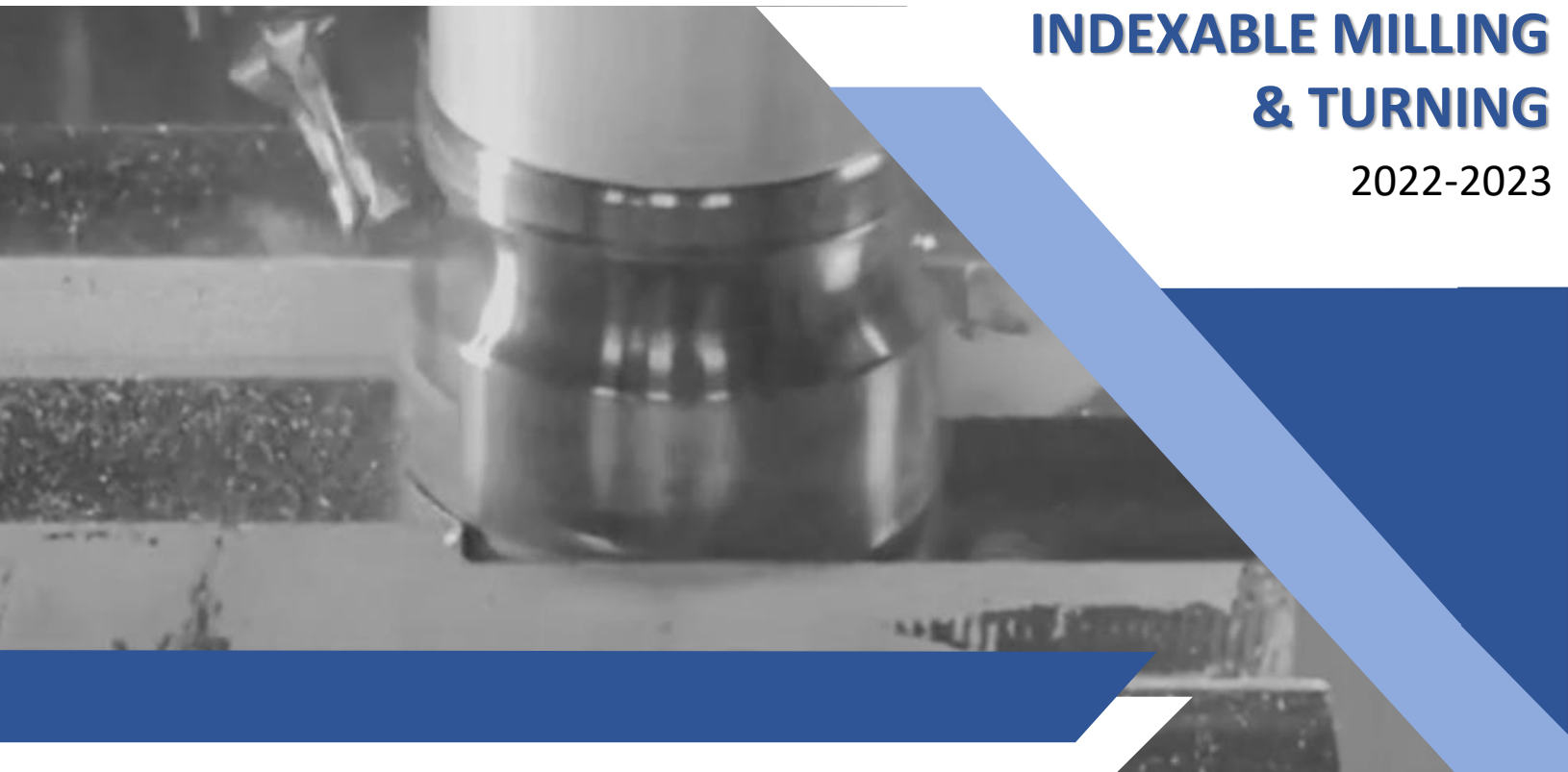




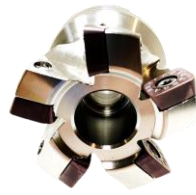
INDEXABLE MILLING & TURNING

2022-2023





High Feed PD520



High Feed SD410



High Feed LN490



High Feed AP290



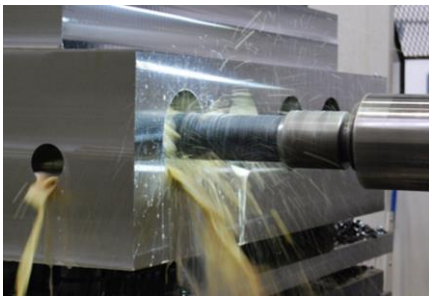
Face Mill SE445

The **BIG** Deal is in the Steel

All ICE steel products are manufactured from a special stainless steel alloy produced specifically to ICE Cutting Tools specifications.

- High density than tool steel giving better antivibration principles
- Harder than 45RC compared to most competitors typical cutter 32RC then plated
- Better memory material absorbs impact and returns to original location
- Cools up to 100 times faster than any other competitors cutter tested.
- Displaces heat better compared to a coated tool which absorbs heat with the coating acting as a cooling barrier.
- High pocket tolerances are achieved and maintained by machining the product in the hard state and by an inspection process performed in the in machine.
- Through hardened provides more strength and toughness.
- Tensile strength is 20% higher than typical H13.

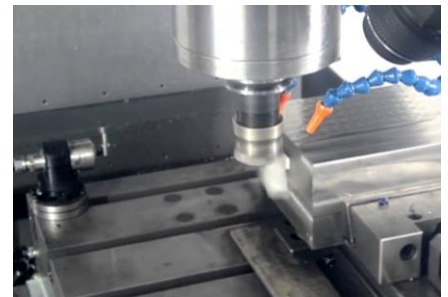
Reinventing Industries and Applications



Fracking



Automotive



Massive Metal Removal Applications

Don't get your cutter body rebuilt. Get a new cutter replacement with a discount every time.



HF PD520

OVERVIEW



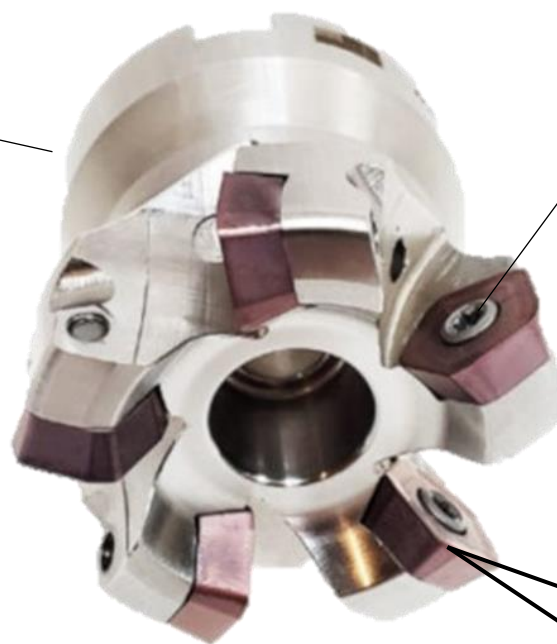
Summary

The PD520 currently is being used in massive mills across the country, but it also has wonderful uses in lighter horsepower machines. Its cutting angle allows for easy work in most any machine and application. The PD520 also comes with 5 indexes.



