40	(.006-.016)	0.15-0.40	(.006-.016)	-		-	
f_n HGR mm/rev (inch/rev)	-		0.08-0.25	(.003-.010)	-		-	
a_p mm (inch)	0.05-0.3	(.001-.012)	0.05-0.3	(.002-.012)	0.05-0.3	(.001-.012)	0.3-0.6	(.012-.016)
a_p Xcel - T-max P mm (inch)	0.15-0.25	(.006-.010)	0.15-0.25	(.006-.010)	-		-	
a_p Xcel - CoroTurn 107 mm (inch)	0.05-0.20	(.002-.008)	0.05-0.20	(.002-.008)	-		-	
a_p HGR mm (inch)	-		0.8-2.0	(.003-.008)	-		-	

Cutting data recommendations for CB7105 / CB7115 / CB7125 / CB7135

Valid for H1.3.Z.HA

Grade	CB7105		CB7115		CB7125		CB7135	
v_c m/min (ft/min)	150-250	(492-820)	120-220	(394-722)	100-200	(262-492)	80-160	(262-524)
f_n mm/rev (inch/rev)	0.05-0.15	(.002-.006)	0.05-0.25	(.002-.010)	0.05-0.3	(.002-.012)	0.05-0.40	(.002-.016)
f_n WH/WG mm/rev (inch/rev)	0.05-0.25	(.002-.010)	0.05-0.35	(.002-.014)	0.05-0.35	(.002-.014)	0.05-0.35	(.002-.014)
f_n Xcel - T-max P mm/rev (inch/rev)	0.25-0.40	(.010-.016)	0.25-0.45	(.010-.018)	0.25-0.45	(.010-.018)	-	
f_n Xcel - CoroTurn 107 mm/rev (inch/rev)	0.15-0.35	(.006-.014)	0.15-0.40	(.006-.016)	0.15-0.40	(.006-.016)	-	
f_n XB - CoroCut 1-2 mm/rev (inch/rev)	0.4-1.2	(.016-.047)	0.4-1.2	(.016-.047)	-		-	
f_n HGR mm/rev (inch/rev)	-		-		0.08-0.25	(.003-.010)	-	
a_p mm (inch)	0.05-0.25	(.002-.010)	0.05-0.3	(.002-.012)	0.05-0.5	(.002-.020)	0.05-0.5	(.002-.02)
a_p Xcel - T-max P mm (inch)	0.15-0.20	(.006-.008)	0.15-0.25	(.006-.010)	0.15-0.25	(.006-.010)	-	
a_p Xcel - CoroTurn 107 mm (inch)	0.05-0.15	(.002-.006)	0.05-0.20	(.002-.008)	0.05-0.20	(.002-.008)	-	
a_p XB - CoroCut 1-2 mm (inch)	0.08-0.12	(.003-.005)	0.08-0.12	(.003-.005)	-		-	
a_p HGR mm (inch)	-		-		0.8-2.0	(.003-.080)	-	

General turning

	CoroTurn® TR		CoroTurn® 107						CoroTurn® 111
				Xcel geometry					
									
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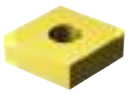
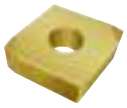
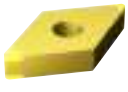
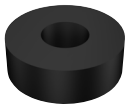
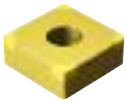
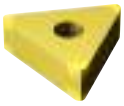
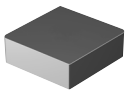
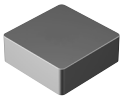
B

	T-Max® P							
		Xcel geometry						
								
	CN..	CN..	DN..	RN..	SN..	TN..	VN..	WN..
Page	A16	A18	A20	A22	A24	A26	A27	A28

	T-Max®			CoroTurn® XS
				
	CN..	RN..	SN..	CXS..
Page	A31	A32	A33	A35

C

Parting and grooving

	CoroCut® 1-2				CoroTurn® XS	CoroCut® MB	
	Grooving	Profiling		Turning	Grooving	Grooving	Turning
							
	123-GE/S	123-S	123-RE	123-S	CXS..	MB..R	MB..T093
Page	B3	B5	B6	B7	B9	B11	B12

D

Thread turning

	CoroThread® 266	CoroTurn® XS	CoroCut® MB
	V-profile 60° Non-topping	V-profile 60° Non-topping	Metric 60° Full form
			
	266RG/RL	CXS..	MB..R
Page	C3	C5	C7

General turning

CoroTurn® TR

For stable external and internal profiling

Application

- Profiling
- Medium to finishing

Benefits and features

- Stable insert clamping (iLock) ensures good repeatability and accuracy while allowing for high cutting data
- Precision coolant improves chip control and tool life
- Easy coolant connection and tool changes with plug and play adaptors or QS stops (QS shanks)

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iLock™ locking interface

The T-rail on the holder and corresponding groove on the insert lock the insert precisely and securely.

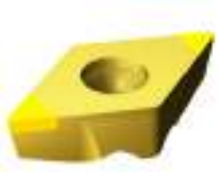
- High stability and tolerances
- High indexing repeatability

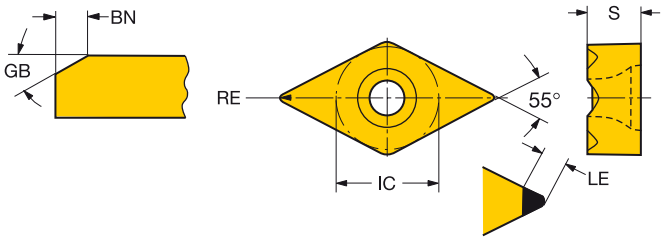
A3

ENG

CoroTurn® TR insert for turning

D-style insert (Rhombic 55°)



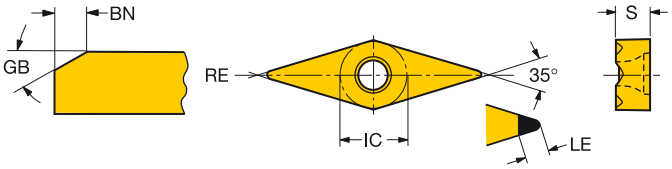


		LE	S	RE	GB	BN	ISO CODE	H 7015	H 7025	H 7105	H 7115	H 7125
Finishing	13	3.1	5.53	0.4	20°	0.10	TR-DC1304S01020F	☆	★	☆	☆	
		.122	.218	.016	20°	.004						
		3.1	5.53	0.8	20°	0.10	TR-DC1308S01020F	☆	☆	☆	☆	★
		.122	.218	.031	20°	.004						

D2 D6

CoroTurn® TR insert for turning

V-style insert (Rhombic 35°)



		LE	S	RE	GB	BN	ISO CODE	H				
								7015	7025	7105	7115	7125
Finishing	13	3.1	4.53	0.4	20°	0.10	TR-VB1304S01020F	☆	☆	☆	☆	★
		.122	.178	.016	20°	.004						
		3.1	4.53	0.8	20°	0.10	TR-VB1308S01020F	☆	★	☆	☆	
		.122	.178	.031	20°	.004						

D2 D6

CoroTurn® 107

For internal and external turning of slender components

Application

- Longitudinal turning
- Profiling
- Back boring
- Medium to finishing

Benefits and features

- Low cutting forces
- Screw clamping ensures stability and unobstructed chip flow
- Insert geometries and grades for all materials
- Wiper geometries available for high feeds and excellent surface finish
- Holders and insert geometries with conventional and CoroTurn HP design

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Positive insert shape

- 5°, 7° clearance angle
- All types of insert shapes and sizes
- Geometries and grades for all application areas
- Insert grades also in advanced cutting materials PCD, CBN and ceramics

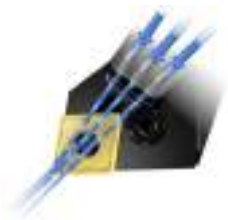
Tools

- Coromant Capto® cutting units
- Shank tools
- QS Shank tools
- Boring bars
- CoroTurn® SL heads

Tools with EasyFix™ and Silent Tools™ available.

Designed for precision coolant

Holders are available with precision nozzles for excellent chip control.



Screw clamping

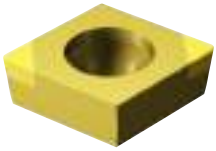
Adds stability and unobstructed chip flow

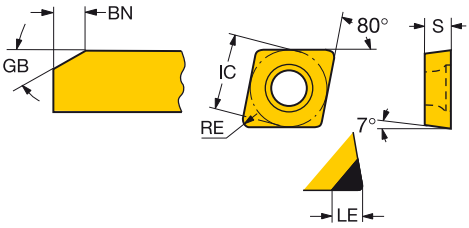

A6

D3

CoroTurn® 107 insert for turning

C-style insert (Rhombic 80°)





		IC	LE	S	RE	BS	GB	BN	ISO CODE	K 7525	H 7015	H 7025	H 7105	H 7115	H 7125	H 7135	H 7525	ANSI CODE
Finishing	06	1/4	2.4	2.38	0.2		20°	0.10	CCGW060202S01020F					★				CCGW2(1.5)0S0320F
			.095	*.094*	*.008*		*20°*	*.004*										
			2.6	2.38	0.2		20°	0.10	CCGW060202T01020F						★			CCGW2(1.5)0T0320F
			.102	*.094*	*.008*		*20°*	*.004*										
			1.5	2.38	0.2		30°	0.10	CCGW060202T01030F		☆	★						CCGW2(1.5)0T0330F
			.059	*.094*	*.008*		*30°*	*.004*										
			2.6	2.38	0.4		20°	0.10	CCGW060204S01020F		☆	☆	☆	☆	★			CCGW2(1.5)1S0320F
			.102	*.094*	*.016*		*20°*	*.004*										
			2.8	2.38	0.4		30°	0.10	CCGW060204S01030F		☆	☆					★	CCGW2(1.5)1S0330F
			.110	*.094*	*.016*		*30°*	*.004*										
			2.6	2.38	0.4		30°	0.15	CCGW060204S01530F							★		CCGW2(1.5)1S0530F
			.102	*.094*	*.016*		*30°*	*.006*										
			2.8	2.38	0.4		20°	0.10	CCGW060204T01020F	★							★	CCGW2(1.5)1T0320F
			.110	*.094*	*.016*		*20°*	*.004*										
			1.8	2.38	0.4		30°	0.10	CCGW060204T01030F		★							CCGW2(1.5)1T0330F
			.071	*.094*	*.016*		*30°*	*.004*										
			2.5	2.38	0.8		20°	0.10	CCGW060208S01020F				☆	★				CCGW2(1.5)2S0320F
			.098	*.094*	*.031*		*20°*	*.004*										
			2.0	2.38	0.8		30°	0.10	CCGW060208S01030F		☆	★						CCGW2(1.5)2S0330F
			.079	*.094*	*.031*		*30°*	*.004*										
			2.0	2.38	0.8		30°	0.10	CCGW060208T01030F		★							CCGW2(1.5)2T0330F
			.079	*.094*	*.031*		*30°*	*.004*										
			2.6	2.38	0.4	0.5	20°	0.15	CCGW060204S01520FWH				☆	★				CCGW2(1.5)1S0520FWH
			.102	*.094*	*.016*	*.018*	*20°*	*.006*										
			1.8	2.38	0.4	0.5	30°	0.10	CCGW060204T01030FWH		☆	★						CCGW2(1.5)1T0330FWH
			.071	*.094*	*.016*	*.018*	*30°*	*.004*										
			2.6	2.38	0.8	0.6	20°	0.15	CCGW060208S01520FWH				☆	★				CCGW2(1.5)2S0520FWH
			.102	*.094*	*.031*	*.022*	*20°*	*.006*										
			2.0	2.38	0.8	0.6	30°	0.10	CCGW060208T01030FWH		☆	★						CCGW2(1.5)2T0330FWH
			.079	*.094*	*.031*	*.022*	*30°*	*.004*										

D2 D3 D6

SANDVIK Coromant

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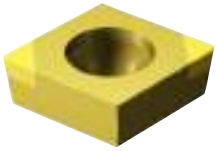
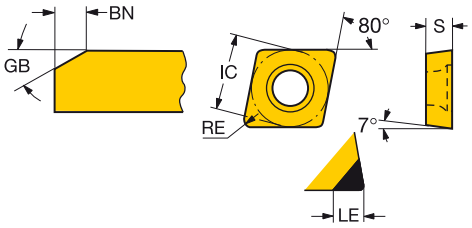
CoroTurn® 107 insert for turning

C-style insert (Rhombic 80°)



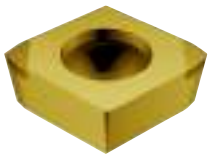


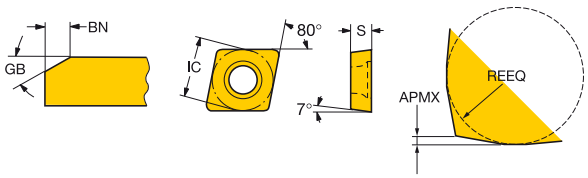
	IC	LE	S	RE	BS	GB	BN	ISO CODE	K 7525	H 7015	H 7025	H 7105	H 7115	H 7125	H 7135	H 7525	ANSI CODE
Finishing	09 3/8	2.6	3.97	0.4		20°	0.10	CCGW09T304S01020F		☆	☆	☆	☆	★			CCGW3(2.5)1S0320F
		.102	*.156*	*.016*		*20°*	*.004*										
		2.6	3.97	0.4		30°	0.15	CCGW09T304S01530F		☆	☆				★	★	CCGW3(2.5)1S0630F
		.102	*.156*	*.016*		*30°*	*.006*										
		2.6	3.97	0.4		30°	0.20	CCGW09T304S02030F					★				CCGW3(2.5)1S0830F
		.102	*.156*	*.016*		*30°*	*.008*										
		2.8	3.97	0.4		20°	0.10	CCGW09T304T01020F	★							★	CCGW3(2.5)1T0320F
		.110	*.156*	*.016*		*20°*	*.004*										
		2.5	3.97	0.8		20°	0.10	CCGW09T308S01020F		☆	☆	☆	☆	★			CCGW3(2.5)2S0320F
		.098	*.156*	*.031*		*20°*	*.004*										
		2.5	3.97	0.8		30°	0.15	CCGW09T308S01530F		☆	☆				★	★	CCGW3(2.5)2S0630F
		.098	*.156*	*.031*		*30°*	*.006*										
		2.5	3.97	0.8		30°	0.20	CCGW09T308S02030F					★	★			CCGW3(2.5)2S0830F
		.098	*.156*	*.031*		*30°*	*.008*										
		3.0	3.97	0.8		20°	0.10	CCGW09T308T01020F	★							★	CCGW3(2.5)2T0320F
		.118	*.156*	*.031*		*20°*	*.004*										
		2.4	3.97	1.2		20°	0.10	CCGW09T312S01020F		☆		☆	★	★			CCGW3(2.5)3S0320F
		.094	*.156*	*.047*		*20°*	*.004*										
		2.3	3.97	1.2		30°	0.15	CCGW09T312S01530F			★						CCGW3(2.5)3S0630F
		.091	*.156*	*.047*		*30°*	*.006*										
		2.4	3.97	1.2	0.6	20°	0.15	CCGW09T304S01020FWH			★						CCGW3(2.5)1S0320FWH
		.095	*.156*	*.047*	*.024*	*20°*	*.006*										
		2.6	3.97	0.4	0.5	20°	0.15	CCGW09T304S01520FWH				☆	★	★			CCGW3(2.5)1S0520FWH
		.102	*.156*	*.016*	*.018*	*20°*	*.006*										
		1.8	3.97	0.4	0.5	30°	0.15	CCGW09T304S01530FWH			★						CCGW3(2.5)1S0630FWH
		.071	*.156*	*.016*	*.018*	*30°*	*.006*										
		1.8	3.97	0.4	0.5	20°	0.10	CCGW09T304T01020FWH		★							CCGW3(2.5)1T0320FWH
		.071	*.156*	*.016*	*.018*	*20°*	*.004*										
		2.0	3.97	0.8	0.6	20°	0.10	CCGW09T308S01020FWH			★						CCGW3(2.5)2S0320FWH
		.079	*.156*	*.031*	*.022*	*20°*	*.004*										
		2.5	3.97	0.8	0.6	20°	0.15	CCGW09T308S01520FWH				☆	★	★			CCGW3(2.5)2S0520FWH
		.098	*.156*	*.031*	*.022*	*20°*	*.006*										
		2.0	3.97	0.8	0.6	20°	0.10	CCGW09T308T01020FWH		★							CCGW3(2.5)2T0320FWH
		.079	*.156*	*.031*	*.022*	*20°*	*.004*										
		2.3	3.97	1.2	0.6	20°	0.10	CCGW09T312S01020FWH		★							CCGW3(2.5)3S0320FWH
		.091	*.156*	*.047*	*.024*	*20°*	*.004*										
		2.4	3.97	1.2	0.6	20°	0.15	CCGW09T312S01520FWH				☆	☆				CCGW3(2.5)3S0320FWH
		.095	*.156*	*.047*	*.024*	*20°*	*.006*										

D2 D3 D6

CoroTurn® 107 insert for turning

C-style insert (Rhombic 80°)





