



## Solutions for machining of extra small components

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 .039 inch (1 mm) in diameter. This includes grooving, threading, parting and turning operations.

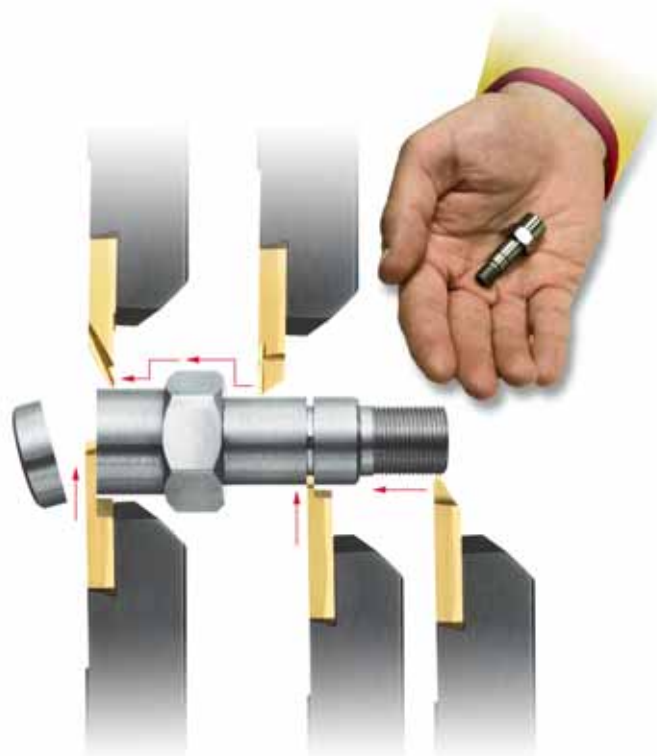
### Savings with less downtime

Now you can index inserts in the machine resulting in less downtime, creating a quick path 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 .020 inch (0.5 mm) and parting width of only .028 inch (0.7 mm) makes it possible to save a considerable amount of component material.

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

All inserts are available in grade GC1025, a proven performer for cutting steel, stainless steel, non-ferrous materials, super alloys and titanium across a range of operations and cutting conditions.

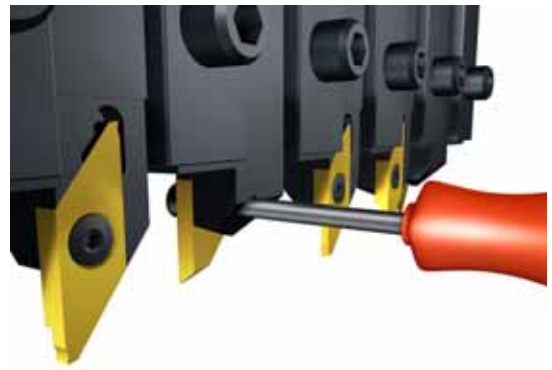


*CoroCut XS, a new productive tooling system for external small part machining.*

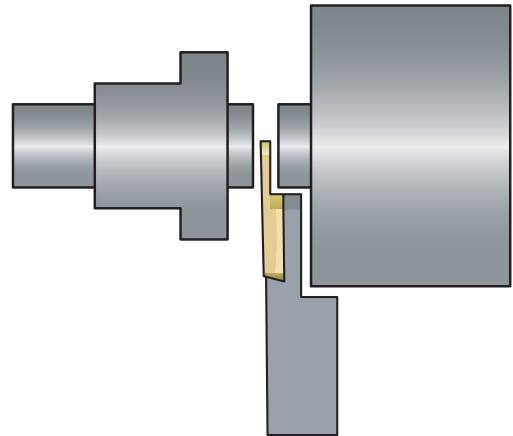
### Less downtime more productivity

with CoroCut XS. You can index inserts in the machine and achieve less downtime.

For easier access when indexing the insert you can reach the insert screw from 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 added clearance to allow machining close to the spindle.