Made with our unique hardened Stainless-Steel.

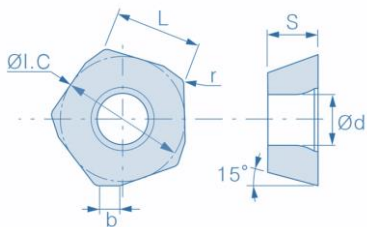
- Better heat dissipation
- Antivibration characteristics reduce chatter.
- Tighter tolerances from no post heat treating.
- Absorbs impacts better and has memory like characteristics.



ICE-PD Screw \$2.99 each

5 indexes

20° cut profile allows for a high feed experience with less effort.

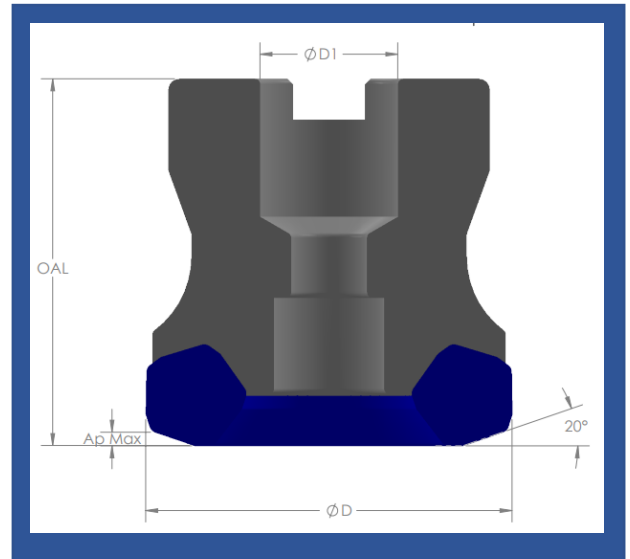
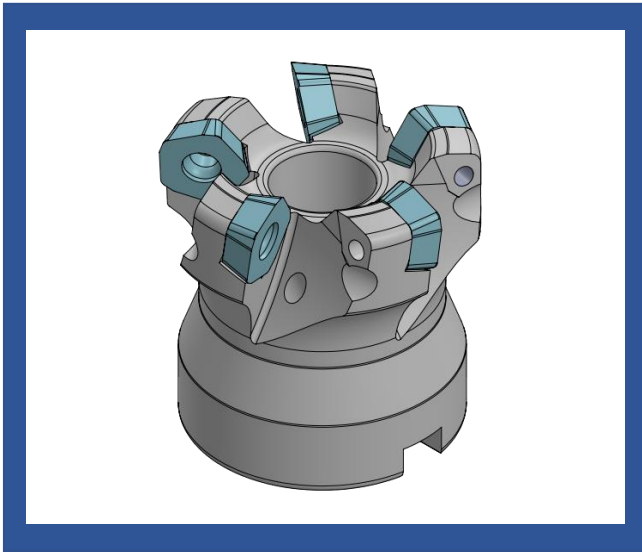


I.C	S	d	b
0.510"	0.201"	0.173"	0.067"

Speeds & Feeds

Material Cutting	Preferred Insert	Grade	SFM Range	IPT Range	DOC Max	Price
P	PDMT1305ZDSR-SAM	IP1215	550 (450-900)	.060 (.018-.075)	0.055 (0.08)	\$10.24
M	PDMT1305ZDSR-SAM	IP1215	500 (375-700)	.045 (.018-.055)	0.050 (0.07)	\$10.24
K	PDMT1305ZDSR-SAM	IP1215	600 (400-900)	.060 (.020-.070)	0.055 (0.07)	\$10.24
S	PDMT1305ZDSR-SAM	IP1030	100 (90-200)	.020 (.015-.030)	0.015 (0.035)	\$10.24

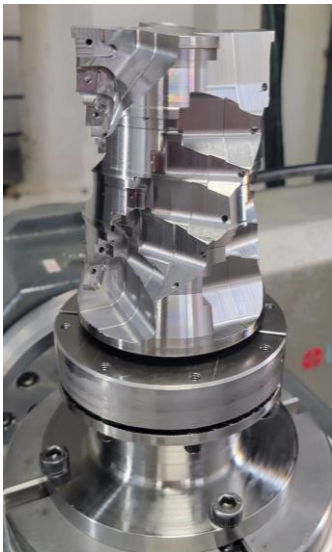
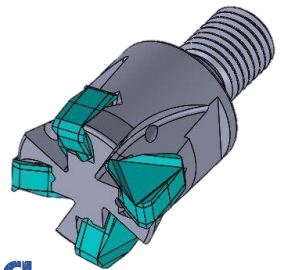
HF PD520 Standard Cutter Bodies



Part Number	DIA	INSERT TYPE	FLUTES	BORE	OAL	COOLANT	PRICE
HF 2.00 PD13 5 0.75 2.00 C	2.00	PD13	5	0.75	2.00	YES	\$240.00
HF 2.50 PD13 5 1.00 2.00 C	2.50	PD13	5	1.00	2.00	YES	\$258.00
HF 3.00 PD13 5 1.00 2.00 C	3.00	PD13	5	1.00	2.00	YES	\$280.00
HF 3.00 PD13 7 1.00 2.00 C	3.00	PD13	7	1.00	2.00	YES	\$42.00
HF 4.00 PD13 6 1.25 2.00 C	4.00	PD13	6	1.25	2.00	YES	\$368.00
HF 4.00 PD13 9 1.25 2.00 C	4.00	PD13	9	1.25	2.00	YES	\$460.00

Looking for Different Specs?

- **Specials in Less Than 7 Days**
- **Custom Production Prototyping**
- **High Tolerance Custom Specifications**



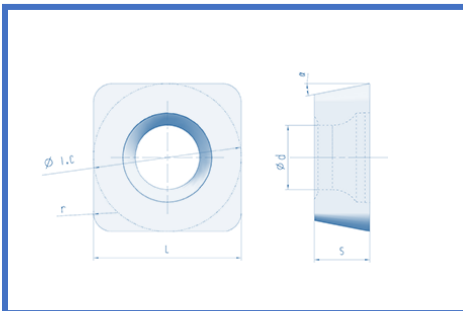
HF SD410 OVERVIEW

Summary

The SD410 is our most popular mill we provide. This cutter enjoys speed and aggressive cutting parameters. If you are looking to remove cubes fast, this is your go to. The SD410 comes with 4 indexes.