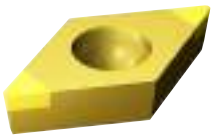
	IC	LE	S	REEQ	APMX	GB	BN	ISO CODE	H 7015	7025	7105	7115	7125
Finishing	09	3/8	2.3	3.97	1.9	0.2	15°	0.15	CCGX09T3L020-15FXA	☆	☆	☆	☆	★
			.091	*.156*	*.075*	*.008*	*15°*	*.006*						

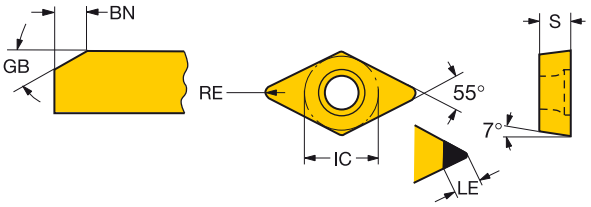
D2 D3 D6

ENG

CoroTurn® 107 insert for turning

D-style insert (Rhombic 55°)





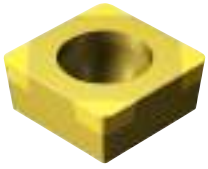
			LE	S	RE	BS	GB	BN	ISO CODE	K	H							ANSI CODE
										7525	7015	7025	7105	7115	7125	7135	7525	CB20	
	07	1/4	2.5	2.38	0.2		20°	0.10	DCGW070202S01020F					★					DCGW2(1.5)0S0320F
			.098	.094	.008		20°	.004											
			2.5	2.38	0.2		20°	0.10	DCGW070202T01020F						★				DCGW2(1.5)0T0320F
			.098	.094	.008		20°	.004											
			1.5	2.38	0.2		30°	0.10	DCGW070202T01030F		☆	★							DCGW2(1.5)0T0330F
			.059	.094	.008		30°	.004											
			2.9	2.38	0.4		20°	0.10	DCGW070204S01020F			☆	☆	☆	★				DCGW2(1.5)1S0320F
			.114	.094	.016		20°	.004											
			2.9	2.38	0.4		30°	0.10	DCGW070204S01030F		☆	☆					★		DCGW2(1.5)1S0330F
			.114	.094	.016		30°	.004											
			2.9	2.38	0.4		30°	0.15	DCGW070204S01530F							★			DCGW2(1.5)1S0530F
			.114	.094	.016		30°	.006											
			2.8	2.38	0.4		20°	0.10	DCGW070204T01020F	★							★		DCGW2(1.5)1T0320F
			.110	.094	.016		20°	.004											
			2.5	2.38	0.8		20°	0.10	DCGW070208S01020F						★				DCGW2(1.5)2S0320F
			.098	.094	.031		20°	.004											
			2.1	2.38	0.8		30°	0.10	DCGW070208S01030F		☆	★							DCGW2(1.5)2S0330F
			.083	.094	.031		30°	.004											
	11	3/8	2.8	3.97	0.2		20°	0.10	DCGW11T302T01020F	★							★		DCGW3(2.5)0T0320F
			.110	.156	.008		20°	.004											
			1.8	3.97	0.4		20°	0.10	DCGW11T304S01020F		☆	☆	☆	☆	★				DCGW3(2.5)1S0320F
			.071	.156	.016		20°	.004											
			2.9	3.97	0.4		30°	0.15	DCGW11T304S01530F		☆	☆				★	★		DCGW3(2.5)1S0630F
			.114	.156	.016		30°	.006											
			2.9	3.97	0.4		30°	0.20	DCGW11T304S02030F					★					DCGW3(2.5)1S0830F
			.113	.156	.016		30°	.008											
			2.9	3.97	0.4		20°	0.10	DCGW11T304T01020F	★	☆						★		DCWG3(2.5)1T0320F
			.114	.156	.016		20°	.004											
			2.5	3.97	0.8		20°	0.10	DCGW11T308S01020F		☆	☆	☆	★	★				DCGW3(2.5)2S0320F
			.098	.156	.031		20°	.004											
			3.1	3.97	0.8		30°	0.15	DCGW11T308S01530F		☆	☆				★	★		DCGW3(2.5)2S0630F
			.122	.156	.031		30°	.006											
			2.5	3.97	0.8		30°	0.20	DCGW11T308S02030F					★	★				DCGW3(2.5)2S0830F
			.098	.156	.031		30°	.008											
			3.1	3.97	0.8		20°	0.10	DCGW11T308T01020F	★	☆						★		DCGW3(2.5)2T0320F
			.122	.156	.031		20°	.004											
			2.1	3.97	1.2		20°	0.10	DCGW11T312S01020F		☆	☆		☆	★				DCGW3(2.5)3S0320F
			.083	.156	.047		20°	.004											
			2.4	3.97	1.2		30°	0.15	DCGW11T312S01530F		★								DCGW3(2.5)3S0630F
			.094	.156	.047		30°	.006											
			3.7	3.97	0.4		20°	0.10	DCMW11T304S01020E									☆	DCMW3(2.5)1S0320E
			.144	.156	.016		20°	.004											
			3.4	3.97	0.8		20°	0.10	DCMW11T308S01020E									☆	DCMW3(2.5)2S0320E
			.132	.156	.031		20°	.004											
			1.8	3.97	0.4	0.5	20°	0.10	DCGW11T304S01020FWH		☆	★							DCGW3(2.5)1S0320FWH
			.071	.156	.016	.018	20°	.004											
			2.9	3.97	0.4	0.5	20°	0.15	DCGW11T304S01520FWH				☆	★					DCGW3(2.5)1S0520FWH
			.113	.156	.016	.018	20°	.006											
			2.1	3.97	0.8	0.6	20°	0.10	DCGW11T308S01020FWH		☆	☆					★		DCGW3(2.5)2S0320FWH
			.083	.156	.031	.022	20°	.004											
			2.5	3.97	0.8	0.6	20°	0.15	DCGW11T308S01520FWH				☆	★					DCGW3(2.5)2S0520FWH
			.098	.156	.031	.022	20°	.006											

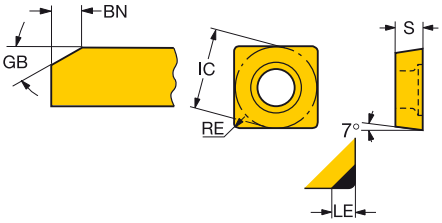
Finishing

D2 D3 D6

CoroTurn® 107 insert for turning

S-style insert (Square)



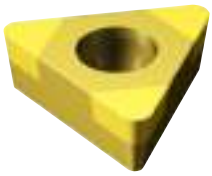


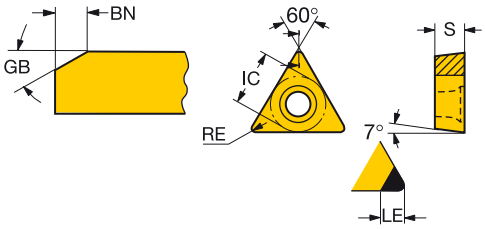
		IC	LE	S	RE	GB	BN	ISO CODE	H 7015	H 7025	H 7525	ANSI CODE
Finishing	09	3/8	1.8	3.97	0.4	30°	0.10	SCGW09T304S01030F	☆	★		SCGW3(2.5)1S0330F
			.071	*.156*	*.016*	*30°*	*.004*					
			2.8	3.97	0.4	20°	0.10	SCGW09T304T01020F			★	SCGW3(2.5)1T0320F
			.110	*.156*	*.016*	*20°*	*.004*					
			2.1	3.97	0.8	30°	0.10	SCGW09T308S01030F	☆	★		SCGW3(2.5)2S0330F
			.083	*.156*	*.031*	*30°*	*.004*					
			3.1	3.97	0.8	30°	0.15	SCGW09T308S01530F			★	SCGW3(2.5)2S0630F
			.122	*.156*	*.031*	*30°*	*.006*					
			3.1	3.97	0.8	20°	0.10	SCGW09T308T01020F			★	SCGW3(2.5)2T0320F
			.122	*.156*	*.031*	*20°*	*.004*					

D2 D3 D6

CoroTurn® 107 insert for turning

T-style insert (Triangular)



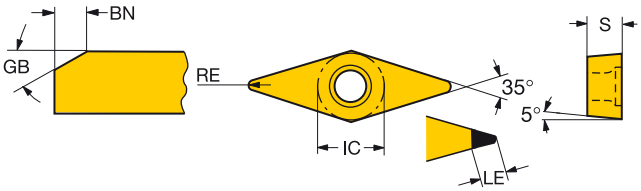


			LE	S	RE	GB	BN	ISO CODE	K	H							ANSI CODE
									7525	7015	7025	7105	7115	7125	7135	7525	CB20	
Finishing	06	5/32	2.0	1.59	0.2	20°	0.10	TCGW06T102S01020E					★					TCGW1.2(1.2)0S0320E
			.077	.063	.008	20°	.004											
			1.5	1.98	0.2	20°	0.10	TCGW06T102T01020E			★							TCGW1.2(1.2)0T0320E
			.059	.078	.008	20°	.004											
			1.8	1.98	0.4	20°	0.10	TCGW06T104S01020E		☆	☆	☆	☆			★		TCGW1.2(1.2)1S0320E
			.071	.078	.016	20°	.004											
	09	7/32	1.8	2.38	0.2	20°	0.10	TCGW090202S01020F		☆	★		☆					TCGW1.8(1.5)0S0320F
			.071	.094	.008	20°	.004											
			2.5	2.38	0.2	20°	0.10	TCGW090202T01020F						★				TCGW1.8(1.5)0T0320F
			.098	.094	.008	20°	.004											
			1.8	2.38	0.4	20°	0.10	TCGW090204S01020F		☆	☆	☆	☆	★				TCGW1.8(1.5)1S0320F
			.071	.094	.016	20°	.004											
			1.8	2.38	0.4	30°	0.10	TCGW090204S01030F		★								TCGW1.8(1.5)1S0330F
			.071	.094	.016	30°	.004											
			2.8	2.38	0.4	30°	0.15	TCGW090204S01530F			☆				★	★		TCGW1.8(1.5)1S0630F
			.110	.094	.016	30°	.006											
			3.0	2.38	0.4	20°	0.10	TCMW090204S01020E									☆	TCMW1.8(1.5)1S0320E
			.118	.094	.016	20°	.004											
	11	1/4	2.8	2.38	0.2	20°	0.10	TCGW110202T01020F								★		TCGW2(1.5)0T0320F
			.110	.094	.008	20°	.004											
			1.8	2.38	0.4	20°	0.10	TCGW110204S01020F		☆	★							TCGW2(1.5)1S0320F
			.071	.094	.016	20°	.004											
			1.8	2.38	0.4	30°	0.15	TCGW110204S01530F			★							TCGW2(1.5)1S0630F
			.071	.094	.016	30°	.006											
			2.8	2.38	0.4	20°	0.10	TCGW110204T01020F	★							★		TCGW2(1.5)1T0320F
			.110	.094	.016	20°	.004											
			2.9	2.38	0.8	20°	0.10	TCGW110208S01020F		☆	★							TCGW2(1.5)2S0320F
			.114	.094	.031	20°	.004											
			2.0	2.38	0.8	30°	0.15	TCGW110208S01530F			★							TCGW2(1.5)2S0630F
			.079	.094	.031	30°	.006											
			1.8	3.18	0.4	20°	0.10	TCGW110304S01020F		☆	☆	☆	☆	★				TCGW221S0320F
			.071	.125	.016	20°	.004											
			2.8	3.18	0.4	30°	0.15	TCGW110304S01530F			★				★			TCGW221S0630F
			.110	.125	.016	30°	.006											
			2.8	3.18	0.4	20°	0.10	TCGW110304T01020F								★		TCGW221T0320F
			.110	.125	.016	20°	.004											
			2.5	3.18	0.8	20°	0.10	TCGW110308S01020F		☆	☆	☆	☆	★				TCGW222S0320F
			.098	.125	.031	20°	.004											
			2.9	3.18	0.8	30°	0.15	TCGW110308S01530F			☆					★		TCGW222S0630F
			.114	.125	.031	30°	.006											
			2.9	3.18	0.8	20°	0.10	TCGW110308T01020F								★		TCGW222T0320F
			.114	.125	.031	20°	.004											
			3.0	2.38	0.4	20°	0.10	TCMW110204S01020E									☆	TCMW2(1.5)1 S0320E
			.118	.094	.016	20°	.004											
			3.0	2.38	0.8	20°	0.10	TCMW110208S01020E									☆	TCMW2(1.5)2S0320E
			.118	.094	.031	20°	.004											
			3.0	3.18	0.4	20°	0.10	TCMW110304S01020E									☆	TCMW221S0320E
			.118	.125	.016	20°	.004											
			3.0	3.18	0.8	20°	0.10	TCMW110308S01020E									☆	TCMW222S0320E
			.118	.125	.031	20°	.004											

D2 D3 D6

CoroTurn® 107 insert for turning

V-style insert (Rhombic 35°)



										K	H								
			LE	S	RE	GB	BN	ISO CODE	7525	7015	7025	7105	7115	7125	7135	7525	CB20	ANSI CODE
Finishing	11	1/4	2.5	3.18	0.2	20°	0.10	VBGW110302S01020F					★					VBGW220T0320F
			.098	*.125*	*.008*	*20°*	*.004*											
			2.3	3.18	0.2	20°	0.10	VBGW110302T01020F			★							VBGW220T0320F
			.091	*.125*	*.008*	*20°*	*.004*											
			2.5	3.18	0.4	20°	0.10	VBGW110304S01020F		☆	☆	☆	☆	★		★		VBGW221S0320F
			.098	*.125*	*.016*	*20°*	*.004*											
			2.5	3.18	0.4	30°	0.15	VBGW110304S01530F							★			VBGW221T0530F
			.098	*.125*	*.016*	*30°*	*.006*											
	16	3/8	3.0	4.76	0.4	20°	0.10	VBGW160404S01020F		☆	☆	☆	☆	★				VBGW331S0320F
			.118	*.188*	*.016*	*20°*	*.004*											
			3.0	4.76	0.4	30°	0.10	VBGW160404S01030F			★							VBGW331S0330F
			.118	*.188*	*.016*	*30°*	*.004*											
			2.5	4.76	0.4	30°	0.15	VBGW160404S01530F		★					★			VBGW331S0630F
			.098	*.188*	*.016*	*30°*	*.006*											
			4.0	4.76	0.4	20°	0.10	VBGW160404T01020F	★							★		VBGW331T0320F
			.157	*.188*	*.016*	*20°*	*.004*											
			3.0	4.76	0.8	20°	0.10	VBGW160408S01020F		☆	☆	☆	☆	★				VBGW332S0320F
			.118	*.188*	*.031*	*20°*	*.004*											
			2.5	4.76	0.8	30°	0.15	VBGW160408S01530F		☆	★				★			VBGW332S0630F
			.098	*.188*	*.031*	*30°*	*.006*											
			4.0	4.76	0.8	20°	0.10	VBGW160408T01020F	★							★		VBGW332T0320F
			.157	*.188*	*.031*	*20°*	*.004*											
			4.7	4.76	0.4	20°	0.10	VBMW160404S01020E									☆	VBMW331S0320E
			.185	*.188*	*.016*	*20°*	*.004*											
			4.1	4.76	0.8	20°	0.10	VBMW160408S01020E									☆	VBMW332S0320E
			.162	*.188*	*.031*	*20°*	*.004*											

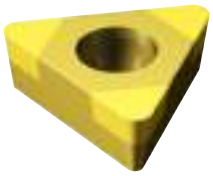
D2 D3 D6

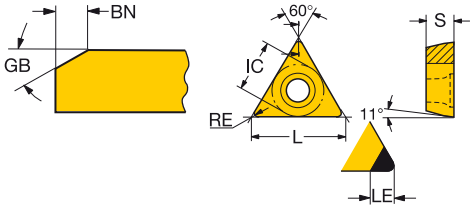
SANDVIK Coromant

ENG

CoroTurn® 111 insert for turning

T-style insert (Triangular)





	IC	LE	S	RE	GB	BN	ISO CODE	H 7015	H 7025	H 7105	H 7115	ANSI CODE
Finishing	11 1/4	1.8	3.18	0.4	20°	0.10	TPGW110304S01020F	☆	★	☆	☆	TPGW221S0320F
		.071	*.125*	*.016*	*20°*	*.004*						
		2.0	3.18	0.8	20°	0.10	TPGW110308S01020F	☆	★	☆	☆	TPGW222S0320F
		.079	*.125*	*.031*	*20°*	*.004*						

D2 D3 D6

T-Max® P

Optimized for external turning

Application

- Longitudinal turning
- Face turning
- Profiling
- Roughing to finishing
- Internal turning of large diameter bores from dia 50 mm (2 inch)

Benefits and features

- Productive solution with Wiper and Xcel technologies
- Tools featuring precision coolant for excellent chip breaking
- Reliable and secure machining, even in roughing applications
- Double sided inserts with strong edges
- Lever clamping for wet machining, Rigid-clamping for dry machining and short chip materials, Wedge clamp for improved accessibility

www.sandvik.coromant.com/tmaxp

Inserts

- All types of insert shapes and sizes
- Geometries and grades for all application areas
- Insert grades also in advanced cutting materials PCD, CBN and ceramic
- Inserts dedicated for precision coolant

Tools

- Coromant Capto® cutting units
- Shank tools
- Boring bars
- CoroTurn® SL heads

Precision coolant

Holders are available with precision nozzles for excellent chip control.

