Machining of small parts

In line with the growing demand of small, precision-turned components we are introducing CoroCut® XS a new and innovative product line to increase your machine performance.

The new tool system, CoroCut XS, will give high performance for external machining such as turning, threading, parting off and grooving.
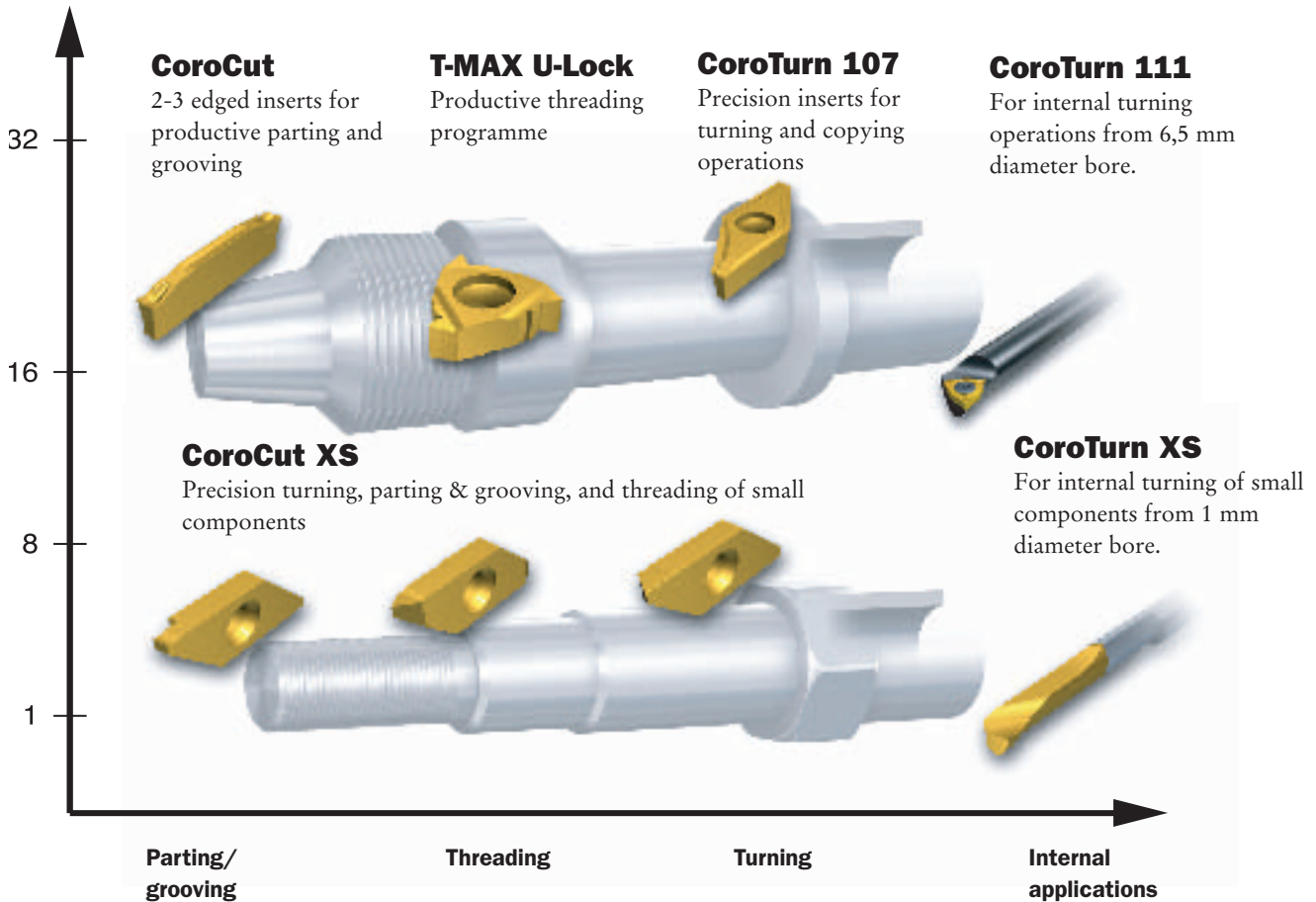
Other tools for small part machining