Made with our unique hardened Stainless-Steel.

- Better heat dissipation
- Antivibration characteristics reduce chatter.
- Tighter tolerances from no post heat treating.
- Absorbs impacts better and has memory like characteristics.



ICE-SD Screw \$2.99 each

4 indexes

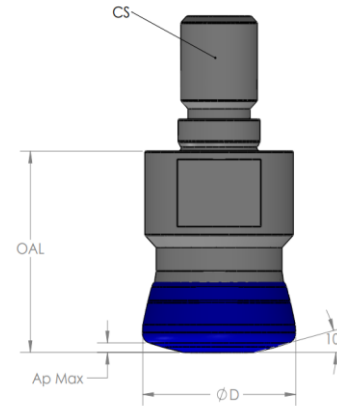
10° cut profile allows for massive metal removal.

I.C	S	d	L
0.500"	0.187"	0.173"	0.500"

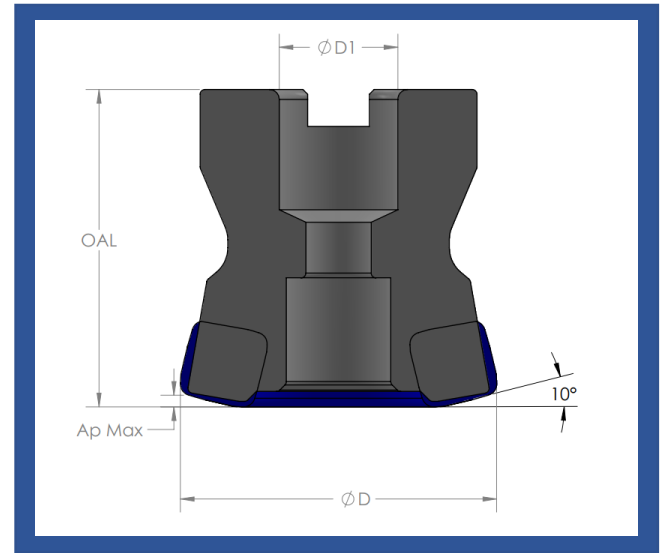
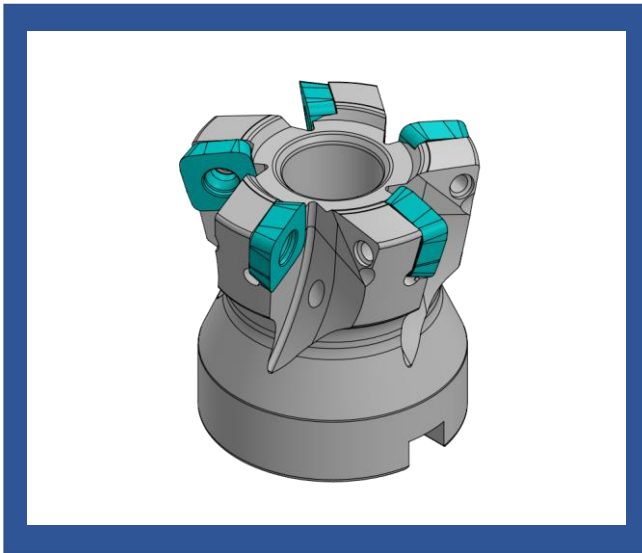
Speeds & Feeds

Material Cutting	Preferred Insert	Grade	SFM Range	IPT Range	DOC Max	Price
P	SDMT120412-IPMFT	IP1215	550 (450-900)	.060 (.018-.075)	0.055 (0.08)	\$8.75
P	SDMT120412-ISMCB	IP1215	550 (450-900)	.050 (.018-.060)	0.045 (0.07)	\$8.75
M	SDMT120412-ISMCB	IP1215	500 (375-700)	.045 (.018-.055)	0.050 (0.065)	\$8.75
M	SDMT120412-IPMFT	IP1630	500 (375-700)	.050 (.018-.065)	0.050 (0.065)	\$8.75
K	SDMT120412-IPMFT	IP2202	600 (400-900)	.060 (.020-.085)	0.055 (0.08)	\$8.75
S	SDMT120412-INMCB	IP212	100 (90-200)	.020 (.015-.030)	0.015 (0.035)	\$10.99

Screw-on Design



HF SD410 Standard Cutter Bodies



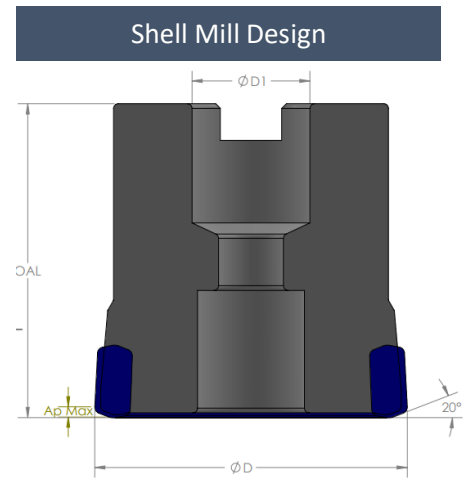
PART NUMBER	DIA	INSERT TYPE	FLUTES	BORE	OAL	COOLANT	PRICE
HF 1.25 SD12 2 CSM16 1.80 C	1.25	SD12	2	0.00	1.80	YES	\$135.80
HF 1.50 SD12 3 CSM16 1.50 C	1.50	SD12	3	0.00	1.50	YES	\$181.00
HF 2.00 SD12 5 0.75 2.00 C	2.00	SD12	5	0.75	2.00	YES	\$213.20
HF 2.00 SD12 5 0.75 3.00 C	2.00	SD12	5	0.75	3.00	YES	\$260.60
HF 2.00 SD12 5 0.75 4.00 C	2.00	SD12	5	0.75	4.00	YES	\$307.80
HF 2.25 SD12 5 0.75 3.00 C	2.25	SD12	5	0.75	3.00	YES	\$286.20
HF 2.50 SD12 5 0.75 2.00 C	2.50	SD12	5	0.75	2.00	YES	\$231.00
HF 2.50 SD12 5 0.75 3.00 C	2.50	SD12	5	0.75	3.00	YES	\$286.20
HF 2.50 SD12 5 0.75 4.00 C	2.50	SD12	5	0.75	4.00	YES	\$341.20
HF 2.50 SD12 5 1.00 2.00 C	2.50	SD12	5	1.00	2.00	YES	\$231.00
HF 3.00 SD12 5 1.00 2.00 C	3.00	SD12	5	1.00	2.00	YES	\$252.60
HF 3.00 SD12 7 1.00 2.00 C	3.00	SD12	7	1.00	2.00	YES	\$297.00
HF 4.00 SD12 6 1.25 2.00 C	4.00	SD12	6	1.25	2.00	YES	\$363.00
HF 4.00 SD12 7 1.50 2.50 C	4.00	SD12	7	1.50	2.50	YES	\$413.20
HF 4.00 SD12 9 1.25 2.00 C	4.00	SD12	9	1.25	2.00	YES	\$429.80
HF 4.00 SD12 9 1.25 2.50 C	4.00	SD12	9	1.25	2.50	YES	\$457.60
HF 4.00 SD12 9 1.50 2.50 C	4.00	SD12	9	1.50	2.50	YES	\$457.60
HF 5.00 SD12 7 1.25 2.00 NC	5.00	SD12	7	1.25	2.00	YES	\$624.80
HF 6.00 SD12 8 1.50 2.50 NC	6.00	SD12	8	1.50	2.50	YES	\$812.80