Different clamping solutions

Lever clamping
Not recommended for HPT

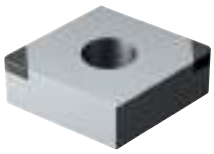
Rigid clamping
Recommended for HPT

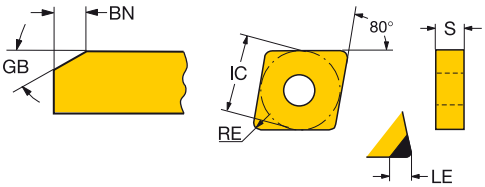
A16 D3

ENG

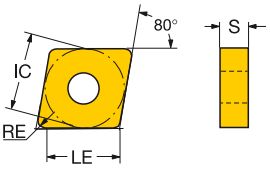
T-Max® P insert for turning

C-style insert (Rhombic 80°)





	IC	LE	S	RE	BS	GB	BN	ISO CODE	H 7125	H 7135	ANSI CODE
Finishing	12 1/2	2.6	4.76	0.4		30°	0.15	CNGA120404S01530F		★	CNGA431S0530F
		.102	*.188*	*.016*		*30°*	*.006*				
		2.5	4.76	0.8		30°	0.15	CNGA120408S01530F		★	CNGA432S0530F
		.098	*.188*	*.031*		*30°*	*.006*				
		2.5	4.76	0.8		35°	0.20	CNGA120408S02035F	★		CNGA432S0835F
		.098	*.188*	*.031*		*35°*	*.008*				
		2.9	4.76	1.2		30°	0.15	CNGA120412S01530F		★	CNGA433S0530F
		.113	*.188*	*.047*		*30°*	*.006*				
		2.4	4.76	1.2		35°	0.20	CNGA120412S02035F	★		CNGA433S0835F
		.094	*.188*	*.047*		*35°*	*.008*				
		2.8	4.76	1.6		35°	0.20	CNGA120416S02035F	★		CNGA434S0835F
		.110	*.188*	*.063*		*35°*	*.008*				
		3.5	4.76	0.8		30°	0.12	CNGM120408F-HGR	★		CNGM432F-HGR
		.138	*.188*	*.031*		*30°*	*.005*				
		3.5	4.76	1.2		30°	0.12	CNGM120412F-HGR	★		CNGM433F-HGR
		.138	*.188*	*.047*		*30°*	*.005*				
		2.5	4.76	0.8	0.6	20°	0.15	CNGA120408S01520FWH		★	CNGA432S0520FWH
		.098	*.188*	*.031*	*.022*	*20°*	*.006*				

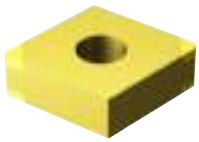


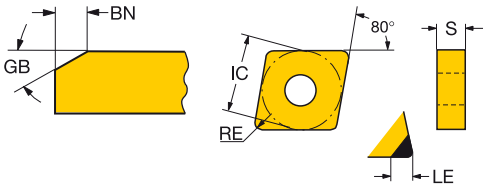
	IC	LE	S	RE	GB	BN	ISO CODE	H CB20	ANSI CODE
Finishing	12 1/2	2.8	4.76	0.4	20°	0.10	CNMA120404S01020E	☆	CNMA431S0320E
		.110	*.188*	*.016*	*20°*	*.004*			
		2.8	4.76	0.8	20°	0.10	CNMA120408S01020E	☆	CNMA432S0320E
		.110	*.188*	*.031*	*20°*	*.004*			
		2.7	4.76	1.2	20°	0.10	CNMA120412S01020E	☆	CNMA433S0320E
		.106	*.188*	*.047*	*20°*	*.004*			

D2 D3 D6

T-Max® P insert for turning

C-style insert (Rhombic 80°)





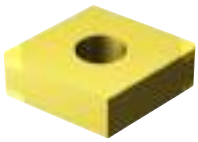
										K	H						
		IC	LE	S	RE	BS	GB	BN	ISO CODE	7525	7015	7025	7105	7115	7125	7525	ANSI CODE
Finishing	09	3/8	2.4	3.18	0.4		30°	0.10	CNGA090304S01030A		☆	★					CNGA321S0330A
			.094	.125	.016		30°	.004									
			2.4	3.18	0.8		30°	0.10	CNGA090308S01030A		☆	★					CNGA322S0330A
			.094	.125	.031		30°	.004									
			2.0	3.18	0.8		35°	0.20	CNGA090308S02035A			★					CNGA322S0835A
			.079	.125	.031		35°	.008									
			2.4	3.18	0.4	0.5	30°	0.10	CNGA090304S01030AWH			★					CNGA321S0330AWH
			.094	.125	.016	.018	30°	.004									
			2.4	3.18	0.4	0.5	30°	0.10	CNGA090304T01030AWH		★						CNGA321T0330AWH
			.094	.125	.016	.018	30°	.004									
			2.4	3.18	0.8	0.6	30°	0.10	CNGA090308S01030AWH			★					CNGA322S0330AWH
			.094	.125	.031	.022	30°	.004									
			2.4	3.18	0.8	0.6	30°	0.10	CNGA090308T01030AWH		★						CNGA322T0330AWH
			.094	.125	.031	.022	30°	.004									
	12	1/2	1.8	4.76	0.4		20°	0.10	CNGA120404S01020A			★					CNGA431S0320A
			.071	.188	.016		20°	.004									
			2.6	4.76	0.4		20°	0.10	CNGA120404S01020H				★				CNGA431S0320H
			.102	.188	.016		20°	.004									
			3.0	4.76	0.4		30°	0.10	CNGA120404S01030A		☆	★					CNGA431S0330A
			.118	.188	.016		30°	.004									
			2.6	4.76	0.4		25°	0.15	CNGA120404S01525H				☆	★	★		CNGA431S0525H
			.102	.188	.016		25°	.006									
			1.8	4.76	0.4		35°	0.20	CNGA120404S02035A			★					CNGA431S0835A
			.071	.188	.016		35°	.008									
			3.1	4.76	0.4		35°	0.20	CNGA120404S02035B	★						★	CNGA431S0835B
			.122	.188	.016		35°	.008									
			3.1	4.76	0.4		20°	0.10	CNGA120404T01020B	★						★	CNGA431T0320B
			.122	.188	.016		20°	.004									
			2.9	4.76	0.8		18°	0.10	CNGA120408S01018A		☆	★					CNGA432S0318A
			.114	.188	.031		18°	.004									
			2.5	4.76	0.8		20°	0.10	CNGA120408S01020H				★				CNGA432S0320H
			.098	.188	.031		20°	.004									
			2.9	4.76	0.8		30°	0.10	CNGA120408S01030A		☆	★					CNGA432S0330A
			.114	.188	.031		30°	.004									
			2.5	4.76	0.8		25°	0.15	CNGA120408S01525H				☆	★	★		CNGA432S0525H
			.098	.188	.031		25°	.006									
			2.1	4.76	0.8		30°	0.15	CNGA120408S01530B							★	CNGA432S0630B
			.083	.188	.031		30°	.006									
			2.5	4.76	0.8		30°	0.20	CNGA120408S02030H					★			CNGA432S0830H
			.098	.188	.031		30°	.008									
			2.9	4.76	0.8		35°	0.20	CNGA120408S02035A		☆	★					CNGA432S0835A
			.114	.188	.031		35°	.008									
			2.1	4.76	0.8		35°	0.20	CNGA120408S02035B							★	CNGA432S0835B
			.083	.188	.031		35°	.008									
			2.1	4.76	0.8		20°	0.10	CNGA120408T01020B	★						★	CNGA432T0320B
			.083	.188	.031		20°	.004									
			2.1	4.76	0.8		30°	0.10	CNGA120408T01030A		★						CNGA432T0330A
			.083	.188	.031		30°	.004									
			2.8	4.76	1.2		18°	0.10	CNGA120412S01018A		☆	★					CNGA433S0318A
			.110	.188	.047		18°	.004									
			2.4	4.76	1.2		20°	0.10	CNGA120412S01020H				★				CNGA433S0320H
			.095	.188	.047		20°	.004									
			2.8	4.76	1.2		30°	0.10	CNGA120412S01030A		☆	★					CNGA433S0330A
			.110	.188	.047		30°	.004									
			2.4	4.76	1.2		25°	0.15	CNGA120412S01525H				☆	★	★		CNGA433S0525H
			.094	.188	.047		25°	.006									
			2.4	4.76	1.2		30°	0.15	CNGA120412S01530B							★	CNGA433S0630B
			.094	.188	.047		30°	.006									
			2.4	4.76	1.2		30°	0.20	CNGA120412S02030H					★			CNGA433S0830H
			.095	.188	.047		30°	.008									

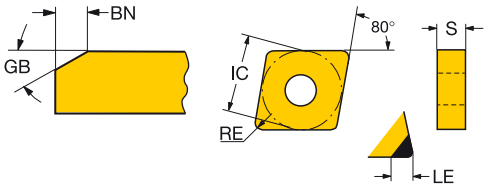
D2 D3 D6

SANDVIK Coromant

T-Max® P insert for turning

C-style insert (Rhombic 80°)



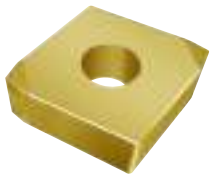


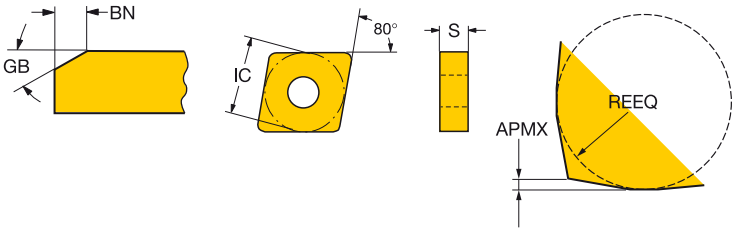
	IC	LE	S	RE	BS	GB	BN	ISO CODE	K	H					ANSI CODE
									7525	7015	7025	7105	7115	7125	7525	
Finishing	12	1/2	2.8	4.76	1.2		35°	0.20	CNGA120412S02035A		☆	★				CNGA433S0835A
			.110	.188	.047		35°	.008								
			2.4	4.76	1.2		35°	0.20	CNGA120412S02035B						★	CNGA433S0835B
			.094	.188	.047		35°	.008								
			2.4	4.76	1.2		20°	0.10	CNGA120412T01020B	★					★	CNGA433T0320B
			.094	.188	.047		20°	.004								
			2.4	4.76	1.2		30°	0.10	CNGA120412T01030A		★					CNGA433T0330A
			.094	.188	.047		30°	.004								
			2.8	4.76	1.6		25°	0.10	CNGA120416S01025H					★		CNGA434S0325H
			.110	.188	.063		25°	.004								
			2.7	4.76	1.6		30°	0.10	CNGA120416S01030A		☆	★				CNGA434S0330A
			.106	.188	.063		30°	.004								
			2.3	4.76	1.6		25°	0.15	CNGA120416S01525H				☆	★		CNGA434S0525H
			.092	.188	.063		25°	.006								
			2.7	4.76	1.6		35°	0.20	CNGA120416S02035A			★				CNGA434S0835A
			.106	.188	.063		35°	.008								
			2.1	4.76	0.8				CNGA120408EA		★					CNGA432AA
			.083	.188	.031											
			2.4	4.76	1.2				CNGA120412EA		★					CNGA433AA
			.094	.188	.047											
			1.8	4.76	0.4	0.8	20°	0.10	CNGA120404T01020BWG	★					★	CNGA431T0320BWG
			.071	.188	.016	.031	20°	.004								
			2.9	4.76	0.8	1.0	30°	0.10	CNGA120408S01030AWG		☆	★				CNGA432S0330AWG
			.114	.188	.031	.039	30°	.004								
			2.5	4.76	0.8	0.6	20°	0.15	CNGA120408S01520HWG				☆	★	★	CNGA432S0520HWG
			.098	.188	.031	.022	20°	.006								
			2.1	4.76	0.8	1.0	20°	0.10	CNGA120408T01020BWG	★					★	CNGA432T0320BWG
			.083	.188	.031	.039	20°	.004								
			2.8	4.76	1.2	1.2	30°	0.10	CNGA120412S01030AWG		☆	★				CNGA433S0330AWG
			.110	.188	.047	.047	30°	.004								
			2.4	4.76	1.2	1.2	20°	0.15	CNGA120412S01520HWG				☆	★		CNGA433S0520HWG
			.095	.188	.047	.047	20°	.006								
			3.0	4.76	0.4	0.5	30°	0.10	CNGA120404S01030AWH			★				CNGA431S0330AWH
			.118	.188	.016	.018	30°	.004								
			2.6	4.76	0.4	0.5	20°	0.15	CNGA120404S01520HWH						★	CNGA431S0520HWH
			.102	.188	.016	.018	20°	.006								
			3.0	4.76	0.4	0.5	30°	0.10	CNGA120404T01030AWH		★					CNGA431T0330AWH
			.118	.188	.016	.018	30°	.004								
			2.9	4.76	0.8	0.6	30°	0.10	CNGA120408S01030AWH		☆	★				CNGA432S0330AWH
			.114	.188	.031	.022	30°	.004								
			2.5	4.76	1.2	0.6	20°	0.15	CNGA120408S01520HWH				☆	★	★	CNGA432S0520HWH
			.098	.188	.047	.022	20°	.006								
			2.1	4.76	0.8	0.6	35°	0.20	CNGA120408S02035AWH		☆	★				CNGA432S0835AWH
			.083	.188	.031	.022	35°	.008								
			2.9	4.76	0.8	0.6	30°	0.10	CNGA120408T01030AWH		★					CNGA432T0330AWH
			.114	.188	.031	.022	30°	.004								
			2.8	4.76	1.2	0.6	30°	0.10	CNGA120412S01030AWH			★				CNGA433S0330AWH
			.110	.188	.047	.024	30°	.004								
			2.4	4.76	1.2	0.6	20°	0.15	CNGA120412S01520HWH				☆	★	★	CNGA433S0520HWH
			.094	.188	.047	.024	20°	.006								
			2.8	4.76	1.2	0.6	30°	0.10	CNGA120412T01030AWH		★					CNGA433T0330AWH
			.110	.188	.047	.024	30°	.004								

D2 D3 D6

T-Max® P insert for turning

C-style insert (Rhombic 80°)





	IC	LE	S	REEQ	APMX	GB	BN	ISO CODE	H 7015	H 7025	H 7105	H 7115	H 7125
Finishing	12	1/2	4.76	2.3	0.3	15°	0.15	CNGX1204L025-18AXA	☆	★			
			.188	*.091*	*.010*	*15°*	*.006*						
		3.3	4.76	2.3	0.3	15°	0.15	CNGX1204L025-18HXA			☆	★	★
		.128	*.188*	*.091*	*.010*	*15°*	*.006*						

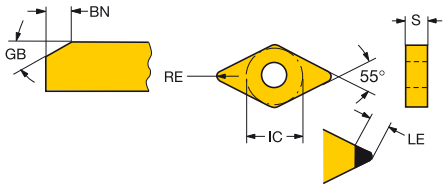
D2 D3 D6

SANDVIK Coromant

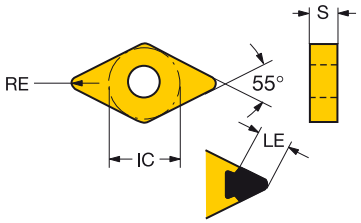
ENG

T-Max® P insert for turning

D-style insert (Rhombic 55°)



			LE	S	RE	GB	BN	ISO CODE	H 7125	H 7135	ANSI CODE
Finishing	11	3/8	2.9	4.76	0.4	30°	0.15	DNGA110404S01530F		★	DNGA331S0530F
			.114	*.188*	*.016*	*30°*	*.006*				
			2.5	4.76	0.8	30°	0.15	DNGA110408S01530F		★	DNGA332S0530F
			.098	*.188*	*.031*	*30°*	*.006*				
	15	1/2	2.5	4.76	0.8	30°	0.15	DNGA150408S01530F		★	DNGA432S0530F
			.098	*.188*	*.031*	*30°*	*.006*				
			2.5	4.76	0.8	35°	0.20	DNGA150408S02035F	★		DNGA432S0835F
			.098	*.188*	*.031*	*35°*	*.008*				
			3.2	4.76	1.2	30°	0.15	DNGA150412S01530F		★	DNGA433S0530F
			.125	*.188*	*.047*	*30°*	*.006*				
			3.2	4.76	1.2	35°	0.20	DNGA150412S02035F	★		DNGA433S0835F
			.125	*.188*	*.047*	*35°*	*.008*				
			3.5	4.76	0.8	30°	0.12	DNGM150408F-HGR	★		DNGM432F-HGR
			.138	*.188*	*.031*	*30°*	*.005*				
			3.5	4.76	1.2	30°	0.12	DNGM150412F-HGR	★		DNGM433F-HGR
			.138	*.188*	*.047*	*30°*	*.005*				

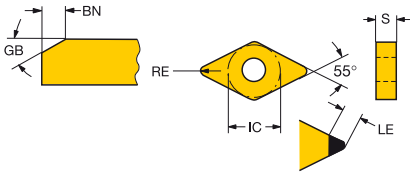


			LE	S	RE	GB	BN	ISO CODE	H CB20	ANSI CODE
Finishing	15	1/2	3.3	4.76	0.4	20°	0.10	DNMA150404S01020E	☆	DNMA431S0320E
			.130	*.188*	*.016*	*20°*	*.004*			
			2.9	4.76	0.8	20°	0.10	DNMA150408S01020E	☆	DNMA432S0320E
			.114	*.188*	*.031*	*20°*	*.004*			
			2.6	4.76	1.2	20°	0.10	DNMA150412S01020E	☆	DNMA433S0320E
			.102	*.188*	*.047*	*20°*	*.004*			