The existing CoroCut for maximum productivity in parting and grooving, CoroTurn XS for small internal machining operations such as: boring, grooving and threading down to diameters as little as 1 mm diameter.
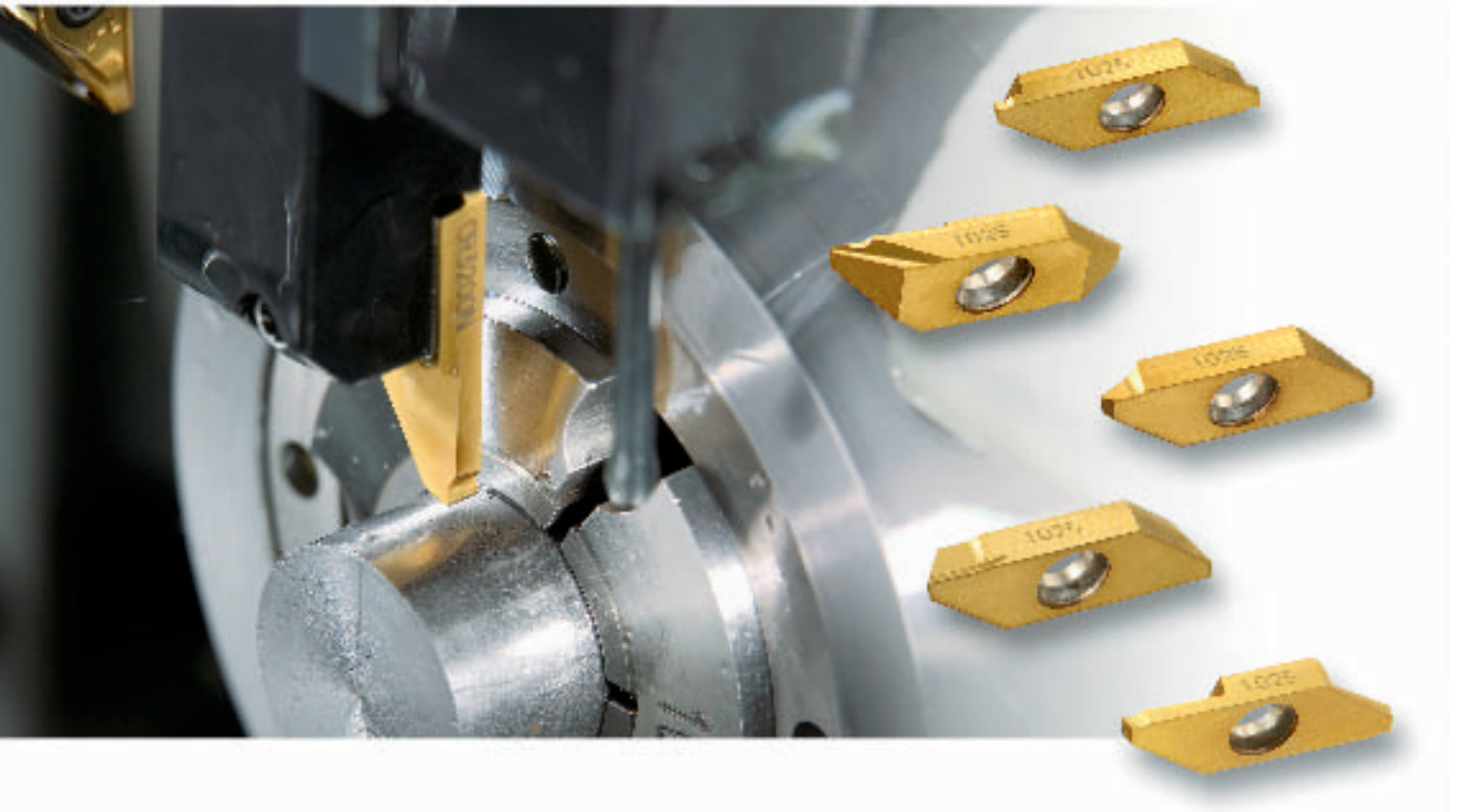
CoroMill Plura and CoroDrill Delta-C are available in small diameters from 0,4 to 1,5 mm respectively.