HF LN490

OVERVIEW

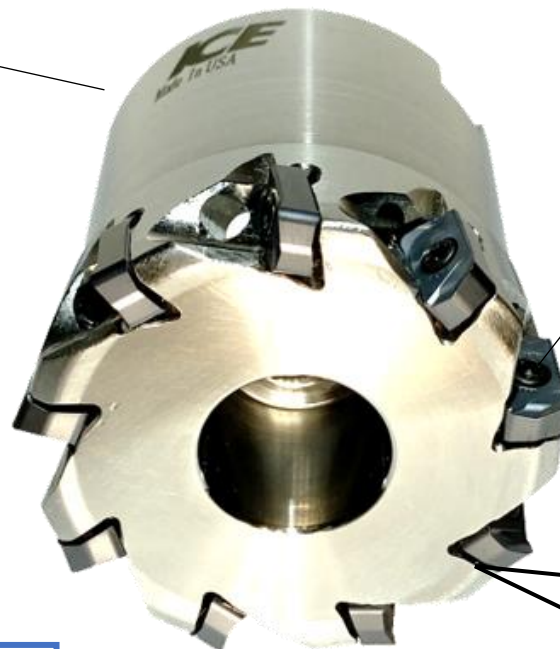
Summary

The LN490 High Feed Mill increases feed rates because of its close pitch high density inserts. More teeth in the cut equals more MRR.



Made with our unique hardened Stainless-Steel.

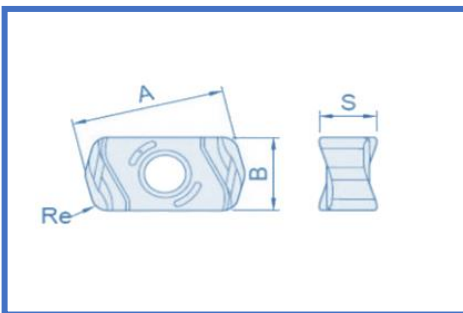
- Better heat dissipation
- Antivibration characteristics reduce chatter.
- Tighter tolerances from no post heat treating.
- Absorbs impacts better and has memory like characteristics.



ICE-LN Screw \$1.99 each

4 indexes

20° cut profile allows for massive metal removal.

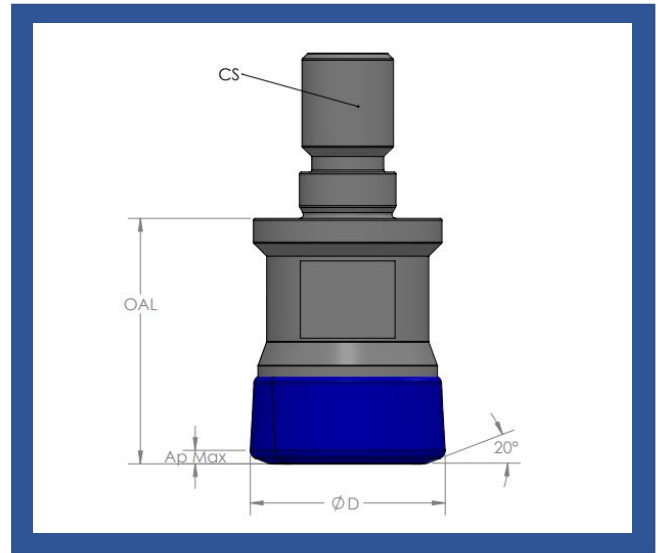
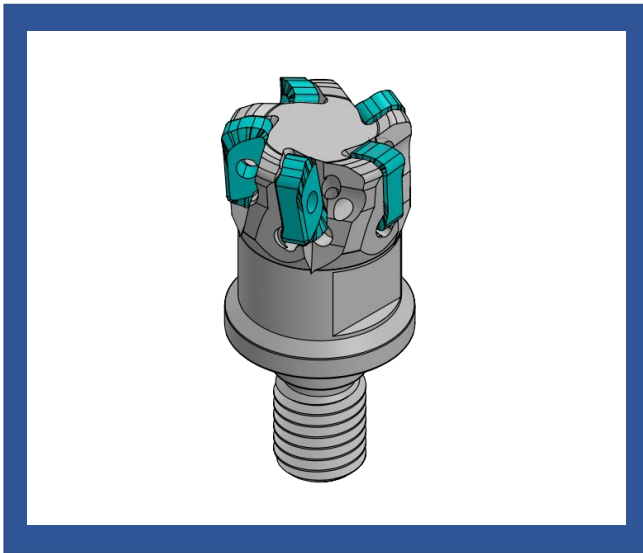


I.C	S	d	L
0.500"	0.187"	0.173"	0.500"

Speeds & Feeds

Material Cutting	Preferred Insert	Grade	SFM Range	IPT Range	DOC Max	Price
P	LNMU0303-ZER	ICE1	550 (450-900)	.025 (.012-.039)	0.020 (0.039)	\$8.40
M	LNMU0303-ZER-ML	IP1315	500 (450-800)	.020 (.012-.039)	0.020 (0.039)	\$8.40
K	LNMU0303-ZER-MJ	IP1215	600 (450-900)	.030 (.012-.039)	0.025 (0.039)	\$8.40
S	LNMU0303-ZER-ML	IP1630	100 (90-200)	.015 (.010-.025)	0.010 (0.020)	\$8.40