D2 D3 D6

T-Max® P insert for turning

D-style insert (Rhombic 55°)



	IC	LE	S	RE	BS	GB	BN	ISO CODE	K 7525	H 7015	H 7025	H 7105	H 7115	H 7125	H 7525	ANSI CODE
	11	1.8	4.76	0.4		20°	0.10	DNGA110404S01020A			★					DNGA331S0320A
		.071	.188	.016		20°	.004									
		3.2	4.76	0.4		30°	0.10	DNGA110404S01030A		☆	★					DNGA331S0330A
		.126	.188	.016		30°	.004									
		2.9	4.76	0.4		25°	0.15	DNGA110404S01525H				☆	★	★		DNGA331S0525H
		.114	.188	.016		25°	.006									
		1.8	4.76	0.4		20°	0.10	DNGA110404T01020B	★						★	DNGA331T0320B
		.071	.188	.016		20°	.004									
		2.1	4.76	0.8		20°	0.10	DNGA110408S01020A			★					DNGA332S0320A
		.083	.188	.031		20°	.004									
		2.8	4.76	0.8		30°	0.10	DNGA110408S01030A		☆	★					DNGA332S0330A
		.110	.188	.031		30°	.004									
		2.5	4.76	0.8		25°	0.15	DNGA110408S01525H				☆	★	★		DNGA332S0525H
		.098	.188	.031		25°	.006									
		1.8	4.76	0.8		35°	0.20	DNGA110408S02035A			★					DNGA332S0835A
		.071	.188	.031		35°	.008									
		2.1	4.76	0.8		20°	0.10	DNGA110408T01020B	★						★	DNGA332T0320B
		.083	.188	.031		20°	.004									
		2.5	4.76	1.2		30°	0.10	DNGA110412S01030A		★						DNGA333S0330A
		.098	.188	.047		30°	.004									
		2.1	4.76	1.2		25°	0.15	DNGA110412S01525H				☆	★			DNGA333S0525H
		.084	.188	.047		25°	.006									
	15	1.8	4.76	0.4		20°	0.10	DNGA150404S01020A			★					DNGA431S0320A
		.071	.188	.016		20°	.004									
		2.9	4.76	0.4		20°	0.10	DNGA150404S01020H				★				DNGA431S0320H
		.113	.188	.016		20°	.004									
		4.0	4.76	0.4		30°	0.10	DNGA150404S01030A		☆	★					DNGA431S0330A
		.157	.188	.016		30°	.004									
		2.9	4.76	0.4		25°	0.15	DNGA150404S01525H				☆	★	★		DNGA431S0525H
		.114	.188	.016		25°	.006									
		1.8	4.76	0.4		35°	0.20	DNGA150404S02035A			★					DNGA431S0835A
		.071	.188	.016		35°	.008									
		2.1	4.76	0.8		20°	0.10	DNGA150408S01020A			★					DNGA432S0320A
		.083	.188	.031		20°	.004									
		2.5	4.76	0.8		20°	0.10	DNGA150408S01020H				★				DNGA432S0320H
		.098	.188	.031		20°	.004									
		3.6	4.76	0.8		30°	0.10	DNGA150408S01030A		☆	★					DNGA432S0330A
		.142	.188	.031		30°	.004									
		2.5	4.76	0.8		25°	0.15	DNGA150408S01525H				☆	★	★		DNGA432S0525H
		.098	.188	.031		25°	.006									
		2.2	4.76	0.8		30°	0.15	DNGA150408S01530B							★	DNGA432S0630B
		.087	.188	.031		30°	.006									
		2.5	4.76	0.8		30°	0.20	DNGA150408S02030H					★			DNGA432S0830H
		.098	.188	.031		30°	.008									
		2.1	4.76	0.8		35°	0.20	DNGA150408S02035A		☆	★					DNGA432S0835A
		.083	.188	.031		35°	.008									
		2.1	4.76	1.2		20°	0.10	DNGA150412S01020H				★				DNGA433S0320H
		.084	.188	.047		20°	.004									
		3.3	4.76	1.2		30°	0.10	DNGA150412S01030A		☆	★					DNGA433S0330A
		.130	.188	.047		30°	.004									
		3.2	4.76	1.2		25°	0.15	DNGA150412S01525H				☆	★	★		DNGA433S0525H
		.125	.188	.047		25°	.006									
		3.3	4.76	1.2		30°	0.15	DNGA150412S01530B							★	DNGA433S0630B
		.130	.188	.047		30°	.006									
		2.1	4.76	1.2		30°	0.20	DNGA150412S02030H					★			DNGA433S0830H
		.084	.188	.047		30°	.008									
		2.4	4.76	1.2		35°	0.20	DNGA150412S02035A		☆	★					DNGA433S0835A
		.094	.188	.047		35°	.008									
		2.9	4.76	1.6		30°	0.10	DNGA150416S01030A		☆	★					DNGA434S0330A
		.114	.188	.063		30°	.004									

Finishing

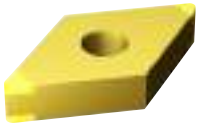
D2 D3 D6

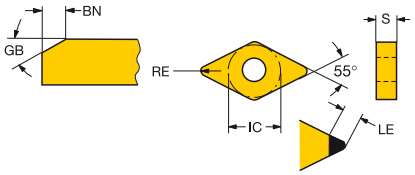
SANDVIK Coromant

ENG

T-Max® P insert for turning

D-style insert (Rhombic 55°)



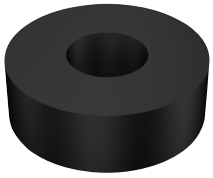


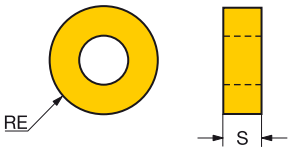
		IC	LE	S	RE	BS	GB	BN	ISO CODE	K	H					ANSI CODE
										7525	7015	7025	7105	7115	7125	7525	
Finishing	15	1/2	2.5	4.76	1.6		25°	0.15	DNGA150416S01525H				☆	★	★		DNGA434S0525H
			.098	*.188*	*.063*		*25°*	*.006*									
			2.2	4.76	0.8				DNGA150408EA		★						DNGA432AA
			.087	*.188*	*.031*												
			2.5	4.76	1.2				DNGA150412EA		★						DNGA433AA
			.098	*.188*	*.047*												
			3.6	4.76	0.8	0.6	30°	0.10	DNGA150408S01030AWH		☆	★					DNGA432S0330AWH
			.142	*.188*	*.031*	*.022*	*30°*	*.004*									
			2.5	4.76	0.8	0.6	20°	0.15	DNGA150408S01520HWH				☆	★	★		DNGA432S0520HWH
			.098	*.188*	*.031*	*.022*	*20°*	*.006*									
			2.1	4.76	0.8	0.6	35°	0.20	DNGA150408S02035AWH			★					DNGA432S0835AWH
			.083	*.188*	*.031*	*.022*	*35°*	*.008*									
			3.3	4.76	1.2	0.6	30°	0.10	DNGA150412S01030AWH		☆	★					DNGA433S0330AWH
			.130	*.188*	*.047*	*.024*	*30°*	*.004*									
			2.1	4.76	1.2	0.6	20°	0.15	DNGA150412S01520HWH				☆	★			DNGA433S0520HWH
			.084	*.188*	*.047*	*.024*	*20°*	*.006*									

D2 D3 D6

T-Max® P insert for turning

R-style insert (Round)





			S	RE	GB	BN	ISO CODE	H CB20	ANSI CODE
Medium	09	3/8	3.18	4.76	20°	0.10	RNGA090300S01020D	☆	RNGA32S0320D
			.125	*.188*	*20°*	*.004*			

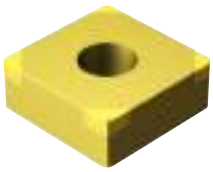
D2 D3 D6

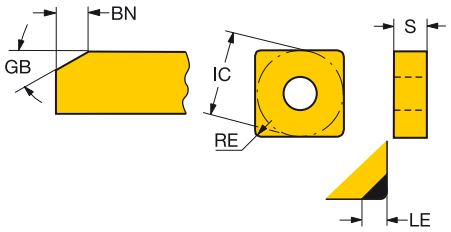
SANDVIK Coromant

ENG

T-Max® P insert for turning

S-style insert (Square)



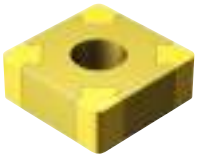


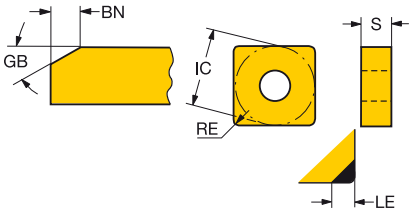
									H					
		IC	LE	S	RE	GB	BN	ISO CODE	7105	7115	7125	7135	CB20	ANSI CODE
Finishing	12	1/2	2.5	4.76	0.8	25°	0.15	SNGA120408S01525F	☆	★				SNGA432S0525F
			.098	*.188*	*.031*	*25°*	*.006*							
			2.5	4.76	0.8	30°	0.15	SNGA120408S01530F				★		SNGA432S0530F
			.098	*.188*	*.031*	*30°*	*.006*							
			2.5	4.76	1.2	25°	0.15	SNGA120412S01525F	☆	★				SNGA433S0525F
			.098	*.188*	*.047*	*25°*	*.006*							
			2.8	4.76	1.2	30°	0.15	SNGA120412S01530F				★		SNGA433S0530F
			.110	*.188*	*.047*	*30°*	*.006*							
			2.8	4.76	1.6	25°	0.10	SNGA120416S01025F			★	☆		SNGA434S0325F
			.110	*.188*	*.063*	*25°*	*.004*							
			2.9	4.76	2.0	25°	0.10	SNGA120420S01025F			★			SNGA435S0325F
			.114	*.188*	*.079*	*25°*	*.004*							
			2.8	4.76	2.4	25°	0.10	SNGA120424S01025F			★	☆		SNGA436S0325F
			.110	*.188*	*.094*	*25°*	*.004*							
			3.4	4.76	0.8	20°	0.10	SNMA120408S01020E					☆	SNMA432S0320E
			.134	*.188*	*.031*	*20°*	*.004*							

D2 D3 D6

T-Max® P insert for turning

S-style insert (Square)





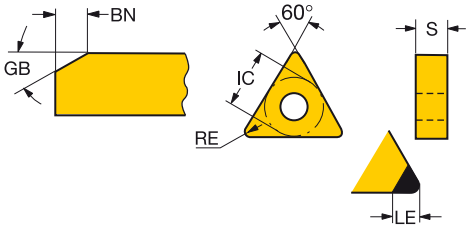
	IC	LE	S	RE	GB	BN	ISO CODE	K 7525	H 7015	H 7025	H 7525	ANSI CODE
Finishing	09	3/8	2.2	3.18	0.8	30°	0.10	SNGA090308S01030A			★		SNGA322S0330A
			.087	*.125*	*.031*	*30°*	*.004*						
	12	1/2	2.8	4.76	0.8	30°	0.10	SNGA120408S01030A		☆	★		SNGA432S0330A
			.110	*.188*	*.031*	*30°*	*.004*						
			2.8	4.76	0.8	20°	0.10	SNGA120408T01020B	★			★	SNGA432T0320B
			.110	*.188*	*.031*	*20°*	*.004*						
			2.8	4.76	1.2	30°	0.10	SNGA120412S01030A		☆	★		SNGA433S0330A
			.110	*.188*	*.047*	*30°*	*.004*						
			2.8	4.76	1.2	35°	0.20	SNGA120412S02035A			★		SNGA433S0835A
			.110	*.188*	*.047*	*35°*	*.008*						
			2.8	4.76	1.2	35°	0.20	SNGA120412S02035B				★	SNGA433S0835B
			.110	*.188*	*.047*	*35°*	*.008*						
			2.8	4.76	1.2	20°	0.10	SNGA120412T01020B	★			★	SNGA433T0320B
			.110	*.188*	*.047*	*20°*	*.004*						

D2 D3 D6

ENG

T-Max® P insert for turning

T-style insert (Triangular)

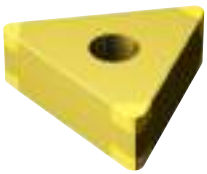


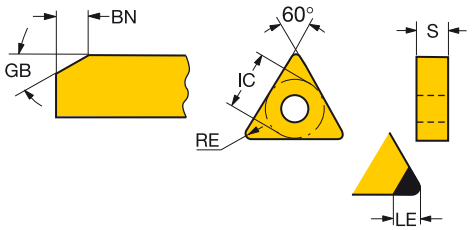
		IC	LE	S	RE	GB	BN	ISO CODE	H 7125	H 7135	H CB20	ANSI CODE
Finishing	16	3/8	2.5	4.76	0.8	30°	0.15	TNGA160408S01530F		★		TNGA332S0530F
			.098	*.188*	*.031*	*30°*	*.006*					
			3.1	4.76	1.2	25°	0.10	TNGA160412S01025F	★			TNGA333S0325F
			.122	*.188*	*.047*	*25°*	*.004*					
			3.1	4.76	1.2	30°	0.15	TNGA160412S01530F		★		TNGA333S0530F
			.122	*.188*	*.047*	*30°*	*.006*					
			2.8	4.76	1.6	25°	0.10	TNGA160416S01025F	★	☆		TNGA334S0325F
			.110	*.188*	*.063*	*25°*	*.004*					
			3.9	4.76	2.0	25°	0.10	TNGA160420S01025F	★	☆		TNGA335S0325F
			.154	*.188*	*.079*	*25°*	*.004*					
			3.6	4.76	2.4	25°	0.10	TNGA160424S01025F	★	☆		TNGA336S0325F
			.142	*.188*	*.094*	*25°*	*.004*					
			3.6	4.76	0.4	20°	0.10	TNMA160404S01020E			☆	TNMA331S0320E
			.142	*.188*	*.016*	*20°*	*.004*					
			3.3	4.76	0.8	20°	0.10	TNMA160408S01020E			☆	TNMA332S0320E
			.130	*.188*	*.031*	*20°*	*.004*					
	22	1/2	3.2	4.76	0.8	20°	0.10	TNMA220408S01020E			☆	TNMA432S0320E
			.126	*.188*	*.031*	*20°*	*.004*					
			2.9	4.76	1.2	20°	0.10	TNMA220412S01020E			☆	TNMA433S0320E
			.114	*.188*	*.047*	*20°*	*.004*					

D2 D3 D6

T-Max® P insert for turning

T-style insert (Triangular)





	IC	IC	LE	S	RE	GB	BN	ISO CODE	K 7525	H 7015	H 7025	H 7105	H 7115	H 7525	ANSI CODE
Finishing	11	1/4	1.8	3.18	0.4	30°	0.10	TNGA110304S01030A		☆	★				TNGA221S0330A
			.071	*.125*	*.016*	*30°*	*.004*								
			1.8	3.18	0.4	20°	0.10	TNGA110304T01020B	★					★	TNGA221T0320B
			.071	*.125*	*.016*	*20°*	*.004*								
			1.5	3.18	0.8	30°	0.10	TNGA110308S01030A		☆	★				TNGA222S0330A
			.059	*.125*	*.031*	*30°*	*.004*								
			2.1	3.18	0.8	20°	0.10	TNGA110308T01020B	★					★	TNGA222T0320B
			.083	*.125*	*.031*	*20°*	*.004*								
	16	3/8	3.0	4.76	0.4	30°	0.10	TNGA160404S01030A		☆	★				TNGA331S0330A
			.118	*.188*	*.016*	*30°*	*.004*								
			2.8	4.76	0.4	25°	0.15	TNGA160404S01525H				☆	★		TNGA331S0525H
			.110	*.188*	*.016*	*25°*	*.006*								
			1.8	4.76	0.4	20°	0.10	TNGA160404T01020B	★					★	TNGA331T0320B
			.071	*.188*	*.016*	*20°*	*.004*								
			2.7	4.76	0.8	30°	0.10	TNGA160408S01030A		☆	★				TNGA332S0330A
			.106	*.188*	*.031*	*30°*	*.004*								
			2.5	4.76	0.8	25°	0.15	TNGA160408S01525H				☆	★		TNGA332S0525H
			.098	*.188*	*.031*	*25°*	*.006*								
			2.8	4.76	0.8	30°	0.15	TNGA160408S01530B						★	TNGA332S0630B
			.110	*.188*	*.031*	*30°*	*.006*								
			2.0	4.76	0.8	35°	0.20	TNGA160408S02035A			★				TNGA332S0835A
			.079	*.188*	*.031*	*35°*	*.008*								
			2.8	4.76	0.8	35°	0.20	TNGA160408S02035B						★	TNGA332S0835B
			.110	*.188*	*.031*	*35°*	*.008*								
			2.8	4.76	0.8	20°	0.10	TNGA160408T01020B	★					★	TNGA332T0320B
			.110	*.188*	*.031*	*20°*	*.004*								
			2.4	4.76	1.2	30°	0.10	TNGA160412S01030A		☆	★				TNGA333S0330A
			.094	*.188*	*.047*	*30°*	*.004*								
			2.2	4.76	1.2	25°	0.15	TNGA160412S01525H				☆	★		TNGA333S0525H
			.087	*.188*	*.047*	*25°*	*.006*								
			2.4	4.76	1.2	35°	0.20	TNGA160412S02035A			★				TNGA333S0835A
			.094	*.188*	*.047*	*35°*	*.008*								
			2.4	4.76	1.2	20°	0.10	TNGA160412T01020B	★					★	TNGA333T0320B
			.094	*.188*	*.047*	*20°*	*.004*								