Altogether we can offer you a wide range of tooling solutions for small part machining to give you a greater impact on cost reduction and at the same time keep your machines running both securely and maintenance free.

Component diameter, mm

CoroCut
2-3 edged inserts for productive parting and grooving

T-MAX U-Lock
Productive threading programme

CoroTurn 107
Precision inserts for turning and copying operations

CoroTurn 111
For internal turning operations from 6,5 mm diameter bore.

CoroCut XS
Precision turning, parting & grooving, and threading of small components

CoroTurn XS
For internal turning of small components from 1 mm diameter bore.

32
16
8
1

Parting/ grooving **Threading** **Turning** **Internal applications**

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Solutions for small part machining of extra small work pieces

We have developed CoroCut® XS inserts and holders to open up new opportunities for productivity improvements within high volume production.

For external machining these inserts will give you precision made components down to 1 mm in diameter. This includes grooving, threading, parting and turning operations.

Savings with less "down time"

Now you can index inserts in the machine resulting in less "down time" producing, therefore, a quick start to increased productivity. Additionally you will have maximum flexibility as all inserts fit into the same tool holder for all operations.

The grooving width of 0,5 mm and parting width of only 0,7 mm makes it possible to save a considerable amount of work piece material.

Choose CoroCut XS inserts for every operation to achieve guaranteed precision.

All inserts are available in grede GC1025, a proven performer for cutting steel, stainless steel, non-ferrous materials, super alloys and titanium, across a range of operations and cutting conditions.
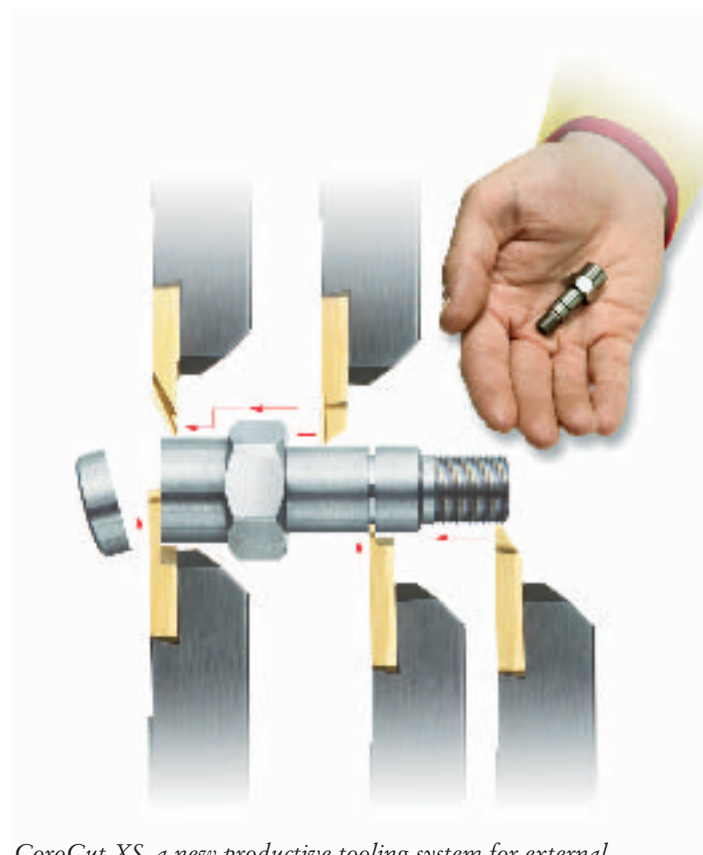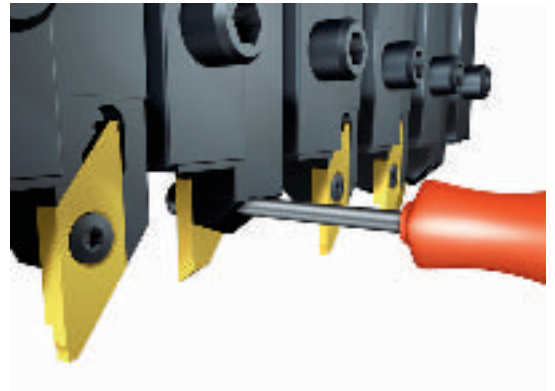
CoroCut XS, a new productive tooling system for external small part machining.