HF LN490 Standard Cutter Bodies



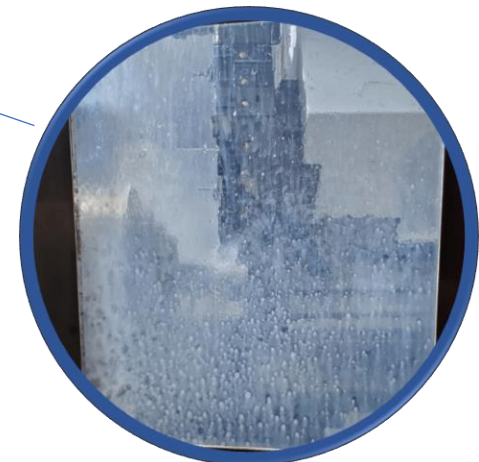
Part Number	DIA	INSERT TYPE	FLUTES	BORE	OAL	COOLANT	PRICE
HF 0.625 LN03 2 CSM08 1.25 C	0.625	LN03	2	0.00	1.25	YES	\$147.00
HF 0.75 LN03 3 CSM10 1.25 C	0.75	LN03	3	0.00	1.25	YES	\$191.40
HF 1.00 LN03 5 CSM12 1.25 C	1.00	LN03	5	0.00	1.25	YES	\$280.20
HF 1.25 LN03 6 CSM16 1.25 C	1.25	LN03	6	0.00	1.25	YES	\$324.80
HF 1.50 LN03 7 CSM16 1.25 C	1.50	LN03	7	0.00	1.25	YES	\$392.20
HF 2.00 LN03 9 0.75 2.00 C	2.00	LN03	9	0.75	2.00	YES	\$468.80

Better Coolant, Better Performance



Leading Brand

Our Blend



We spent a lot of time working with blenders to find the best all-around coolant on the market.

- Great for hard water
- No obnoxious chemical smells
- Leaves your windows clear, so you can see what you're doing

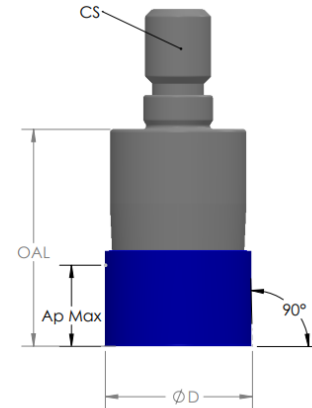
HF AP290

OVERVIEW

Summary

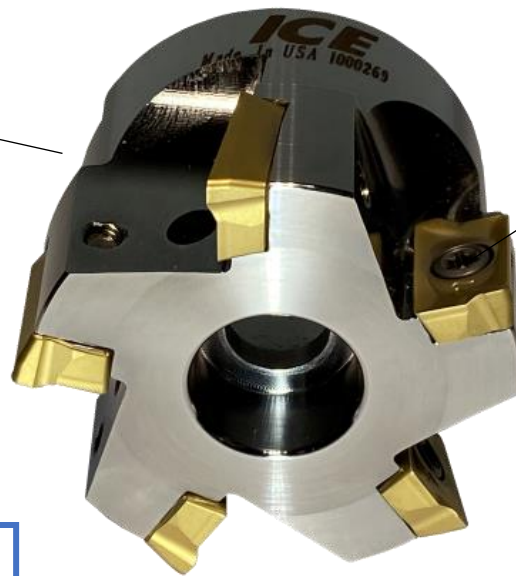
The AP290 is one of the most capable mills we provide. Can be used for general Shoulder milling as well as high-feed applications. The AP insert offers a radius range from 0 to 0.126". When you need a dynamic mill, look no further then the AP290.

Screw-On Design



Made with our unique hardened Stainless-Steel.

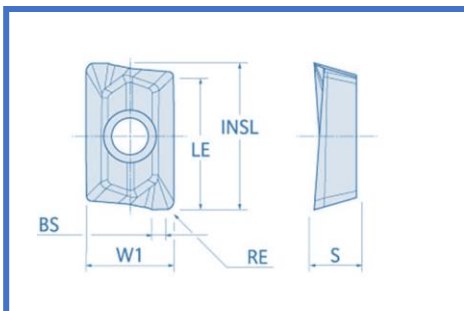
- Better heat dissipation
- Antivibration characteristics reduce chatter.
- Tighter tolerances from no post heat treating.
- Absorbs impacts better and has memory like characteristics.



ICE-AP Screw \$2.99 each

2 indexes

90° cut profile allows for sidewall applications

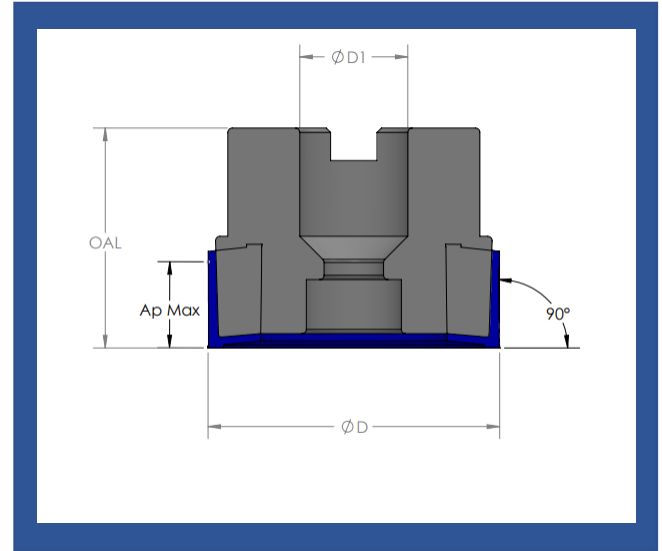
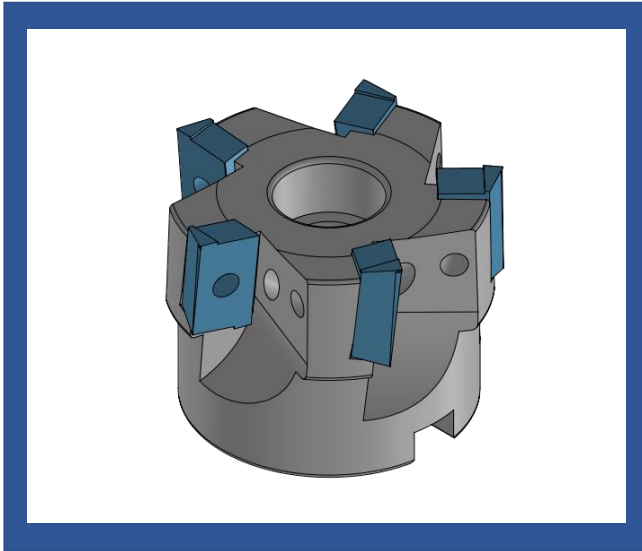


LE	W1	d	RE
0.629"	0.386"	0.173"	0 - 0.0126"