### 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 center height within .00079 inch (0.02 mm).

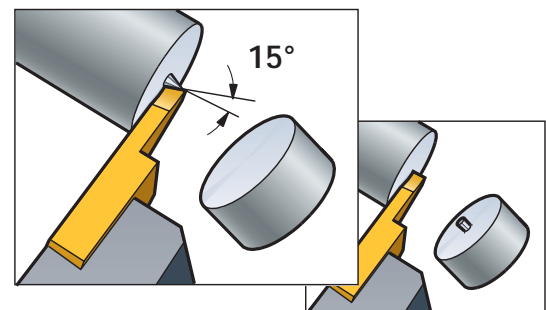
### Maximum flexibility

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 widths starting at .020 inch (0.5 mm) and parting off widths of .028 inch (0.7 mm), it is possible to save a considerable amount of component material.

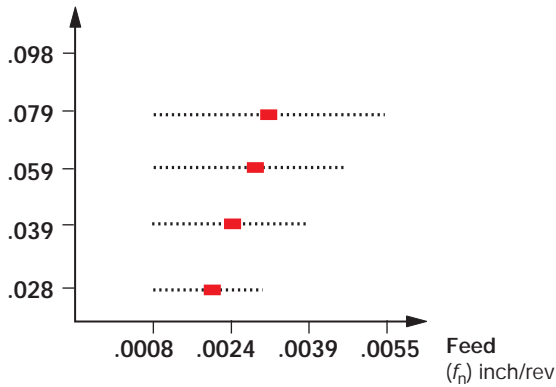
The insert, with a 15 degree front angle, makes it possible to achieve a pip and burr-free parting off operation



# Cutting data recommendations for CoroCut® XS

## Parting off

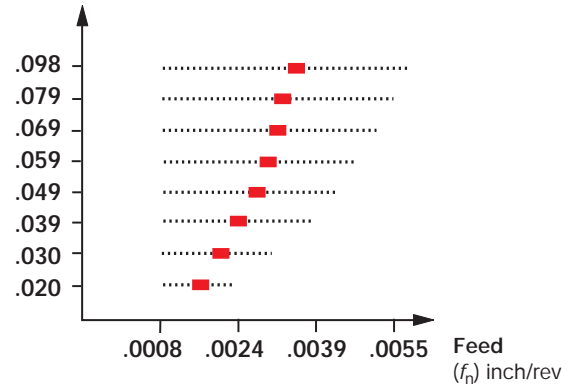
Insert width  
( $l_a$ ) inch



■ = Recommended starting value.

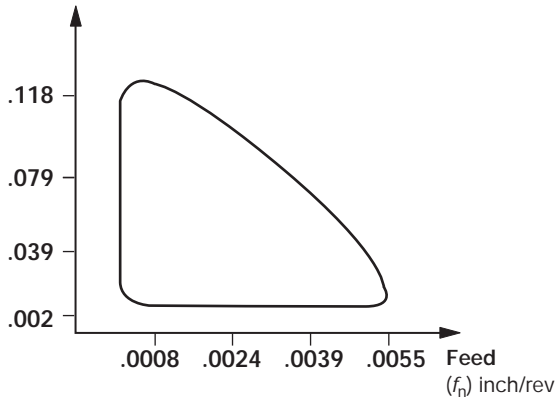
## Grooving

Insert width  
( $l_a$ ) inch



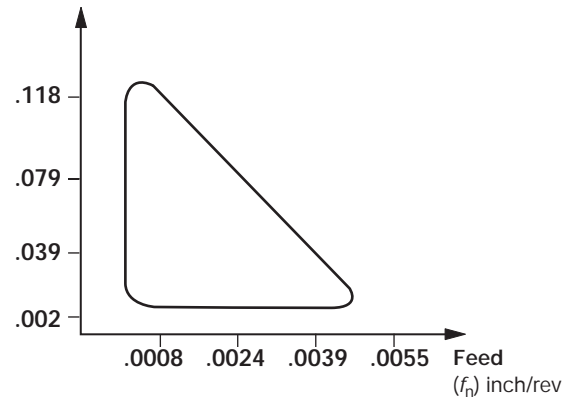
## Turning

Cutting depth  
( $a_p$ ) inch



## Backturning

Cutting depth  
( $a_p$ ) inch



## Threading, (Infeed recommendations)

Metric 60°,

Pitch	$a_p$	nap
.008	.004	4
.010	.006	4
.012	.007	4
.014	.008	4
.016	.010	4
.018	.011	4
.020	.011	4
.030	.018	4
.039	.024	5
.049	.029	6
.059	.035	6
.069	.042	8
.079	.048	8

Can be used for thread types:

- ISO metric 60°
- UN 60°
- NPTF, MJ, UNJ 60°

$a_p$  = total depth of thread  
 $nap$  = number of passes

## Cutting speed recommendations

Grade 1025  
( $v_c$ ) feet/min

**P**

92-310

**M**

92-280

**N**

138-620

**S**

30-75

In CANADA, call us toll-free  
1-800-268-0703

**SANDVIK**  
Coromant

In the UNITED STATES call us toll-free  
1-800-SANDVIK (1-800-726-3845)

# Code key for CoroCut XS

Insert for parting


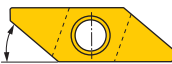

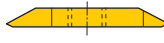

<b>M</b>	<b>A</b>	<b>C</b>	<b>R</b>	<b>3</b>	<b>070</b>	-	<b>N</b>
1	2	3	4	5	6		7

Insert for Turning/grooving

<b>M</b>	<b>A</b>	<b>G</b>	<b>R</b>	<b>3</b>	<b>070</b>
1	2	3	4	5	6

Insert for threading

<b>M</b>	<b>A</b>	<b>T</b>	<b>R</b>	<b>3</b>	<b>60</b>	-	<b>A</b>
1	2	3	3	5	8		9

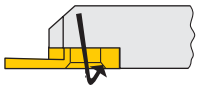
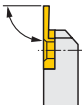
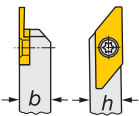
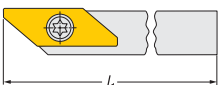
<p><b>1 Family description</b></p> <p>M = </p>	<p><b>2 Insert clearance angle</b></p> <p>A = 50° </p>	<p><b>3 Type of operation</b></p> <p>C = Cut off/parting G = Grooving T = Threading F = Turning B = Back turning X = Utility insert</p>
<p><b>4 Hand of insert/holder</b></p> <p>R = Right hand L = Left hand</p>	<p><b>5 Insert seat size</b></p> <p>3</p>	<p><b>6 Insert thickness, mm</b></p> <p>070 = 0.70</p>
<p><b>7 For cut off inserts (C in third position)</b></p> <p>N = Neutral with geometry T = Neutral without geometry L = Left handed with geometry R = Right handed with geometry</p>	<p><b>8 For threading inserts (T in third position)</b></p> <p>60 = V-profile 60°</p>	<p><b>9 For threading inserts Hand of thread point</b></p> <p> N = Neutral  A = Right hand  C = Left hand</p>

Shank holder, metric design

<b>S</b>	<b>M</b>	<b>AL</b>	<b>R</b>	<b>08</b>	<b>C</b>	<b>3</b>	-	<b>X</b>
10	1	11	4	12	13	5		14

Shank holder, metric design

<b>S</b>	<b>M</b>	<b>AL</b>	<b>R</b>	<b>1010</b>	<b>K</b>	<b>3</b>	-	<b>X</b>
10	1	11	4	12	13	5		14

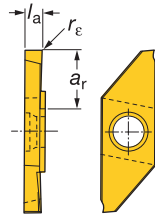
<p><b>10 Clamping system</b></p> <p>S = Screw clamping </p>	<p><b>11 Holder style</b></p> <p>AL = 90° </p>	<p><b>12 Shank dimensions, inch/mm</b></p> <p>ex. 1/2" ex. 1010 </p>
<p><b>13 Shank tool length, inch/mm</b></p> <p>C <math>l_1 = 5"</math> K <math>l_1 = 5"/125 \text{ mm}</math></p> 	<p><b>14 Additional information</b></p> <p>X = Special designed for working with sub-spindle</p>	