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Less "down time" more productivity

with CoroCut XS you can index inserts in the machine and achieve less "down time".

For easier access when indexing the insert you can reach the insert screw both sides of the tool holder. No need to remove the tool holder.

To reduce vibration during parting off, when machines with sub spindles are used, we recommend CoroCut XS tool holders with a bevel to reduce the overhang of the workpiece material.
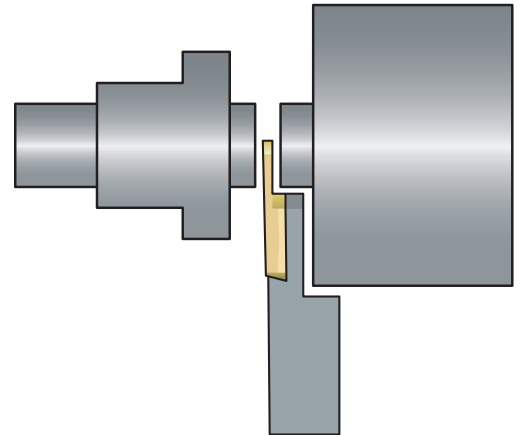
Precision made

components need precision made tool holders and inserts- The tools are ground to achieve close tolerances and subsequently the repeatability of inserts gives a correct centre height of 0,02 mm.

Maximum flexibility

has now been achieved as all inserts for a whole range of operations fit into the same CoroCut XS tool holder.

Save material when parting off

with grooving width's starting at 0,5 mm and parting off width's of 0,7 mm, it is possible to save a considerable amount of work piece material.

The insert, with a 15 degrees front angle, makes it possible to achieve a pip and burr-free parting off operation

15°
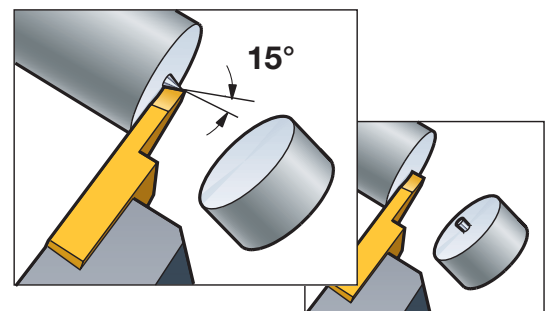
Run it you're way

by using uncoated blanks in grade H10F, code; MAXR, you have the possibility to modify your insert for any machining operation.

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Code key for CoroCut XS

Insert for parting
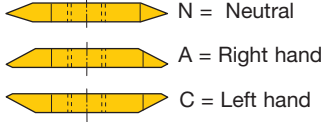
M	A	C	R	3	070		N
1	2	3	4	5	6		7

Insert for Turning/grooving

M	A	G	R	3	070
1	2	3	4	5	6
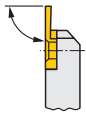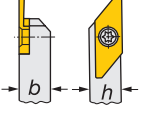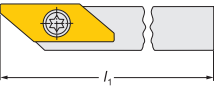
Insert for threading

M	A	T	R	3	60		A
1	2	3	3	5	8		9

---

1 Family description

M =

---

2 Insert clearance angle

A = 50°

---

3 Type of operation

C = Cut off/parting
G = Grooving
T = Threading
F = Turning
B = Back turning
X = Semi-finishing blanks