Speeds & Feeds

Material Cutting	Preferred Insert	Grade	SFM Range	IPT Range	DOC Max	Price
P	APKT1604PDER-HCM ICP1235	ICP1235	600 (350-850)	.012 (.005-.016)	0.100 (0.551)	\$10.71
M	APKT1604PDER-SCM ITP2235	ITP2235	500 (275-650)	.010 (.004-.012)	0.075 (0.551)	\$10.71
K	APKT1604PDER-CCM ITC3215	ITC3215	650 (300-900)	.012 (.006-.018)	0.100 (0.551)	\$10.71
N	APHT1604PDFR-LMM IH216T	IH216T	950 (500-1500)	.015 (.003-.022)	0.100 (0.551)	Call for Price
S	APKT1604PDER-SCM ITC5235	ITC5235	110 (90-250)	.006 (.002-.010)	0.050 (0.551)	\$10.71

HF AP290 Standard Cutter Bodies



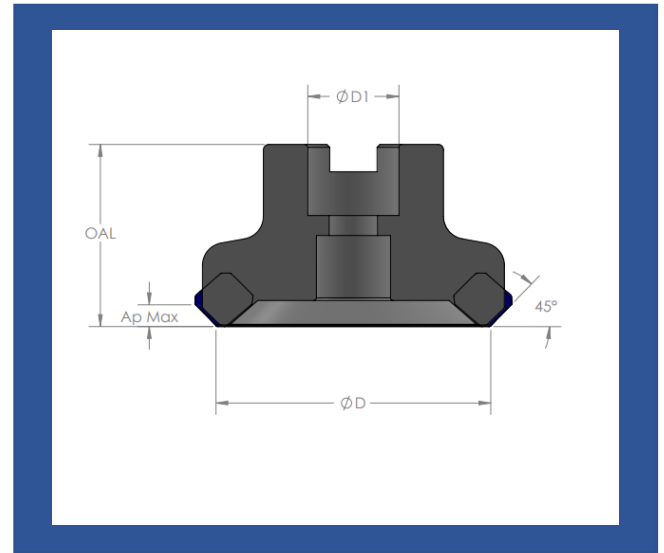
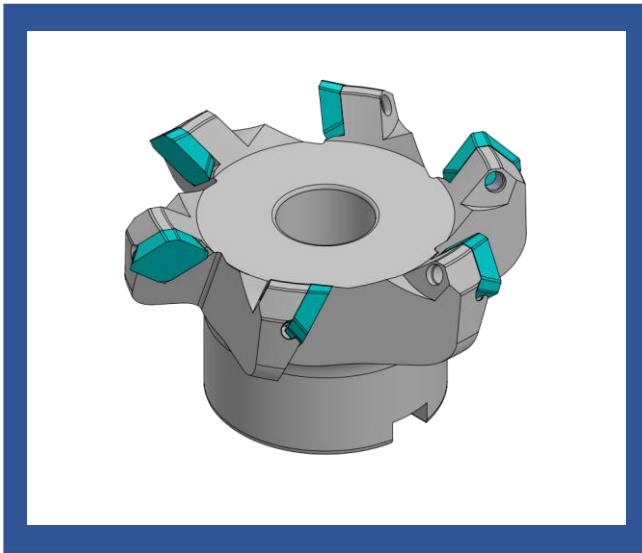
PART NUMBER	DIA	INSERT TYPE	FLUTES	BORE	OAL	COOLANT	PRICE
SM 1.00 AP16 2 CSM12 1.50 C	1.00	AP16	2	0.00	1.50	YES	\$140.20
SM 1.25 AP16 3 CSM16 1.50 C	1.25	AP16	3	0.00	1.50	YES	\$164.80
SM 1.50 AP16 4 CSM16 1.50 C	1.50	AP16	4	0.00	1.50	YES	\$212.20
SM 2.00 AP16 5 0.75 1.50 C	2.00	AP16	5	0.75	1.50	YES	\$224.40
SM 2.50 AP16 6 0.75 2.00 C	2.50	AP16	6	0.75	2.00	YES	\$266.60
SM 3.00 AP16 7 1.00 2.00 C	3.00	AP16	7	1.00	2.00	YES	\$312.60

More Inserts

Material Cutting	Preferred Insert	Grade	SFM Range	IPT Range	DOC Max	Price
P	APKT 160416-RCM ITP1235	ITP1235	600 (350-850)	.012 (.005-.016)	0.100 (0.551)	\$10.71
M	APKT 160416-RCM ITP2235	ITP2235	500 (275-650)	.010 (.004-.012)	0.075 (0.551)	\$10.71
P	APKT 160424-RCM ITP1235	ITP1235	600 (350-850)	.012 (.005-.016)	0.100 (0.551)	\$10.71
M	APKT 160424-RCM ITP2235	ITP2235	500 (275-650)	.010 (.004-.012)	0.075 (0.551)	\$10.71
P	APKT 160432-RCM ITP1235	ITP1235	600 (350-850)	.010 (.005-.016)	0.100 (0.551)	\$10.71
M	APKT 160432-RCM ITP2235	ITP2235	500 (275-650)	.008 (.004-.012)	0.075 (0.551)	\$10.71
P	APKT 160448-RCM ITP1235	ITP1235	600 (350-850)	.010 (.005-.016)	0.100 (0.551)	\$10.71
M	APKT 160448-RCM ITP2235	ITP2235	500 (275-650)	.008 (.004-.012)	0.075 (0.551)	\$10.71

FM SE445

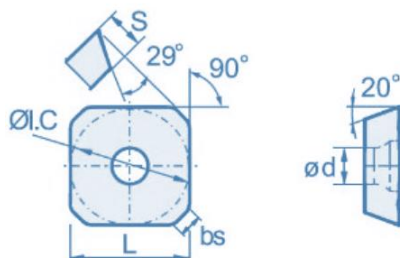
- 45° Face mill built for heavy depths of cut
- Fine finishes with lighter depths of cut



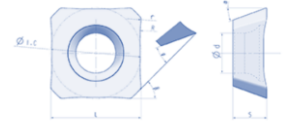
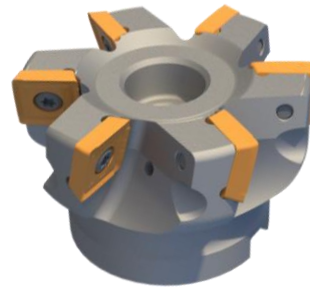
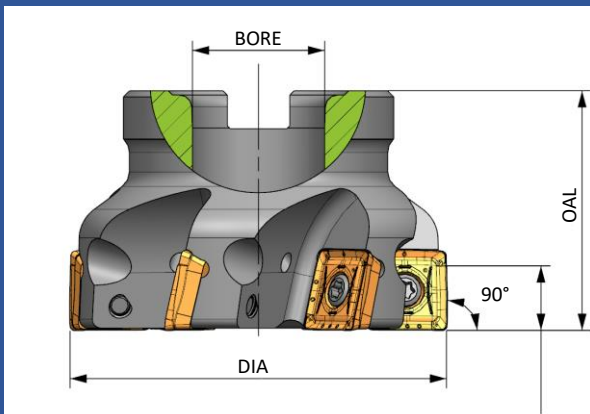
PART NUMBER	DIA	BORE	OAL	FLUTES	PRICE
FM 2.00 SE12 4 0.75 2.00 NC	2.00	0.75	2.00	4	\$226.60
FM 2.50 SE12 5 0.75 2.00 NC	2.50	0.75	2.00	5	\$274.80
FM 3.00 SE12 6 1.00 2.00 NC	3.00	1.00	2.00	6	\$327.00
FM 4.00 SE12 7 1.25 2.00 NC	4.00	1.25	2.00	7	\$449.80