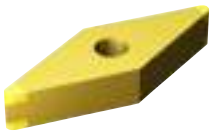
D2 D3 D6

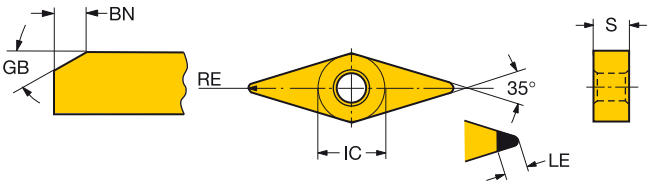
SANDVIK Coromant

ENG

T-Max® P insert for turning

V-style insert (Rhombic 35°)



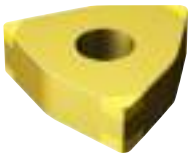


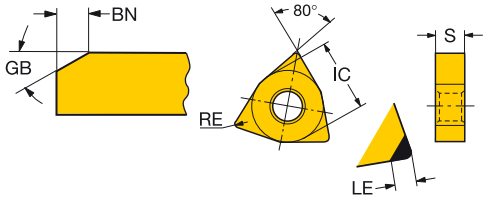
			LE	S	RE	GB	BN	ISO CODE	H 7015	H 7025	H 7105	H 7115	H 7125	ANSI CODE
Finishing	16	3/8	2.1	4.76	0.4	20°	0.10	VNGA160404S01020A		★				VNGA331S0320A
			.083	*.188*	*.016*	*20°*	*.004*							
			4.4	4.76	0.4	30°	0.10	VNGA160404S01030A	☆	★				VNGA331S0330A
			.173	*.188*	*.016*	*30°*	*.004*							
			2.5	4.76	0.4	25°	0.15	VNGA160404S01525H			☆	★	★	VNGA331S0525H
			.098	*.188*	*.016*	*25°*	*.006*							
			2.4	4.76	0.8	20°	0.10	VNGA160408S01020A		★				VNGA332S0320A
			.094	*.188*	*.031*	*20°*	*.004*							
			3.5	4.76	0.8	30°	0.10	VNGA160408S01030A	☆	★				VNGA332S0330A
			.138	*.188*	*.031*	*30°*	*.004*							
			2.5	4.76	0.8	25°	0.15	VNGA160408S01525H			☆	★	★	VNGA332S0525H
			.098	*.188*	*.031*	*25°*	*.006*							
			2.4	4.76	0.8	35°	0.20	VNGA160408S02035A	☆	★				VNGA332S0835A
			.094	*.188*	*.031*	*35°*	*.008*							

D2 D3 D6

T-Max® P insert for turning

W-style insert (Trigon 80°)





										K	H							
			LE	S	RE	BS	GB	BN	ISO CODE	7525	7015	7025	7105	7115	7125	7135	7525	ANSI CODE
	06	3/8	2.4	4.76	0.4		30°	0.10	WNGA060404S01030A		☆	★						WNGA331S0330A
			.094	.188	.016		30°	.004										
			2.6	4.76	0.4		25°	0.15	WNGA060404S01525H				☆	★				WNGA331S0525H
			.102	.188	.016		25°	.006										
			1.8	4.76	0.4		20°	0.10	WNGA060404T01020B	★							★	WNGA331T0320B
			.071	.188	.016		20°	.004										
			2.4	4.76	0.8		30°	0.10	WNGA060408S01030A		☆	★						WNGA332S0330A
			.094	.188	.031		30°	.004										
			2.5	4.76	0.8		25°	0.15	WNGA060408S01525H				☆	★				WNGA332S0525H
			.098	.188	.031		25°	.006										
			2.4	4.76	0.8		20°	0.10	WNGA060408T01020B	★							★	WNGA332T0320B
			.094	.188	.031		20°	.004										
			1.8	4.76	0.4	0.8	20°	0.10	WNGA060404T01020BWG	★							★	WNGA331T0320BWG
			.071	.188	.016	.031	20°	.004										
			2.4	4.76	0.8	1.0	20°	0.10	WNGA060408T01020BWG	★							★	WNGA332T0320BWG
			.094	.188	.031	.039	20°	.004										
			2.4	4.76	0.4	0.5	30°	0.10	WNGA060404S01030AWH			★						WNGA331S0330AWH
			.094	.188	.016	.018	30°	.004										
			2.6	4.76	0.4	0.5	20°	0.15	WNGA060404S01520HWH				☆	★				WNGA331S0520HWH
			.102	.188	.016	.018	20°	.006										
			2.4	4.76	0.4	0.5	30°	0.10	WNGA060404T01030AWH		★							WNGA331T0330AWH
			.094	.188	.016	.018	30°	.004										
			2.4	4.76	0.8	0.6	30°	0.10	WNGA060408S01030AWH			★						WNGA332S0330AWH
			.094	.188	.031	.022	30°	.004										
			2.5	4.76	0.8	0.6	20°	0.15	WNGA060408S01520HWH				☆	★				WNGA332S0520HWH
			.098	.188	.031	.022	20°	.006										
			2.4	4.76	0.8	0.6	30°	0.10	WNGA060408T01030AWH		★							WNGA332T0330AWH
			.094	.188	.031	.022	30°	.004										
Finishing	08	1/2	3.0	4.76	0.4		30°	0.10	WNGA080404S01030A		☆	★						WNGA431S0330A
			.118	.188	.016		30°	.004										
			2.6	4.76	0.4		25°	0.15	WNGA080404S01525H				☆	★				WNGA431S0525H
			.102	.188	.016		25°	.006										
			3.1	4.76	0.4		20°	0.10	WNGA080404T01020B	★							★	WNGA431T0320B
			.122	.188	.016		20°	.004										
			2.9	4.76	0.8		30°	0.10	WNGA080408S01030A		☆	★						WNGA432S0330A
			.114	.188	.031		30°	.004										
			2.5	4.76	0.8		25°	0.15	WNGA080408S01525H				☆	★	★			WNGA432S0525H
			.098	.188	.031		25°	.006										
			2.5	4.76	0.8		30°	0.15	WNGA080408S01530F							★		WNGA332S0530F
			.098	.188	.031		30°	.006										
			2.0	4.76	0.8		35°	0.20	WNGA080408S02035A		☆	★						WNGA432S0835A
			.079	.188	.031		35°	.008										
			3.0	4.76	0.8		20°	0.10	WNGA080408T01020B	★							★	WNGA432T0320B
			.118	.188	.031		20°	.004										
			2.8	4.76	1.2		30°	0.10	WNGA080412S01030A		☆	★						WNGA433S0330A
			.110	.188	.047		30°	.004										
			2.4	4.76	1.2		25°	0.15	WNGA080412S01525H				☆	★	★			WNGA433S0525H
			.095	.188	.047		25°	.006										
			2.9	4.76	1.2		30°	0.15	WNGA080412S01530F							★		WNGA333S0530F
			.113	.188	.047		30°	.006										
			2.9	4.76	1.2		20°	0.10	WNGA080412T01020B	★							★	WNGA433T0320B
			.114	.188	.047		20°	.004										
			3.1	4.76	0.4	0.8	20°	0.10	WNGA080404T01020BWG	★							★	WNGA431T0320BWG
			.122	.188	.016	.031	20°	.004										
			3.0	4.76	0.8	1.0	20°	0.10	WNGA080408T01020BWG	★							★	WNGA432T0320BWG
			.118	.188	.031	.039	20°	.004										
			3.0	4.76	0.4	0.5	30°	0.10	WNGA080404S01030AWH			★						WNGA431S0330AWH
			.118	.188	.016	.018	30°	.004										
			2.6	4.76	0.4	0.5	20°	0.15	WNGA080404S01520HWH				☆	★				WNGA431S0520HWH
			.102	.188	.016	.018	20°	.006										

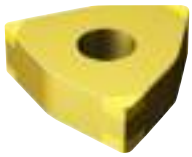
D2 D3 D6

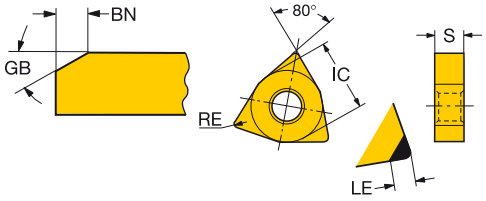
SANDVIK Coromant

ENG

T-Max® P insert for turning

W-style insert (Trigon 80°)





			LE	S	RE	BS	GB	BN	ISO CODE	K	H						ANSI CODE
										7525	7015	7025	7105	7115	7125	7135	7525	
Finishing	08	1/2	3.0	4.76	0.4	0.5	30°	0.10	WNGA080404T01030AWH		★							WNGA431T0330AWH
			.118	*.188*	*.016*	*.018*	*30°*	*.004*										
			2.9	4.76	0.8	0.6	30°	0.10	WNGA080408S01030AWH			★						WNGA432S0330AWH
			.114	*.188*	*.031*	*.022*	*30°*	*.004*										
			2.5	4.76	0.8	0.6	20°	0.15	WNGA080408S01520HWH				☆	★				WNGA432S0520HWH
			.098	*.188*	*.031*	*.022*	*20°*	*.006*										
			2.9	4.76	0.8	0.6	30°	0.10	WNGA080408T01030AWH		★							WNGA432T0330AWH
			.114	*.188*	*.031*	*.022*	*30°*	*.004*										
			2.8	4.76	1.2	0.6	30°	0.10	WNGA080412S01030AWH			★						WNGA433S0330AWH
			.110	*.188*	*.047*	*.024*	*30°*	*.004*										
			2.4	4.76	1.2	0.6	20°	0.15	WNGA080412S01520HWH				☆	★				WNGA433S0520HWH
			.095	*.188*	*.047*	*.024*	*20°*	*.006*										
			2.8	4.76	1.2	0.6	30°	0.10	WNGA080412T01030AWH		★							WNGA433T0330AWH
			.110	*.188*	*.047*	*.024*	*30°*	*.004*										

D2 D3 D6

T-Max®

For productive turning of difficult to machine materials

Application

- Longitudinal turning
- Face turning
- Profiling
- Roughing to finishing

Benefits and features

- Reliable and secure machining, even in roughing applications
- Double sided inserts with strong edges
- Secure and rigid-clamping and top clamp

Clamping

- Rigid clamp and top clamp

Tools

- Coromant Capto® cutting units
- Shank tools

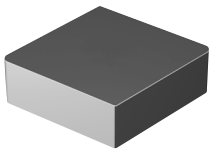
Inserts

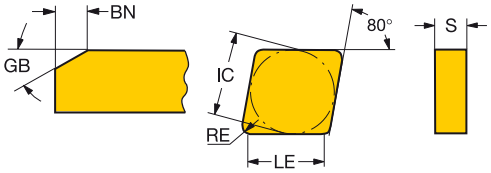
- T-Max inserts, without holes.

ENG

T-Max® insert for turning

C-style insert (Rhombic 80°)



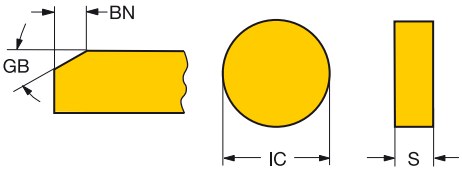


			LE	S	RE	GB	BN	ISO CODE	K 7925	ANSI CODE
Finishing	12	1/2	11.7	4.76	1.2	20°	0.25	CNGN120412S02520M	★	CNG433S0820M
			.460	*.188*	*.047*	*20°*	*.010*			
			11.3	4.76	1.6	20°	0.25	CNGN120416S02520M	★	CNG434S0820M
			.445	*.188*	*.063*	*20°*	*.010*			

D2 D3 D6

T-Max® insert for turning

R-style insert (Round)



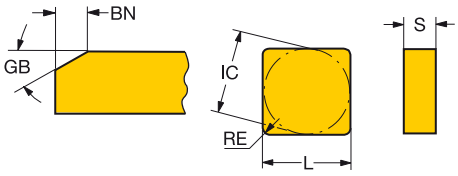
	IC		S	RE	GB	BN	ISO CODE	K 7925	K CB50	H CB50	ANSI CODE
Finishing	06	1/4	3.18	3.0	20°	0.25	RNGN060300S02520M	★			RNG22S1020M
			.125	*.118*	*20°*	*.010*					
	09	3/8	3.18	4.8	20°	0.25	RNGN090300S02520M	★			RNG32S1020M
			.125	*.188*	*20°*	*.010*					
	12	1/2	3.18	6.4	20°	0.25	RNGN120300S02520M	★			RNG42S1020M
			.125	*.250*	*20°*	*.010*					
			4.76	6.4	20°	0.25	RNGN120400S02520M	★			RNG43S1020M
			.188	*.250*	*20°*	*.010*					
			4.76	6.4			RNGN120400FD		☆	☆	RNG43FD
			.188	*.250*							

D2 D3 D6

ENG

T-Max® insert for turning

S-style insert (Square)



		IC	LE	S	RE	GB	BN	ISO CODE	K 7925	K CB50	H CB50	ANSI CODE
Finishing	09	3/8	8.3	3.18	1.2	20°	0.25	SNGN090312S02520M	★			SNG323S1020M
			.328	*.125*	*.047*	*20°*	*.010*					
	12	1/2	11.5	4.76	1.2	20°	0.25	SNGN120412S02520M	★			SNG433S1020M
			.453	*.188*	*.047*	*20°*	*.010*					
			11.1	4.76	1.6	20°	0.25	SNGN120416S02520M	★			SNG434S1020M
			.437	*.188*	*.063*	*20°*	*.010*					
			11.9	4.76	0.8			SNGN120408FD		☆	☆	SNG432FD
			.469	*.188*	*.031*							
			11.5	4.76	1.2			SNGN120412FD		☆	☆	SNG433FD
			.453	*.188*	*.047*							
			11.1	4.76	1.6			SNGN120416FD		☆	☆	SNG434FD
			.437	*.188*	*.063*							

D2 D3 D6

CoroTurn® XS

Internal turning, face grooving and threading of small components

Application

- Internal turning
- Copying
- Backboring
- Profiling
- Grooving
- Face grooving
- Pre-parting
- Threading

Benefits and features

- Optimized for machining of small high quality features
- High precision and repeatability
- Reliable and easy-to-use clamping system
- Precision ground tools for high repeatability
- Longer tool life by minimized micro vibrations with cylindrical carbide shank adaptors
- Clamping nut ensures easy change of cutting tool with cylindrical carbide shank adaptors

www.sandvik.coromant.com/coroturnxs

Internal coolant

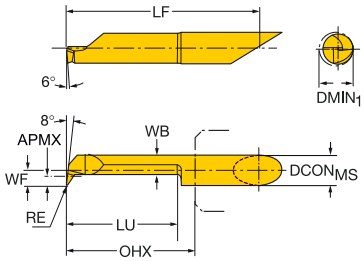
- The adaptors are designed with internal precision coolant supply.
- Selectable coolant direction for better chip evacuation and safe machining

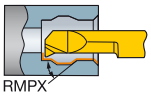
Locking precision

Precise location into the boring bar due to a locating pin.