# CoroCut XS inserts

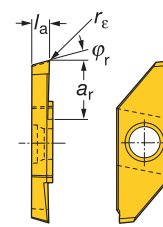
## Parting off



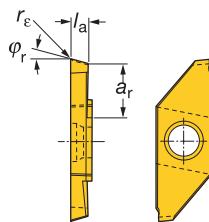
MACR/L -N



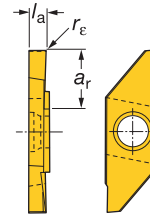
MACR/L -R



MACR/L -L



MACR/L -T



**Tolerances:**

$l_a$ : ± .001 inch

$r_\epsilon$ : ± .0008 inch

Repeatability: ± .001 inch

Center height: ± .001 inch

Right hand style shown

**Coromant grades**

GC = Coated carbide/Cermet

	Insert size <sup>1)</sup>	Ordering code	Dimensions, inch					P		M		N		S	
			$D_m$	$a_r$	$l_a$	$r_\epsilon$	$\phi_r$	GC		GC		GC		GC	
			max					1025		1025		1025		1025	
	3	MACR/L 3 070-N	.315	.169	.028	.002	0°	★		★		★		★	
	3	MACR/L 3 100-N	.472	.248	.039	.002	0°	★		★		★		★	
	3	MACR/L 3 150-N	.472	.248	.059	.002	0°	★		★		★		★	
	3	MACR/L 3 200-N	.630	.335	.079	.002	0°	★		★		★		★	
	3	MACR/L 3 070-R	.315	.169	.028	.002	15°	★		★		★		★	
	3	MACR/L 3 100-R	.472	.248	.039	.002	15°	★		★		★		★	
	3	MACR/L 3 150-R	.472	.248	.059	.002	15°	★		★		★		★	
	3	MACR/L 3 200-R	.630	.335	.079	.002	15°	★		★		★		★	
	3	MACR/L 3 200-L	.630	.335	.079	.002	15°	★		★		★		★	
	3	MACR/L 3 200-T	.630	.323	.079	.002	0°	★		★		★		★	
	3	MACR/L 3 250-T	.630	.323	.098	.002	0°	★		★		★		★	
							P25		M15		N15		S15		

<sup>1)</sup> To correspond with insert size on holder.

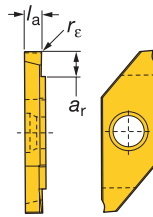
**Ordering example:** 10 pieces MACR 3 070-N 1025  
 10 pieces MACR 3 070-N 1025  
 R = Right hand. L = Left hand

# CoroCut XS inserts

## Grooving



MAGR/L



Right hand style shown

### Coromant grades

GC = Coated carbide/Cermet

	Insert size <sup>1)</sup>	Ordering code	Dimensions, inch			P	M	N	S
						GC	GC	GC	GC
			$a_r$	$l_a$	$r_\epsilon$	1025	1025	1025	1025
	3	MAGR/L 3 050	.051	.020	.002	★	★	★	★
	3	MAGR/L 3 075	.098	.030	.002	★	★	★	★
	3	MAGR/L 3 100	.106	.039	.002	★	★	★	★
	3	MAGR/L 3 125	.106	.049	.002	★	★	★	★
	3	MAGR/L 3 150	.146	.059	.002	★	★	★	★
	3	MAGR/L 3 175	.146	.069	.002	★	★	★	★
	3	MAGR/L 3 200	.146	.079	.002	★	★	★	★
	3	MAGR/L 3 250	.146	.079	.002	★	★	★	★
						P25	M15	N15	S15

Ordering example: 10 pieces MAGR 3 050 1025  
10 pieces MAGL 3 050 1025

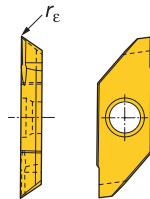
R = Right hand. L = Left hand

# CoroCut XS inserts

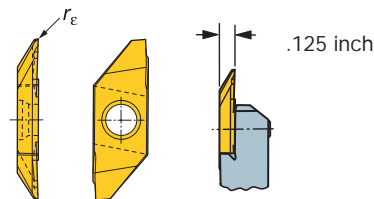
## Turning, backturning



Turning  
MAFR/L



Backturning  
MABR/L



### Tolerances:

$r_\epsilon$ : +0  
- .002

Repeatability: ± .001 inch

Center height: ± .001 inch

Right hand style shown

### Coromant grades

GC = Coated carbide/Cermet

	Insert size <sup>1)</sup>	Ordering code	Dimensions, inch			P	M	N	S
						GC	GC	GC	GC
			$r_\epsilon$	1025	1025	1025	1025		
	3	MAFR/L 3 003	.001			★	★	★	
	3	MAFR/L 3 010	.004			★	★	★	
	3	MAFR/L 3 020	.008			★	★	★	
	3	MABR/L 3 005	.002			★	★	★	
	3	MABR 3 020	.008			★	★	★	
					P25	M15	N15	S15	