Speeds & Feeds

Material Cutting	Preferred Insert	Grade	SFM Range	IPT Range	DOC Max	Price
P	SEET12T3-IPR IP4225	IP4225	550 (450-900)	.012 (.005-.016)	0.100 (0.230)	\$9.52
M	SEET12T3-QPR IP1315	IP1315	550 (450-800)	.010 (.005-.016)	0.075 (0.200)	\$9.52
K	SEET12T3-QPM IP2202	IP2202	550 (450-900)	.012 (.005-.016)	0.100 (0.230)	\$9.52
N	SEET12T3-LH ID101	ID101	950 (500-1500)	.015 (.003-.022)	0.100 (0.230)	\$11.24



HF SD13



Inserts

Material Cutting	Preferred Insert	Grade	Price
P	SDKT13T308PER-IM IP1325	IP1325	\$8.42
M	SDKT13T308PER-IM IP1325	IP1325	\$8.42
K	SDKT13T308PER-IM IP3220	IP3220	\$8.42
P K	SDKT13T308PER-IM IP2202	IP2202	\$8.42

PART NUMBER

DIA

BORE

OAL

FLUTES

PRICE

FM905-2.00-0.750-5-SD13

2.00

0.75

1.60

5

\$212.14

FM905-2.50-0.750-6-SD13

2.50

0.75

1.60

6

\$269.70

FM905-3.00-1.00-7-SD13

3.00

1.00

2.00

7

\$332.27

FM905-4.00-1.25-8-SD13

4.00

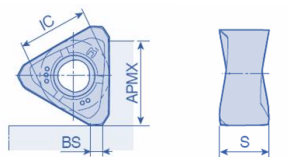
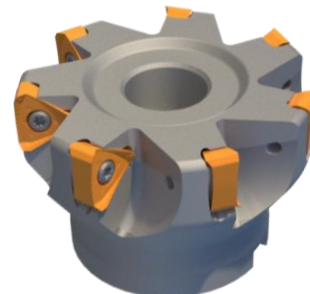
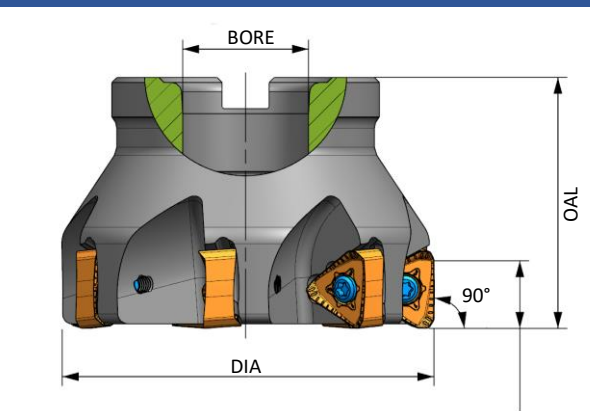
1.25

2.00

8

\$424.24

FM TN13



Inserts

Material Cutting	Preferred Insert	Grade	Price
P	TNGX1306PNFR-1 IP1315	IP1315	\$17.04
M	TNGX1306PNFR-1 IP1325	IP1325	\$17.04
K	TNGX1306PNFR-1 IP1325	IP1325	\$17.04

PART NUMBER

DIA

BORE

OAL

FLUTES

PRICE

FM902-2.00-0.750-4-TN13

2.00

0.75

1.60

4

\$166.67

FM902-2.50-0.750-5-TN13

2.50

0.75

1.60

5

\$240.40

FM902-3.00-1.00-7-TN13

3.00

1.00

2.00

7

\$356.07

FM902-4.00-1.25-8-TN13

4.00

1.25

2.00

8

\$424.24

FM902-5.00-1.50-10-TN13

5.00

1.50

2.50

10

\$555.60

FM902-6.00-1.50-12-TN13

6.00

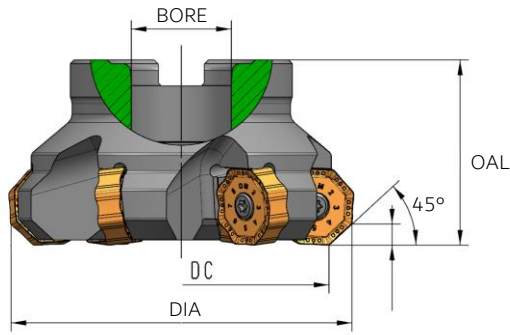
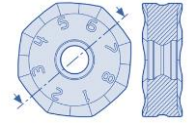
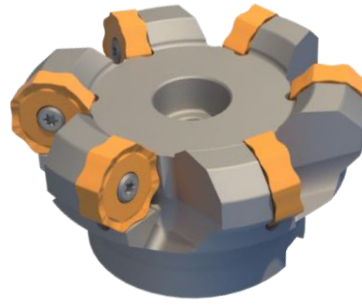
1.50

2.50

12

\$824.27

FM ON09



Inserts

Material Cutting	Preferred Insert	Grade	Price
P	ONMU0906ANN-IM	IP1325	\$21.84
M	ONMU0906ANN-IL	IP1325	\$21.84

PART NUMBER

DIA

BORE

OAL

FLUTES

PRICE

FM453-4.00-1.25--7-ON09

4.00

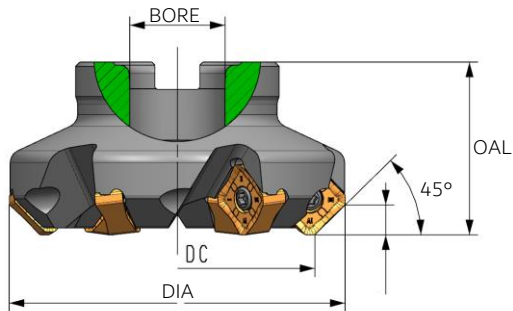
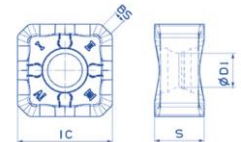
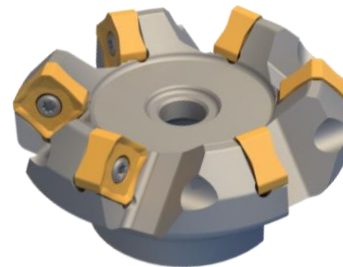
1.25