ENG

CoroTurn® XS solid carbide tool for turning





CZC$_{MS}$	DMIN$_1$	LU	RE	APMX	RMPX	OHX	Ordering code	H 7015	DCON$_{MS}$	WB	LF	WF
									Dimensions, mm, inch			
4	1.7	6.0	0.100	0.20	17°	13.0	CXS-04T098-10-1706R	★	4	1.1	27.3	0.7
	.067	.236	.004	.008		.512			.157	.041	1.073	.028
4	2.2	9.0	0.100	0.20	17°	13.0	CXS-04T098-10-2209R	★	4	1.6	27.3	1.0
	.087	.354	.004	.008		.512			.157	.061	1.073	.037
4	2.7	10.0	0.150	0.20	17°	13.0	CXS-04T098-15-2710R	★	4	2.1	27.3	1.2
	.106	.394	.006	.008		.512			.157	.081	1.073	.047
4	3.2	15.0	0.150	0.20	17°	18.0	CXS-04T098-15-3215R	★	4	2.6	32.3	1.5
	.126	.591	.006	.008		.709			.157	.100	1.270	.057
4	3.7	15.0	0.150	0.20	17°	18.0	CXS-04T098-15-3715R	★	4	3.1	32.3	1.7
	.146	.591	.006	.008		.709			.157	.120	1.270	.067
4	4.2	10.0	0.150	0.30	17°	13.0	CXS-04T098-15-4210R	★	4	3.5	27.3	2.0
	.165	.394	.006	.012		.512			.157	.136	1.073	.077
4	4.2	15.0	0.150	0.30	17°	18.0	CXS-04T098-15-4215R	★	4	3.5	32.3	2.0
	.165	.591	.006	.012		.709			.157	.136	1.270	.077
4	4.2	20.0	0.150	0.30	17°	23.0	CXS-04T098-15-4220R	★	4	3.5	37.3	2.0
	.165	.787	.006	.012		.906			.157	.136	1.467	.077
4	4.2	25.0	0.150	0.30	17°	28.0	CXS-04T098-15-4225R	★	4	3.5	42.3	2.0
	.165	.984	.006	.012		1.102			.157	.136	1.663	.077
5	5.2	10.0	0.200	0.50	17°	13.0	CXS-05T098-20-5210R	★	5	4.3	32.3	2.5
	.205	.394	.008	.020		.512			.197	.167	1.270	.096
5	5.2	20.0	0.200	0.50	17°	23.0	CXS-05T098-20-5220R	★	5	4.3	42.3	2.5
	.205	.787	.008	.020		.906			.197	.167	1.663	.096
5	5.2	25.0	0.200	0.50	17°	28.0	CXS-05T098-20-5225R	★	5	4.3	47.3	2.5
	.205	.984	.008	.020		1.102			.197	.167	1.860	.096
5	5.2	30.0	0.200	0.50	17°	33.0	CXS-05T098-20-5230R	★	5	4.3	52.3	2.5
	.205	1.181	.008	.020		1.299			.197	.167	2.057	.096
6	6.2	15.0	0.200	0.50	17°	18.0	CXS-06T098-20-6215R	★	6	5.3	37.3	3.0
	.244	.591	.008	.020		.709			.236	.207	1.467	.116
6	6.2	20.0	0.200	0.50	17°	23.0	CXS-06T098-20-6220R	★	6	5.3	42.3	3.0
	.244	.787	.008	.020		.906			.236	.207	1.663	.116
6	6.2	25.0	0.200	0.50	17°	28.0	CXS-06T098-20-6225R	★	6	5.3	47.3	3.0
	.244	.984	.008	.020		1.102			.236	.207	1.860	.116
6	6.2	30.0	0.200	0.50	17°	33.0	CXS-06T098-20-6230R	★	6	5.3	52.3	3.0
	.244	1.181	.008	.020		1.299			.236	.207	2.057	.116
6	6.2	40.0	0.200	0.50	17°	43.0	CXS-06T098-20-6240R	★	6	5.3	62.3	3.0
	.244	1.575	.008	.020		1.693			.236	.207	2.451	.116
7	7.2	25.0	0.200	0.50	17°	28.0	CXS-07T098-20-7225R	★	7	6.3	47.3	3.5
	.283	.984	.008	.020		1.102			.276	.246	1.860	.136
7	7.2	30.0	0.200	0.50	17°	33.0	CXS-07T098-20-7230R	★	7	6.3	52.3	3.5
	.283	1.181	.008	.020		1.299			.276	.246	2.057	.136
7	7.2	40.0	0.200	0.50	17°	43.0	CXS-07T098-20-7240R	★	7	6.3	62.3	3.5
	.283	1.575	.008	.020		1.693			.276	.246	2.451	.136
7	7.2	50.0	0.200	0.50	17°	53.0	CXS-07T098-20-7250R	★	7	6.3	72.3	3.5
	.283	1.969	.008	.020		2.087			.276	.246	2.844	.136

CZC$_{MS}$ to correspond with CZC$_{WS}$ on adaptor.

R = Right hand, L = Left hand

D2 D8

Parting and grooving

CoroCut® 1-2

Parting, profiling and grooving operations

Application

- Parting off
- External grooving
- Internal grooving
- Face grooving
- Profiling

Benefits and features

- Strong tool material alloy for high fatigue resistance
- Plug and play adaptors make it easy to connect the coolant
- Easy to change inserts: no torque wrench needed – always correct clamping with quick-release key

Note: In parting off and grooving CoroCut® 1-2 is the best choice to depths where the 2-edged inserts can be used.

www.sandvik.coromant.com/corocut1-2

Inserts

- Geometries and grades for all applications and feeds
- Insert grades in advanced cutting materials CBN
- Xcel inserts for excellent surface finish

Tools

- Coromant Capto® cutting units
- Shank tools
- QS™ shanks
- Parting blades
- Boring bars
- CoroTurn® SL heads

Rigid spring clamping

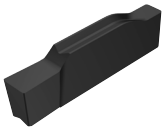
The system combines rigid spring clamping mechanism with railed insert seat and long inserts for exceptional stability.

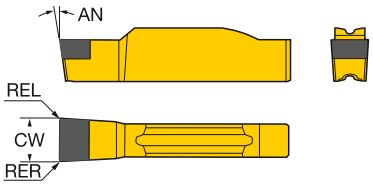
Over- and under coolant

Tools with internal over- and under coolant available for best chip control and tool life.

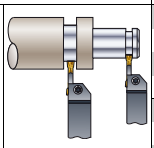
B3 D3

CoroCut® 1-2 insert for grooving





CoroCut® 2-edge

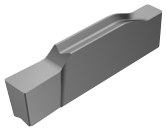
		SSC	CW	REL	RER	Ordering code	H CB20	AN	CWTOLL	CWTOLU	RETOLL	RETOLU
			Dimensions, mm, inch									
Finishing		G	3.00	0.20	0.20	N123G1-0300-0002-GE	☆	7°	-0.020	0.020	-0.050	0.050
			.118	*.008*	*.008*				*-.0008*	*.0008*	*-.0020*	*.0020*
			3.18	0.20	0.20	N123G1-0318-0002-GE	☆	7°	-0.020	0.020	-0.050	0.050
			.125	*.008*	*.008*				*-.0008*	*.0008*	*-.0020*	*.0020*
		H	4.00	0.20	0.20	N123H1-0400-0002-GE	☆	7°	-0.020	0.020	-0.050	0.050
			.157	*.008*	*.008*				*-.0008*	*.0008*	*-.0020*	*.0020*
			5.00	0.20	0.20	N123H1-0500-0002-GE	☆	7°	-0.020	0.020	-0.050	0.050
			.197	*.008*	*.008*				*-.0008*	*.0008*	*-.0020*	*.0020*
		J	6.00	0.20	0.20	N123J1-0600-0002-GE	☆	7°	-0.020	0.020	-0.050	0.050
			.236	*.008*	*.008*				*-.0008*	*.0008*	*-.0020*	*.0020*
		K	6.35	0.20	0.20	N123K1-0635-0002-GE	☆	7°	-0.020	0.020	-0.050	0.050
			.250	*.008*	*.008*				*-.0008*	*.0008*	*-.0020*	*.0020*

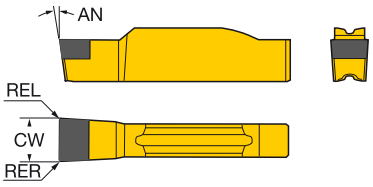
SSC = To correspond with SSC on holder.

N = Neutral

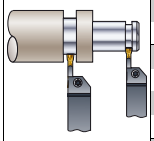
D2 D3 D11

CoroCut® 1-2 insert for grooving





CoroCut® 1-edge

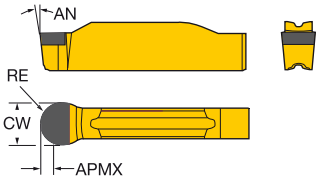
		SSC	CW	RE	REL	RER	Ordering code	S 7015	H 7015	GB	BN	AN	CWTOLL	CWTOLU	RETOLL	RETOLU
										Dimensions, mm, inch						
Finishing		G	3.00		0.40	0.40	N123G1-030004S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.050	0.050
			.118		*.016*	*.016*				*25°*	*.004*		*-.0008*	*.0008*	*-.0020*	*.0020*
		H	4.00		0.40	0.40	N123H1-040004S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.050	0.050
			.157		*.016*	*.016*				*25°*	*.004*		*-.0008*	*.0008*	*-.0020*	*.0020*
			5.00		0.40	0.40	N123H1-050004S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.050	0.050
			.197		*.016*	*.016*				*25°*	*.004*		*-.0008*	*.0008*	*-.0020*	*.0020*
		J	6.00		0.40	0.40	N123J1-060004S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.050	0.050
			.236		*.016*	*.016*				*25°*	*.004*		*-.0008*	*.0008*	*-.0020*	*.0020*
		L	8.00	0.80	0.80	0.80	N123L1-080008S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.050	0.050
			.315	*.031*	*.031*	*.031*				*25°*	*.004*		*-.0008*	*.0008*	*-.0020*	*.0020*

SSC = To correspond with SSC on holder. N = Neutral

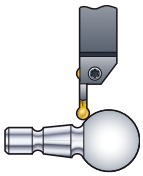
D2 D3 D11

ENG

CoroCut® 1-2 insert for profiling



CoroCut® 1-edge

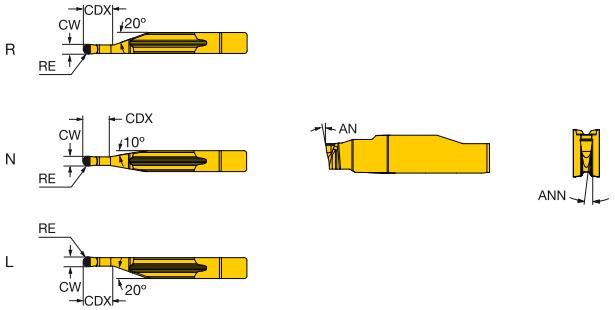
		SSC	CW	RE	APMX	Ordering code	S 7015	H 7015	Dimensions, mm, inch GB	BN	AN	CWTOLL	CWTOLU	RETOLL	RETOLU
Finishing		F	3.00	1.50	2.5	N123F1-0300S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.020	0.020
			.118	*.059*	*.098*				*25°*	*.004*		*-.0008*	*.0008*	*-.0008*	*.0008*
		H	4.00	2.00	3.4	N123H1-0400S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.020	0.020
			.157	*.079*	*.134*				*25°*	*.004*		*-.0008*	*.0008*	*-.0008*	*.0008*
			5.00	2.50	4.5	N123H1-0500S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.020	0.020
			.197	*.098*	*.177*				*25°*	*.004*		*-.0008*	*.0008*	*-.0008*	*.0008*
		J	6.00	3.00	5.3	N123J1-0600S01025	★	★	25°	0.1	7°	-0.020	0.020	-0.020	0.020
			.236	*.118*	*.209*				*25°*	*.004*		*-.0008*	*.0008*	*-.0008*	*.0008*

SSC = To correspond with SSC on holder.

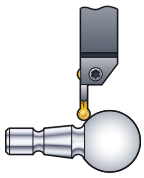
N = Neutral

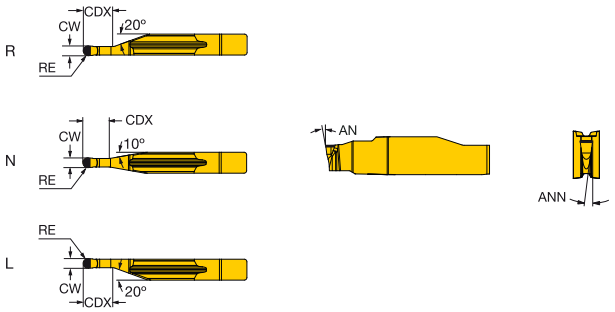
D2 D3 D11

CoroCut® 1-2 insert for profiling

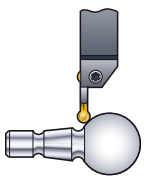


CoroCut® 1-edge

		SSC	CW	RE	CDX	APMX	Ordering code	S	H			Dimensions, mm, inch				
								7015	7015	7025	CB20	AN	CWTOLL	CWTOLU	RETOLL	RETOLU
Finishing		F	3.00	1.50		0.6	N123F1-0300-RE	★	★	☆	☆	7°	-0.020	0.020	-0.020	0.020
			.118	*.059*		*.024*							*-.0008*	*.0008*	*-.0008*	*.0008*
			3.18	1.59		0.6	N123F1-0318-RE	★	★			7°	-0.020	0.020	-0.020	0.020
			.125	*.063*		*.024*							*-.0008*	*.0008*	*-.0008*	*.0008*
		HN	2.00	1.00	5.0	0.5	N123H1-0200-RE	★	★	☆		7°	-0.020	0.020	-0.010	0.010
			.079	*.039*	*.197*	*.020*							*-.0008*	*.0008*	*-.0004*	*.0004*
		H	4.00	2.00		0.7	N123H1-0400-RE	★	★	☆	☆	7°	-0.020	0.020	-0.020	0.020
			.157	*.079*		*.026*							*-.0008*	*.0008*	*-.0008*	*.0008*
			5.00	2.50		0.7	N123H1-0500-RE	★	★		☆	7°	-0.020	0.020	-0.020	0.020
			.197	*.098*		*.028*							*-.0008*	*.0008*	*-.0008*	*.0008*
		J	6.00	3.00		0.8	N123J1-0600-RE	★	★		☆	7°	-0.020	0.020	-0.020	0.020
			.236	*.118*		*.030*							*-.0008*	*.0008*	*-.0008*	*.0008*
			6.35	3.18		0.8	N123J1-0635-RE	★	★			7°	-0.020	0.020	-0.020	0.020
			.250	*.125*		*.030*							*-.0008*	*.0008*	*-.0008*	*.0008*
		L	8.00	4.00		0.9	N123L1-0800-RE	★	★		☆	7°	-0.020	0.020	-0.020	0.020
			.315	*.157*		*.033*							*-.0008*	*.0008*	*-.0008*	*.0008*



CoroCut® 1-edge

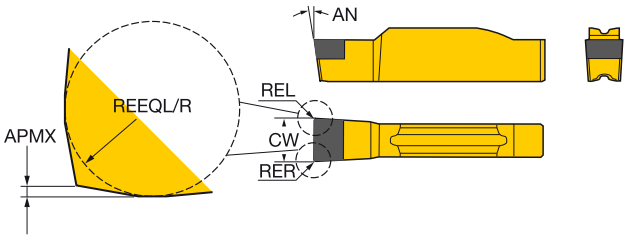
		SSC	CW	RE	CDX	APMX	Ordering code	S	H	Dimensions, mm, inch				
								7015	7015	AN	CWTOLL	CWTOLU	RETOLL	RETOLU
Finishing		HL	2.00	1.00	5.0	0.5	L123H1-0200-RE	★	★	7°	-0.020	0.020	-0.010	0.010
			.079	*.039*	*.197*	*.020*					*-.0008*	*.0008*	*-.0004*	*.0004*
		HR	2.00	1.00	5.0	0.5	R123H1-0200-RE	★	★	7°	-0.020	0.020	-0.010	0.010
			.079	*.039*	*.197*	*.020*					*-.0008*	*.0008*	*-.0004*	*.0004*

SSC = To correspond with SSC on holder.

N = Neutral, R = Right hand, L = Left hand

D2 D3 D11

CoroCut® 1-2 insert for turning



CoroCut® 1-edge

	SSC	CW	REEQL	REEQR	REL	RER	APMX	Ordering code	H 7105	H 7115	GB	BN	AN	CWTOLL	CWTOLU	RETOLL	RETOLU
Finishing	G	3.00	1.60	1.60	0.40	0.40	0.12	N123G1-0300S01025-XB	★	★	25°	0.1	7°	-0.020	0.020	-0.050	0.050
		.118	*.063*	*.063*	*.016*	*.016*	*.005*				*25°*	*.004*		*-.0008*	*.0008*	*-.0020*	*.0020*
	J	5.00	2.60	2.60	0.20	0.20		N123J1-0500S01025-XB	☆	★	25°	0.1	7°	-0.020	0.020	-0.050	0.050
		.197	*.102*	*.102*	*.008*	*.008*					*25°*	*.004*		*-.0008*	*.0008*	*-.0020*	*.0020*

SSC = To correspond with SSC on holder. N = Neutral

D2 D3 D11

CoroTurn® XS

Internal turning, face grooving and threading of small components

Application

- Internal turning
- Copying
- Backboring
- Profiling
- Grooving
- Face grooving
- Pre-parting
- Threading

Benefits and features

- Optimized for machining of small high quality features
- High precision and repeatability
- Reliable and easy-to-use clamping system
- Precision ground tools for high repeatability
- Longer tool life by minimized micro vibrations with cylindrical carbide shank adaptors
- Clamping nut ensures easy change of cutting tool with cylindrical carbide shank adaptors

www.sandvik.coromant.com/coroturnxs

Internal coolant

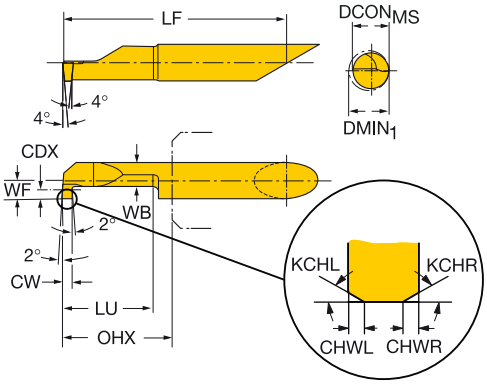
- The adaptors are designed with internal precision coolant supply.
- Selectable coolant direction for better chip evacuation and safe machining

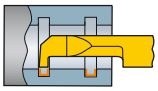
Locking precision

Precise location into the boring bar due to a locating pin.