---

4 Hand of insert/holder

R = Right hand
L = Left hand

---

5 Insert seat size

3

---

6 Insert thickness, mm

070 = 0,70

---

7 For cut off inserts (C in third position)

N = Neutral with geometry
T = Neutral without geometry
L = Left handed with geometry
R = Right handed with geometry

---

8 For threading inserts (T in third position)

60 = V-profile 60°

---

9 For threading inserts Hand of thread point

N = Neutral
A = Right hand
C = Left hand

Shank holder

S	M	AL	R	1010	K	3		X
10	1	11	4	12	13	5		14

---

10 Clamping system

S = Screw clamping

---

11 Holder style

AL = 90°

---

12 Shank dimensions, mm

ex. 1010

b h

---

13 Shank tool length, mm

K l_1 =125 mm

l_1

---

14 Additional information

X = Special designed for working with sub-spindle

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CoroCut XS inserts

Parting off

MACR/L -N
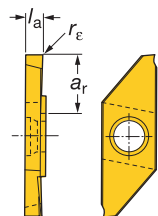
MACR/L -R
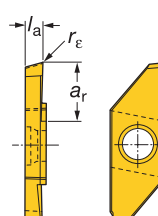
MACR/L -L
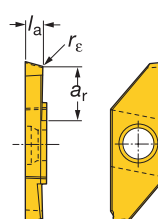
MACR/L -T

Tolerances:
l_a: ± 0,025 mm
r_ε: ± 0,02 mm
Repetability: ± 0,025 mm
Centre height: ± 0,025 mm

Right hand style shown

Coromant grades

GC = Coated carbide/Cermet

Insert size[1]	Ordering code	Dimensions, mm					P			M			N			S		
							GC			GC			GC			GC		
		D_m min	a_r	l_a	r_ε	φ_r	1025			1025			1025			1025		
3	MACR/L 3 070-N	8	4,5	0,7	0,05	0°	★			★			★			★		
3	MACR/L 3 100-N	12	6,7	1,0	0,05	0°	★			★			★			★		
3	MACR/L 3 150-N	12	6,7	1,5	0,05	0°	★			★			★			★		
3	MACR/L 3 200-N	16	9,2	2,0	0,05	0°	★			★			★			★		
3	MACR/L 3 070-R	8	4,5	0,7	0,05	15°	★			★			★			★		
3	MACR/L 3 100-R	12	6,7	1,0	0,05	15°	★			★			★			★		
3	MACR/L 3 150-R	12	9,2	1,5	0,05	15°	★			★			★			★		
3	MACR/L 3 200-R	16	9,2	2,0	0,05	15°	★			★			★			★		
3	MACR/L 3 200-L	8	9,2	2,0	0,05	15°	★			★			★			★		
3	MACR/L 3 200-T	16	9,2	2,0	0,05	0°	★			★			★			★		
3	MACR/L 3 250-T	16	9,2	2,5	0,05	0°	★			★			★			★		
							P25			M15			N15			S15		

= New item

1) To correspond with insert size on holder.

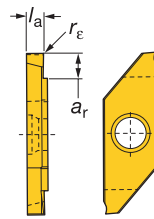**Ordering example: 10 pieces MACR 3 070-N 1025**
10 pieces MACL 3 070-N 1025
R = Right hand, L = Left hand

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CoroCut XS inserts

Grooving

MAGR/L

Right hand style shown

Coromant grades

GC = Coated carbide/Cermet

Insert size[1]	Ordering code	Dimensions, mm			P		M		N		S	
					GC		GC		GC		GC	
					1025		1025		1025		1025	
		a_r	l_a	r_ε								
3	MAGR/L 3 050	1,3	0,50	0,05	★		★		★		★	
3	MAGR/L 3 075	2,5	0,75	0,05	★★		★★		★★		★★	
3	MAGR/L 3 100	2,7	1,00	0,05	★★		★★		★★		★★	
3	MAGR/L 3 125	2,7	1,25	0,05	★★		★★		★★		★★	
3	MAGR/L 3 150	3,7	1,50	0,05	★★		★★		★★		★★	
3	MAGR/L 3 175	3,7	1,75	0,05	★★		★★		★★		★★	
3	MAGR/L 3 200	3,7	2,00	0,05	★★		★★		★★		★★	
3	MAGR/L 3 250	3,7	2,50	0,05	★		★		★		★	
					P25		M15		N15		S15	