Ordering example: 10 pieces MAFR 3 003 1025  
10 pieces MAFL 3 003 1025

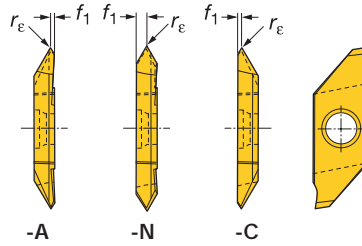
R = Right hand. L = Left hand

# CoroCut XS inserts

## Threading



MATR/L



Right hand style shown

Coromant grades

GC = Coated carbide/Cermet

Tolerances:

$r_e$ : ± .0008 inch

Repeatability: ± .001 inch

Center height: ± .001 inch

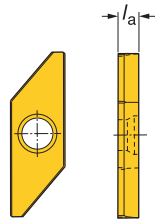
	Pitch range, inch	Insert size <sup>1)</sup>	Ordering code	Dimensions, inch		P		M		N		S	
				$f_1$	$r_e$	GC		GC		GC		GC	
						1025		1025		1025		1025	
	.008 - .039	3	MATR/L3 60-A	.024	.002	★		★		★		★	
	.008 - .039		MATR/L3 60-C	.024	.002	★		★		★		★	
	.008 - .079		MATR/L3 60-N	.063	.002	★		★		★		★	
						P25		M15		N15		S15	

<sup>1)</sup> 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

# CoroCut® XS utility inserts

MAXR/L



Right hand style shown

Coromant grades

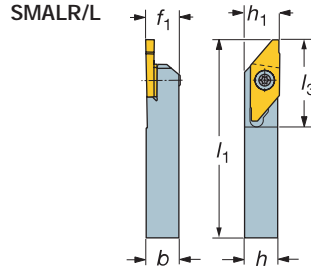
- = Uncoated carbide

	Insert size <sup>1)</sup>	Ordering code	Dimensions, inch			
			$l_a$		H10F	
	3	MAXR/L 3 300	.125		★	

<sup>1)</sup> To correspond with insert size on holder.

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

# CoroCut XS shank holder



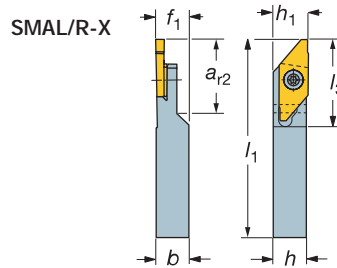
Right hand style shown

	To be used with insert size	Ordering code	Dimensions, inch/mm					
			<i>b</i>	<i>f</i> <sub>1</sub>	<i>h</i>	<i>h</i> <sub>1</sub>	<i>l</i> <sub>1</sub>	<i>l</i> <sub>3</sub>
	3	<b>Inch design</b>						
		SMALR/L 08C3	.500	.500	.500	.500	5.000	1.063
	3	SMALR/L 10C3	.625	.625	.625	.625	5.000	1.063
	3	<b>Metric design</b>						
		SMALR/L 1010K3	10	10	10	10	125	27
		SMALR/L 1212K3	12	12	12	12	125	27
		SMALR/L 1616K3	16	16	16	16	125	27

Ordering example: 2 pieces SMALR 08C3

# CoroCut XS shank holder

Cut off holder for sub-spindle



Right hand style shown

<i>a</i> <sub>r</sub> max. for holder	To be used with insert size	Ordering code	Dimensions, inch/mm					
			<i>b</i>	<i>f</i> <sub>1</sub>	<i>h</i>	<i>h</i> <sub>1</sub>	<i>l</i> <sub>1</sub>	<i>l</i> <sub>3</sub>
.787	3	<b>Inch design</b>						
		SMALR 08C3-X	.500	.500	.500	.500	5.000	1.063
.787	3	<b>Metric design</b>						
.787		SMALR 1010K3-X	10	10	10	10	125	27
	3	SMALR 1212K3-X	12	12	12	12	125	27

Ordering example: 2 pieces SMALR 08C 3-X

## Spare parts

Holder type	Screw	Key (Torx Plus)
SMALR/L C3/K3	5513 027-01	5680 046-01(8IP)
SMALR/L C3-X/K3-X	5513 027-02	5680 046-01(8IP)

Ordering example: 10 pieces 5513 027-01