ENG

CoroTurn® XS solid carbide tool for grooving



	CZCMS	CW	KCHL	KCHR	CHWL	CHWR	CDX	DMIN1	LU	OHX	Ordering code	H 7015	Dimensions, mm, inch DCONMS	WB	LF	WF	CWTOLL	CWTOLU
	6	1.00	45°	45°	0.04	0.04	1.8	6.2	15.0	18.0	CXS-06G100-6215R	★	6	4.0	37.3	3.0	0.000	0.050
		.039			*.002*	*.002*	*.071*	*.244*	*.591*	*.709*			*.236*	*.156*	*1.467*	*.116*	*.0000*	*.0020*
	6	1.50	45°	45°	0.04	0.04	1.8	6.2	15.0	18.0	CXS-06G150-6215R	★	6	4.0	37.3	3.0	0.000	0.050
		.059			*.002*	*.002*	*.071*	*.244*	*.591*	*.709*			*.236*	*.156*	*1.467*	*.116*	*.0000*	*.0020*

D2 D8

CoroCut® MB

For internal machining with high precision

Application

- For internal machining of small holes
- Pre-parting
- Grooving
- Face grooving
- Profiling
- Turning
- Copying
- Back boring
- Threading

Benefits and features

- Vibration free machining
- Fast set up for both tool and insert
- Stable high precision interface between interface and tool holder
- Front-mounted exchangeable cutting tool
- Sharp cutting edges
- Geometries and grades for all materials
- Carbide shanks for long overhangs
- Through coolant
- Easy fix clamping
- Grooving tools in a large variety of widths and corner radii – also for standardized grooves such as O-rings and circlip grooves.

www.sandvik.coromant.com/corocutmb

EasyFix

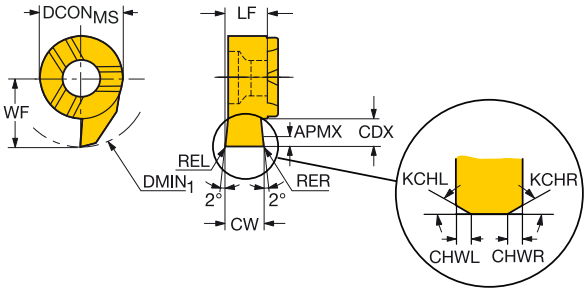
Cylindrical steel and carbide boring bars to be used with EasyFix sleeves for exact centre height.

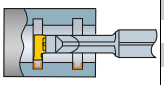
CoroCut® MB boring bars

For stability and accessibility the bars are designed with an eccentric head with oval cross section.

ENG

CoroCut® MB solid carbide head for grooving

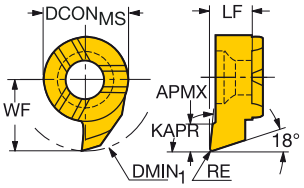


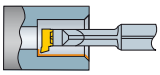
	CZC$_{MS}$	CW	KCHL	KCHR	CHWL	CHWR	CDX	DMIN$_1$	Ordering code	H	Dimensions, mm, inch DCON$_{MS}$	LF	WF	CWTOLL	CWTOLU
										7015					
	07	1.00	45°	45°	0.04	0.04	2.8	11.0	MB-07G100-00-11R	★	7	3.9	6.8	0.000	0.050
		.039			*.002*	*.002*	*.110*	*.433*			*.276*	*.154*	*.268*	*.0000*	*.0020*
	07	1.50	45°	45°	0.04	0.04	2.8	11.0	MB-07G150-00-11R	★	7	3.9	6.8	0.000	0.050
		.059			*.002*	*.002*	*.110*	*.433*			*.276*	*.154*	*.268*	*.0000*	*.0020*

CZC$_{MS}$ to correspond with CZC$_{WS}$ on adaptor.

D2 D10

CoroCut® MB solid carbide head for turning



	CZC$_{MS}$	RE	DMIN$_1$	APMX	RMPX	Ordering code	H 7015	Dimensions, mm, inch DCON$_{MS}$	LF	WF
	07	0.20	10.0	1.8	15°	MB-07T093-02-10R	★	7	3.9	5.6
		.008	*.394*	*.071*				*.276*	*.154*	*.220*

CZC$_{MS}$ to correspond with CZC$_{WS}$ on adaptor.

D2 D10

Thread turning

CoroThread® 266

Ultra-rigid thread turning for all types of threads

Application

- External threads
- Internal threads

Benefits and features

- Reduced machine- and downtime
- Excellent surface finish due to the exceptional stability
- Three sharp cutting edges for high-quality threads
- Multi-point inserts available, require fewer passes resulting in increased productivity
- Large standard product range of tools and thread profile inserts
- Unique guide rail interface between the insert and tip seat
- Good edge indexing
- Easy to mount the insert correctly

www.sandvik.coromant.com/corothread266

Inserts

- Insert geometries and grades for all materials
- Tailor Made inserts for almost any thread form or pitch

Standard
A-geometry

Sharp
F-geometry

Chip-breaking
C-geometry

Tools

- Coromant Capto® cutting units
- Shank tools
- Boring bars
- CoroTurn® SL heads

Three different threading insert types

Full profile
High productivity

V-profile
Minimum tool inventory

Multi-point
Economical mass production

Secure iLock™ clamping
The slotted insert sits rigidly on the T-rails in the pocket eliminating any insert movement caused by cutting force variations.

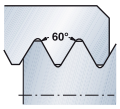
C3

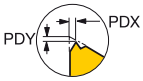
D3

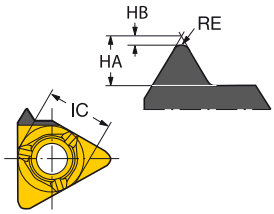
ENG

CoroThread® 266 insert for thread turning

V-profile 60° Non-topping







External right-hand threads

IC	TPN	TPX	TPIN	TPIX	NT	Ordering code	H 7015	Dimensions, mm, inch RER	REL	HA	HB	PDX	PDY
16	3/8	1.0	2.0	12.0	24.0	1	266RG-16VM01A001EE	★	0.13	0.13	1.68	0.14	1.00	1.03
									.005	.005	.0661	.0055	.039	.041
		1.5	3.0	8.0	16.0	1	266RG-16VM01A002EE	★	0.20	0.20	2.64	0.20	1.50	1.03
									.008	.008	.1039	.0079	.059	.041

External left-hand threads

IC	TPN	TPX	TPIN	TPIX	NT	Ordering code	H 7015	Dimensions, mm, inch RER	REL	HA	HB	PDX	PDY
16	3/8	1.5	3.0	8.0	16.0	1	266RL-16VM01A002EE	★	0.09	0.09	2.54	0.09	1.50	1.01
									.004	.004	.1000	.0035	.059	.040

R = Right hand, L = Left hand

D2 D3

CoroTurn® XS

Internal turning, face grooving and threading of small components

Application

- Internal turning
- Copying
- Backboring
- Profiling
- Grooving
- Face grooving
- Pre-parting
- Threading

Benefits and features

- Optimized for machining of small high quality features
- High precision and repeatability
- Reliable and easy-to-use clamping system
- Precision ground tools for high repeatability
- Longer tool life by minimized micro vibrations with cylindrical carbide shank adaptors
- Clamping nut ensures easy change of cutting tool with cylindrical carbide shank adaptors

www.sandvik.coromant.com/coroturnxs

Internal coolant

- The adaptors are designed with internal precision coolant supply.
- Selectable coolant direction for better chip evacuation and safe machining

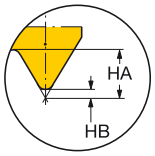
Locking precision

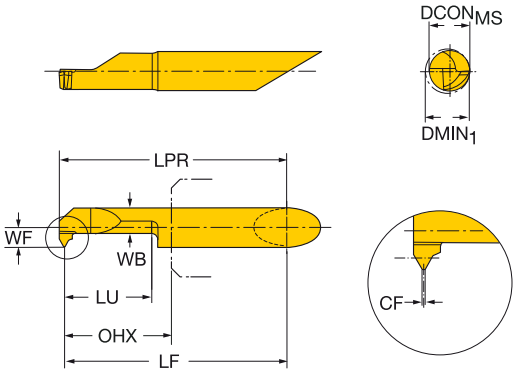
Precise location into the boring bar due to a locating pin.

ENG

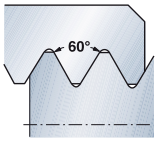
CoroTurn® XS solid carbide tool for thread turning

V-profile 60° Non-topping





Internal right-hand threads

	CZC_{MS}	TPN	TPX	TPIN	TPIX	$DMIN_1$	LU	OHX	Ordering code	H 7015	Dimensions, mm, inch $DCON_{MS}$	WB	CF	LPR	LF	WF	HA	HB
	6	1.00	1.25	20.0	24.0	6.2	15.0	17.5	CXS-06TH100VM-6215R	★	6	3.6	0.1	37.9	37.3	3.0	0.8	0.1
		.039	*.049*			*.244*	*.591*	*.687*			*.236*	*.140*	*.005*	*1.490*	*1.469*	*.116*	*.031*	*.004*
	6	1.50	1.75	16.0	18.0	6.2	15.0	17.2	CXS-06TH150VM-6215R	★	6	3.6	0.2	38.3	37.3	3.0	1.1	0.2
		.059	*.069*			*.244*	*.591*	*.676*			*.236*	*.140*	*.007*	*1.507*	*1.469*	*.116*	*.045*	*.006*

CZC_{MS} to correspond with CZC_{WS} on adaptor.

R = Right hand, L = Left hand

D2 D8

CoroCut® MB

For internal machining with high precision

Application

- For internal machining of small holes
- Pre-parting
- Grooving
- Face grooving
- Profiling
- Turning
- Copying
- Back boring
- Threading

Benefits and features

- Vibration free machining
- Fast set up for both tool and insert
- Stable high precision interface between interface and tool holder
- Front-mounted exchangeable cutting tool
- Sharp cutting edges
- Geometries and grades for all materials
- Carbide shanks for long overhangs
- Through coolant
- Easy fix clamping
- Grooving tools in a large variety of widths and corner radii – also for standardized grooves such as O-rings and circlip grooves.

www.sandvik.coromant.com/corocutmb

EasyFix

Cylindrical steel and carbide boring bars to be used with EasyFix sleeves for exact centre height.

CoroCut® MB boring bars

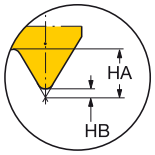
For stability and accessibility the bars are designed with an eccentric head with oval cross section.

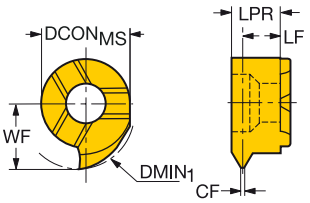
ENG

CoroCut® MB solid carbide head for thread turning

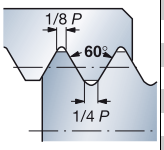
Metric 60° Full form

TCTR IT 6





Internal right-hand threads

	CZC_{MS}	TP	$DMIN_1$	Ordering code	H 7015	Dimensions, mm, inch $DCON_{MS}$	CF	LPR	LF	WF	HA	HB
	07	1.0	10.0	MB-07TH100MM-10R	★	7	0.1	3.8	3.2	5.8	0.9	0.1
		.039	*.394*			*.276*	*.005*	*.150*	*.126*	*.228*	*.035*	*.004*
	07	1.5	10.0	MB-07TH150MM-10R	★	7	0.2	3.8	3.0	5.8	1.4	0.2
		.059	*.394*			*.276*	*.007*	*.150*	*.118*	*.228*	*.054*	*.006*

CZC_{MS} to correspond with CZC_{WS} on adaptor.

R = Right hand, L = Left hand

D2 D10


SANDVIK

General information

To make life easier, a new standard has been developed

ISO 13399 is an international standard that will simplify the exchange of data for cutting tools. You will notice a slight difference through the new parameters and descriptions of each tool.

For the first time ever, there is a standardized way of describing product data regarding cutting tools. When all tools in the industry share the same parameters and definitions, communicating tool information becomes very straightforward.

What does this mean to you?

Basically, it means that your systems can talk to ours, as they all speak the same language. Download product data from our web site and use it directly in your CAD/CAM software to assemble tools that you use in production. No need to look for information in catalogues and interpret data from one system to another. Imagine how much time this will save you!

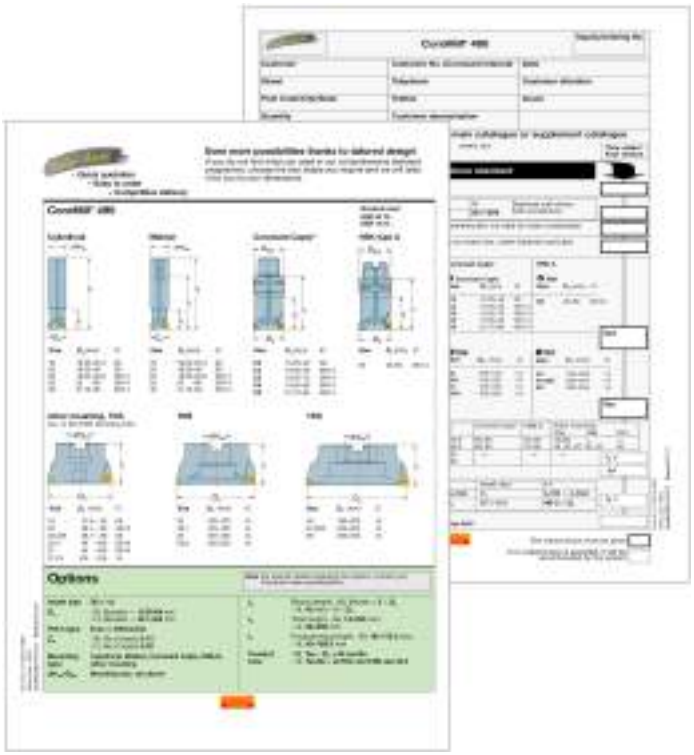
Parameters in Hard Part Turning

Short name	Preferred Name
ANN	Clearance angle minor
APMX	Depth of cut maximum
BN	Face land width
CDX	Cutting depth maximum
CF	Spot chamfer
CW	Cutting width
CWTOLL	Cutting width lower tolerance
CWTOLU	Cutting width upper tolerance
CZC MS	Connection size code machine side
D1	Fixing hole diameter
DMIN	Minimum bore diameter
DMM	Shank diameter
GB	Face land angle
HA	Thread height theoretical
HB	Thread height difference
IC	Inscribed circle diameter
KAPR	Tool cutting edge angle
L	Cutting edge length
LE	Cutting edge effective length
LF	Functional length
LLTOLL	Length tolerance lower
LLTOLU	Length tolerance upper
LPR	Protruding length
LU	Usable length (max. recommended)
OHX	Overhang maximum
RE	Corner radius
REEQ	Corner radius equivalent
RETOLL	Corner radius lower tolerance
RETOLU	Corner radius upper tolerance
S	Insert thickness
SSC	Insert seat size code
TP	Thread pitch
TPIN	Threads per inch minimum
TPIX	Threads per inch maximum
TPN	Thread pitch minimum
TPX	Maximum thread pitch
TSYC	Tool style code
WB	Body width
WF	Functional width
WSC	Clamping width
WT	Weight of item
W1	Insert width

ENG

Tailor Made

Additional tool options designed for your specific requirements.



Apart from a comprehensive standard programme we can offer tools to your dimensions on standard tool terms. In our Tailor Made offer you are free to specify your own dimensions without paying the price of a special tool.

What you can expect from us

- Quick quotation
- Easy ordering
- Performance guarantee at given product and cutting data
- Competitive delivery times

The Tailor Made option is available in the following product families:

Inserts - carbide
- CoroCut® 1-2
- CoroCut® QD
- CoroCut® 3
- T-Max® Q-Cut
- CoroThread® 266
- T-Max® U-Lock

Inserts - CBN
- T-Max® P
- T-Max®
- CoroTurn® 107
- CoroTurn® 111
- CoroTurn® TR
- CoroCut®

Inserts - PCD
- CoroTurn® 107
- CoroTurn® 111
- CoroCut®

Tools
- CoroTurn® 300
- CoroTurn® TR
- CoroCut® 1-2
- CoroCut® QD
- CoroCut® 3
- T-Max® Q-Cut

Adaptors
- Coromant Capto®

Engineered solutions

When standard or Tailor Made solutions do not fulfill your needs you can depend on Sandvik Coromant's wide experience in engineered tool solutions to handle particularly demanding criteria. Access our Tailor Made forms at www.sandvik.coromant.com

Safety information

Safety information in connection with grinding of cemented carbide

Material compositon

Tool holders
Tool holders mainly contain iron (FE), and low alloy elements such as chromium, nickel, manganese, molybdenum and silicon.
Indexable inserts/cutting tools/round tools
Substances in cemented carbide products contain mostly wolfram carbide and cobalt. They may also contain carbides and carbonitrides of the following elements: titanium, tantalum, niobium, chromium, molybdenum and vanadium.

Routes of exposure

Grinding or heating of hard metal blanks or hard metal products will produce products that give off dangerous dust and fumes. Avoiding ingestion and contact with skin or eyes is very important.

Acute toxicity

Intake of the aforementioned substances is toxic. Inhalation may cause irritation and inflammation of the airways. Significantly higher acute inhalation toxicity has been reported during simultaneous inhalation of cobalt and tungsten carbide compared to inhalation of cobalt alone.
Skin contact can cause irritation and rash. Sensitive individuals may even experience an allergic reaction.