Ordering example: 10 pieces MAGR 3 050 1025
10 pieces MAGL 3 050 1025
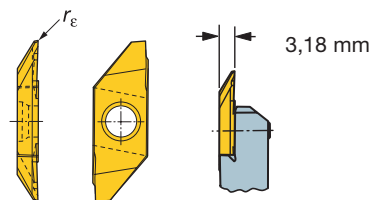R = Right hand, L = Left hand

CoroCut XS inserts

Turning, backturning

Turning
MAFR/L

Backturning
MABR/L

3,18 mm

Tolerances:
r_ε: $^{+0}_{-0,05}$ mm
Repetability: ± 0,025 mm
Centre height: ± 0,025 mm

Right hand style shown

Coromant grades

GC = Coated carbide/Cermet

Insert size[1]	Ordering code	Dimensions, mm	P		M		N		S	
			GC		GC		GC		GC	
			1025		1025		1025		1025	
		r_ε								
3	MAFR/L 3 003	0,03	★		★		★		★	
3	MAFR/L 3 010	0,10	★★		★★		★★		★★	
3	MAFR/L 3 020	0,20	★		★		★		★	
3	MABR/L 3 005	0,05	★		★		★		★	
3	MABR 3 020	0,20	★		★		★		★	
			P25		M15		N15		S15	

[1] To correspond with insert size on holder.

Ordering example: 10 pieces MAFR 3 003 1025
10 pieces MAFL 3 003 1025
R = Right hand, L = Left hand

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CoroCut XS inserts

Threading

MATR/L

-A   -N   -C
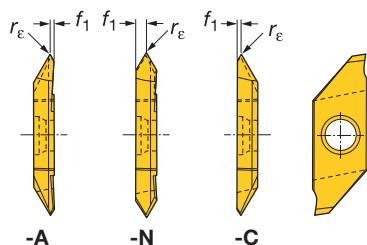
Right hand style shown

Tolerances:
r_ε: ± 0,02 mm
Repetability: ± 0,025 mm
Centre height: ± 0,025 mm

Coromant grades

GC = Coated carbide/Cermet

	Pitch range, mm	Insert size[1]	Ordering code	Dimensions, mm		**P**		**M**		**N**		**S**	
						GC		GC		GC		GC	
				f_1	r_ε	1025		1025		1025		1025	
	0,2 - 1	3	**MATR/L3 60-A**	0,60	0,05	★		★		★		★	
	0,2 - 1	3	**MATR/L3 60-C**	0,60	0,05	★		★		★		★	
	0,2 - 2	3	**MATR/L3 60-N**	1,59	0,05	★		★		★		★	
						P25		M15		N15		S15	

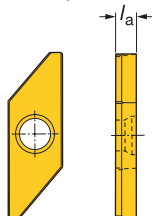　 = New item

[1] To correspond with insert size on holder.

Ordering example: 10 pieces MATR 360-C 1025
MATL 360-C 1025
R = Right hand, L = Left hand

Blanks for CoroCut® XS inserts

MAXR/L

Right hand style shown

Coromant grades

- = Uncoated carbide

	Insert size[1]	Ordering code	Dimensions, mm		-	
					H10F	
			l_a			
	3	**MAXR/L 3 300**	3,18		★	

　 = New item

[1] To correspond with insert size on holder.

Ordering example: 10 pieces MAXR 3300 H10F
MAXL 3300 H10F
R = Right hand, L = Left hand

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