Chronic toxicity

Repeated inhalation of aerosols containing cobalt may cause obstruction of the airways. Prolonged exposure to increased concentrations may cause lung fibrosis or lung cancer. Epidemiological studies indicate that workers previously exposed to high concentrations of tungsten carbide/cobalt carried an increased risk of developing lung cancer.
Cobalt and nickel are potent skin sensitizers. Repeated or prolonged contact can cause irritation and sensitization.

Risk phrases

Toxic: danger of serious damage to health by prolonged exposure through inhalation
Toxic when inhaled
Limited evidence of a carcinogenic effect.
May cause sensitization by inhalation and skin contact

Preventive measures

Avoid formation and inhalation of dust. Use adequate local exhaust ventilation to keep personal exposure well below nationally authorised limits.
If ventilation is not available or adequate, use respirators appropriately approved for the purpose.
Use safety goggles or glasses with side shields when necessary.
Avoid repeated skin contact. Wear suitable gloves. Wash skin thoroughly after handling.
Use suitable protective clothing. Launder clothing if needed.
Do not eat, drink or smoke in the working area. Wash skin thoroughly before eating, drinking or smoking.

For the sake of the environment

Get into the Sandvik Coromant Recycling Concept (CRC) now!

The Sandvik Coromant Recycling Concept (CRC) is a comprehensive service for used carbide inserts and solid carbide tools offered by Sandvik Coromant to all its customers.
In the light of increasing consumption of non-renewable raw materials, the economic management of dwindling resources is a duty owed by all manufacturers.
Sandvik Coromant is playing its part by offering to collect used carbide inserts and solid carbide tools and recycle them in the most environmentally friendly way.
All used carbide inserts are collected in the collection box at the workplace.
When the collection box is sufficiently full, its contents are transferred to the transport box.
The full transport box is then sent to the nearest Sandvik Coromant office or to your Sandvik Coromant dealer who can also give you more information.

The benefits of the CRC speak for themselves

- A worldwide ISO and OHAS certified recycling system.
- Open to all Sandvik Coromant customers.
- Simple procedure with collection and transport boxes.
- Less waste, easing the burden on the environment.
- Better utilisation of resources.
- Other manufacturers' carbide inserts are also accepted.

Order collection boxes for each lathe, milling machine, drill or for your machining centre. We recommend one collection box for inserts and one separate box for solid carbide tools for each cutting workplace.
For detailed instructions on how to sell your used cemented carbide, please visit www.sandvik.coromant.com and select your market.

	Order numbers
Collection box:	91617
Transport box for solid carbide tools (plywood):	92994
Transport box inserts (plywood):	92995

Code key

Metric

C	N	G	A	12	04	08	T	010	20	R	A	WG
1	2	3	4	5	6	7	8	9	10	11	12	13

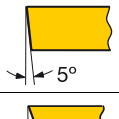
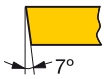
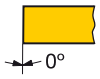
Inch

C	N	G	A	4	3	2	T	03	20	R	A	WG
1	2	3	4	5	6	7	8	9	10	11	12	13

1 Insert shape

C		D	
K		R	
S		T	
V		W	

2 Insert clearance angle

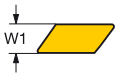
B		C	
E		N	
P		O	Specific description

3 Tolerances, metric

Class	S	IC / W1
G	±0.13	±0.025
M	±0.13	±0.05 – ±0.15[1]
U	±0.13	±0.08 – ±0.25[1]
E	±0.025	±0.025

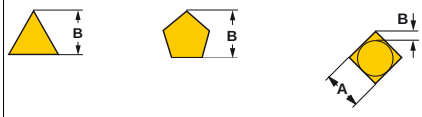
[1] Varies depending on the size of IC. See below.

Inscribed circle IC mm	Tolerance class M	U
3.97 5.0 5.56 6.0 6.35 8.0 9.525 10.0	±0.05	±0.08
12.0 12.7	±0.08	±0.13
15.875 16.0 19.05 20.0	±0.10	±0.18
25.0 25.4	±0.13	±0.25
31.75 32.0	±0.15	±0.25



For positive inserts iC is valid for a sharp corner. See cutting edge condition F. (Picture 8).

3 Tolerances, inch



A: Theoretical diameter of the insert inscribed circle.
T: Thickness of the insert.
B: See figures.

Tolerances in inch

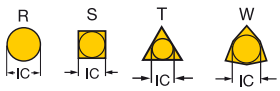
Class	B:	A:	T:
A	±.0002	±.001	±.001
B	.0002	.001	.005
C	.0005	.001	.001
D	.0005	.001	.005
E	.001	.001	.001
F	.0002	.0005	.001
G	.001	.001	.005
H	.0005	.0005	.001
J	.0002	.002-.005	.001
K	.0005	.002-.005	.001
L	.001	.002-.005	.001
M	.002-.005	.002-.005	.005
U	.005-.012	.005-.010	.005
N	.002-.010	.002-.004	.001

4 Insert type

A		Q	
G		R	
M		T	
N		W	
P		X	 Special design

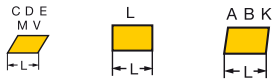
5 Insert size

Inscribed circle, inch



Inscribed circle is indicated in 1/8".

Cutting edge length, inch



For rectangular and rhombic inserts cutting edge length is indicated in mm.

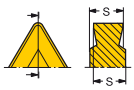
Cutting edge length, metric

IC mm	IC inch	C	D	R	S	T	V	W	K
3.18	1/8"					05			
3.97	5/32"					06			
5.0				05					
				09					
6.0			06						
6.35	1/4"	06	07			11	11		
8.0				08					
9.525	3/8"	09	11	09	09	16	16	06	16*)
10.0				10					
12.0				12					
12.7	1/2"	12	15	12	12	22	22	08	
15.875	5/8"	16		15	15	27			
16.0				16					
19.0	3/4"	19		19	19	33			
20.0				20					
25.0				25[1]					
25.4	1"	25		25[2]	25				
31.75	1/4"			31					
32				32					

*) For insert shape K (KNMX, KNUX) only the theoretical cutting edge length is indicated.
[1] Metric base design
[2] Inch base design

ENG

6 Insert thickness, S mm, inch



Metric			Inch	
01	S =	1.59	1.	S = .0625
T1	S =	1.98	(1.2)	S = .075
02	S =	2.38	(1.5)	S = 3/32
03	S =	3.18	2	S = 1/8
T3	S =	3.97	(2.5)	S = 5/32
04	S =	4.76	3	S = 3/16
05	S =	5.56	4	S = 1/4
06	S =	6.35	5	S = 5/16
07	S =	7.94	6	S = 3/8
09	S =	9.52	6.3	S = .394
10	S =	10.00	7.6	S = .475
12	S =	12.00		

7 Nose radius, RE mm, inch

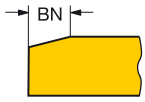
Metric:	Inch:	Actual dimension:
00 = 0	00	Round
01 = 0.1	03	.004
02 = 0.2	0	.008
04 = 0.4	1 = 1/64	.0156
05 = 0.5		
08 = 0.8	2 = 1/32	.0312
10 = 1.0		
12 = 1.2	3 = 3/64	.047
15 = 1.5		
16 = 1.6	4 = 1/16	.0625
24 = 2.4	6 = 3/32	.094
32 = 3.2	8 = 1/8	.125

Note: See example for approximation of metric nose radius.
16=1.6mm=.063≈.0625 inch

8 Cutting edge condition

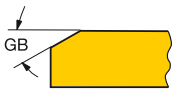
F		Sharp cutting edge
E (A)		ER treated cutting edge A (inch) E (metric)
T		Negative land
K		Double negative lands
S		Negative land and ER treated cutting edge

9 Chamfer width



ISO mm	ANSI inch
010 BN = 0.10	03 BN = (.003)
015 BN = 0.15	06 BN = (.006)
020 BN = 0.20	08 BN = (.0078)
025 BN = 0.25	08 BN = (.0098)
070 BN = 0.70	30 BN = (.030)
150 BN = 1.50	60 BN = (.060)
200 BN = 2.00	80 BN = (.080)

10 Chamfer angle, degrees



15 GB = 15°	30 GB = 30°
20 GB = 20°	35 GB = 35°
25 GB = 25°	

11 Hand of insert

Inserts designed solely for machining in left or right direction are indicated as below.

R	Right hand design
L	Left hand design

12 Insert Type (CBN)

To allow a variety of machining demands to be met, several types of inserts comprising CBN and PCD is manufactured. To easy identify the different types Sandvik Coromant uses a letter to denote the variants.

A	CBN, Multi Corner Inserts - Fully indexable - CBN brazed tip from top to bottom of the carbide carrier corners (double sided)
B, H	CBN, Multi Corner Inserts - Fully indexable - CBN brazed tip on the top and on the bottom of the carbide carrier corners (double sided).
E	CBN, Single tip inserts - Non-indexable - CBN brazed to the top of one of the carbide carrier corners
F	CBN, Multi tip inserts - Indexable - CBN brazed tip to the top of the carbide carrier corners (single sided)
D	CBN, Full top inserts - Indexable - CBN sintered to the complete top surface of the carbide carrier
M	CBN, Solid inserts - Fully indexable - Complete insert mode from CBN

13 Geometry

Our unique Wiper and Xcel technologies can be used to boost productivity and generate superior surface finish.

WG	Wiper geometry for general purpose machining Allows high feed rates in HPT Suitable for finish machining of GCI
WH	Wiper geometry optimized for HPT Low cutting forces for superior surface finish Designed for peak performance at HPT finishing feed rates
Xcel XA / XB	XA - for higher feed rates than WH and WG XB - for higher feed rates than XA or for tightest surface finish tolerances with lower feed rates
HGR	Rough chip breaker for removal of case or induction hardened layer (skin)

CoroTurn® XS

Insert for turning

CXS	04	T	098	A	10	–	22	06	R
1	2	3	4	13	5		9	10	12

Insert for grooving

CXS	06	F	100	–	62	15	A	R
1	2	3	6		9	10	11	12

Insert for threading

CXS	04	TH	050	VM	–	42	15	R
1	2	3	7	8		9	10	12

1 Main code

CXS = CoroTurn® XS

2 Insert size mm

04 = 4 mm (.157 inch)
05 = 5 mm (.197 inch)
06 = 6 mm (.236 inch)
07 = 7 mm (.276 inch)

3 Type of operation

T = Turning
TE = Turning copying, extended f_1-dimension
F = Face grooving
G = Grooving
GX = Pre-parting
R = Profiling full radius
TH = Threading
B = Back boring

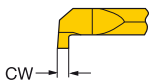
4 Entering angle (Turning)

E.g.: 098 = Entering angle 98°
98° Lead angle -8°

5 Nose radius, RE mm (Turning)

E.g.:
10 = 0.1 mm (.004 inch)
15 = 0.15 mm (.006 inch)
20 = 0.2 mm (.008 inch)

6 Insert width, CW mm (Grooving)



E.g.: 100 = 1.00 mm

7 Pitch, mm (Threading)

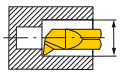
mm: pitch x 100

inch: No. of threads per inch x 10

8 Thread profile (Threading)

VM = V-Profile 60°
WH = Whitworth 55°
NT = NPT 60°
UN = UN 60°
MM = MM 60°
TR = Trapezoidal 30°

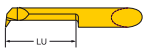
9 Min bore diameter, DMIN.



min. hole

E.g.: 22 = 2.2 mm (.087 inch)

10 Penetration depth, LU



E.g.: 06 = 6 mm (.236 inch)

11 Type of curve (Face grooving)

A = A-curved

12 Hand of insert

R = Right hand style
L = Left hand style

13 Geometry

- = Without chip forming geometry
A = Chip forming geometry

ENG

CoroTurn® XS

Boring bars

CXS	A	10	–	04
1	2	3		4

Double ended boring bars

CXS	A	10	–	04	–	04
1	2	3		4		5

Shank tool

CXS	–	1010	–	04	F	N
1		6		4	10	7

Coromant Capto® holder

C4	–	CXS	–	47	–	04
8		1		9		4

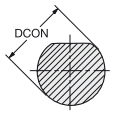
1 Main code

CXS = CoroTurn® XS

2 Type of bar

A = Steel bar with internal coolant supply

3 Bar diameter, DCON



Metric
10 = 10 mm
Inch
0500 = 1/2"

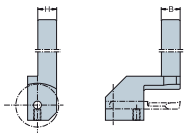
4 Insert size

04 = 4 mm (.157 inch)
05 = 5 mm (.197 inch)
06 = 6 mm (.236 inch)
07 = 7 mm (.276 inch)

5 Insert size for sub-spindle

For double ended boring bars, same as 4.

6 Shank size (width and height), mm



H = 10 mm (.394 inch)
B = 10 mm (.394 inch)

7 Hand of tool

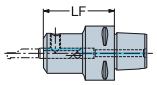
L = Left hand style
R = Right hand style
N = Neutral

8 Coromant Capto® size

C3: DCON = 32 mm (1.260 inch)
C4: DCON = 40 mm (1.575 inch)
C5: DCON = 50 mm (1.968 inch)
C6: DCON = 63 mm (2.480 inch)

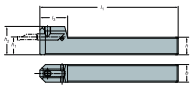
9 Coromant Capto® length

LF = 47 mm (1.850 inch)



10 Shank style

F = 0°



CoroCut® MB

Insert for turning/back boring

MB	–	07	T	093	A	–	02	–	10	R
1		2	3	4	16		5		9	12

Insert for grooving/pre-parting

MB	–	07	G	070	–	00	–	10	R
1		2	3	6		5		9	12

Insert for threading

MB	–	07	TH	050	VM	–	10	R
1		2	3	7	8		9	12

Boring bars

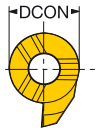
MB	–	A	16	–	16	–	07	R
1		13	14		10		2	15

B

1 Main code

MB = CoroCut® MB

2 Insert size, mm



07 = 7 mm (.276 inch)
09 = 9 mm (.354 inch)

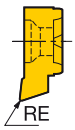
3 Type of operation

B = Back boring
G = Grooving
GX = Pre-parting
R = Profiling full radius
T = Turning
TE = Turning copying, extended f_1-dimension
TH = Threading
FA = Face grooving A-curve
FB = Face grooving B-curve

4 Entering angle (Turning)

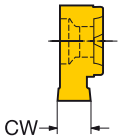
E.g.: 093 = 93°

5 Nose radius, RE mm (Turning)



E.g.: 00 = Sharp
02 = 0.2 mm (.008 inch)

6 Insert width, CW mm (Grooving)



E.g.: 100 = 1.00 mm (.039 inch)

7 Pitch (Threading)

mm: pitch x 100

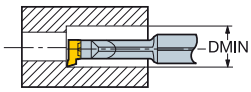
inch: No. of threads per inch x 10 (TPI)

C

8 Thread profile (Threading)

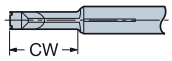
VM = V profile 60°
MM = Metric 60°
WH = Whitworth 55°
UN = UN 60°
NT = NPT 60°
AC = ACME 29°
SA = STUB-ACME

9 Min bore diameter, DMIN (Insert)



E.g.: 10 = 10 mm (.394 inch)

10 Penetration depth, CW (boring bar)



Inch E.g.:
06 = 0.630 inch
08 = 0.787 inch
12 = 1.260 inch

Metric E.g.:
16 = 16 mm

D

12 Hand of insert

R = Right hand style

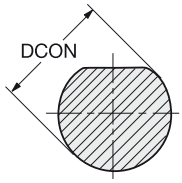
L = Left hand style

13 Type of bar

A = Steel bar with internal coolant supply

E = Carbide shank bar

14 Bar dia, DCON inch



Inch
0625 = .625 inch
Metric
16 = 16 mm

15 Shank type

R = Cylindrical

No symbol = With flats

16 Geometry

- = Without chip forming geometry

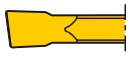
A = Chip forming geometry

ENG

CoroCut® 1-2

N	123	H	2	–	0400	–	00	04	–	TF
1	2	3	4		5		6	7		8

1 Hand of insert

R 

N 

L 

2 Main code

123

3 Seat size

CoroCut® 1-2

D	G	K
E	H	L
F	J	M
		R

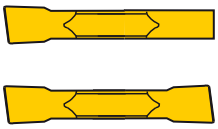
CoroCut® 3
T = Right hand cutting
U = Left hand cutting

To correspond with seat size on holder.

Insert seat interchangeability:

Insert seat size	Size, mm	Holder	Insert seat size	Size, mm	Holder
D	1.5	D	H	4.0	H
E	2.0	E	J	5.0	J, H
F	2.5	F, E	K	6.0	K, J, H
G	3.0	G, F, E	L	8.0	L
			M	9.0	M
			R	15.0	R

4 Number of edges

1 or 2 

3 

5 Insert width

E.g.: 0400 = .157 inch (4 mm)

0400 = .157 inch (4 mm)

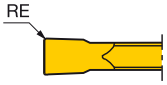
6 Front angle

E.g.: 00 = 0°
05 = 5°

7 Corner radius

E.g.: 04 = .016 inch (0.4 mm)

08 = .031 inch (0.8 mm)



8 Geometry designation

First digit: Type of operation

A = Aluminium/profiling
C = Cut off
T = Turning
G = Grooving
R = Profiling
B = Blank

Second digit:

E = ER treated cutting edge
F = Low feed
M = Medium feed
R = High feed
O = Optimized for special areas
S = Sharp cutting edge
G = Blank