2.00

7

\$488.90

FM SN13



Inserts

Material Cutting	Preferred Insert	Grade	Price
P	SNMX1306ANN-IM	IP1325	\$13.48
M	SNMX1306ANN-IM	IP1630	\$13.48

PART NUMBER

DIA

BORE

OAL

FLUTES

PRICE

FM452-2.00-0.75-5-SN13

2.00

0.75

1.60

5

\$102.04

FM452-2.50-0.75-6-SN13

2.50

0.75

1.60

6

\$246.70

FM452-3.00-1.00-7-SN13

3.00

1.00

2.00

7

\$292.84

FM452-4.00-1.25-8-SN13

4.00

1.25

2.00

8

\$488.90

FM452-5.00-1.50-10-SN13

5.00

1.50

2.50

10

\$646.74

FM452-6.00-1.50-12-SN13

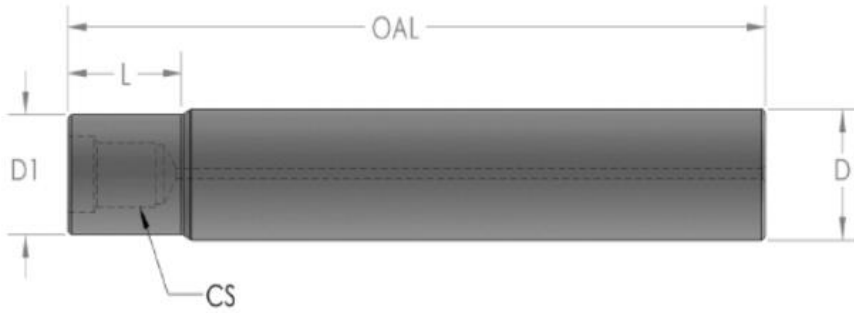
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1.50

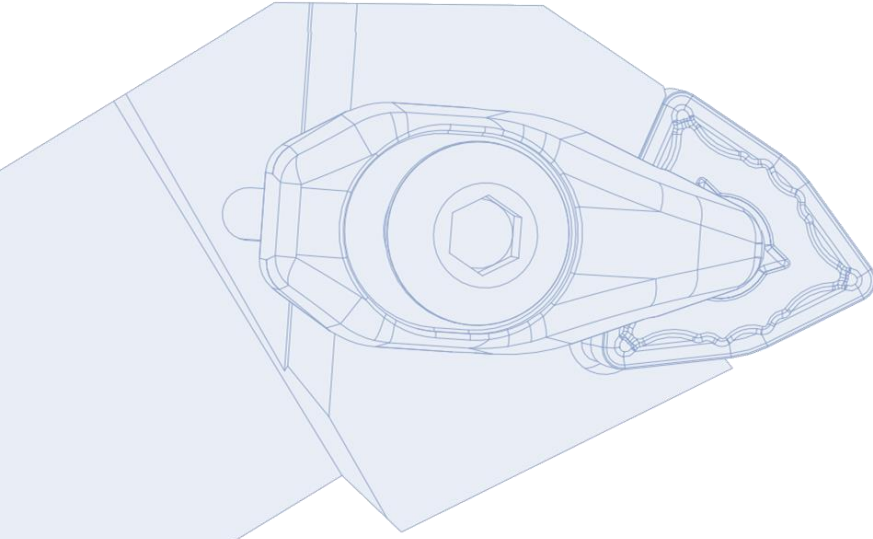
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12

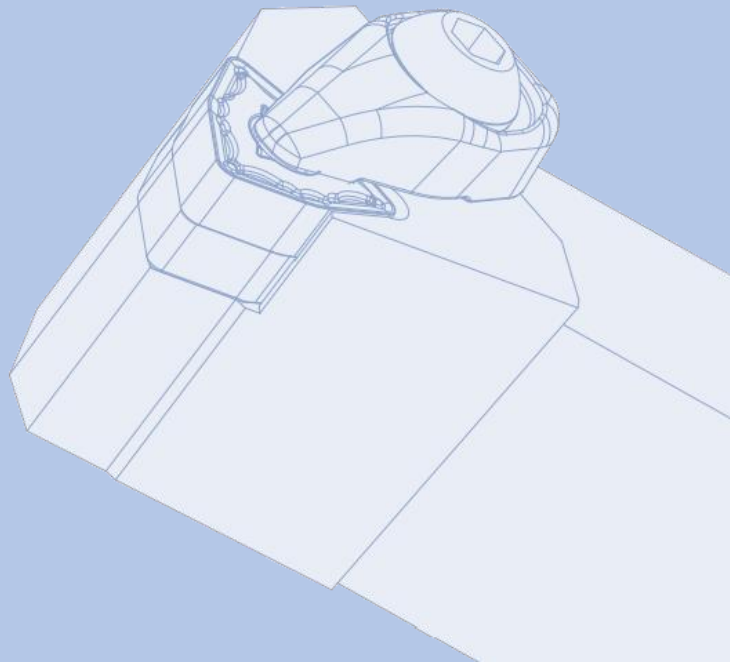
\$824.27



Part Number	D	CS	D1	L	OAL	Price
CSS 0.75 CSM10 0.71 0.00 2.00 SS	0.75	CSM10	0.71	0.00	2.00	\$91.40
CSS 0.75 CSM10 0.71 0.75 3.00 SS	0.75	CSM10	0.71	0.75	3.00	\$91.40
CSS 0.75 CSM10 0.71 1.00 4.00 SS	0.75	CSM10	0.71	1.00	4.00	\$98.00
CSS 0.75 CSM10 0.71 2.00 5.00 SS	0.75	CSM10	0.71	2.00	5.00	\$104.60
CSS 0.75 CSM10 0.71 3.00 6.00 SS	0.75	CSM10	0.71	3.00	6.00	\$111.20
CSS 1.00 CSM12 0.96 0.75 3.00 SS	1.00	CSM12	0.96	0.75	3.00	\$91.40
CSS 1.00 CSM12 0.96 1.00 4.00 SS	1.00	CSM12	0.96	1.00	4.00	\$98.00
CSS 1.00 CSM12 0.96 2.00 5.00 SS	1.00	CSM12	0.96	2.00	5.00	\$104.60
CSS 1.00 CSM12 0.96 3.00 6.00 SS	1.00	CSM12	0.96	3.00	6.00	\$111.20
CSS 1.25 CSM16 1.14 1.50 4.00 SS	1.25	CSM16	1.14	1.50	4.00	\$98.00
CSS 1.25 CSM16 1.21 2.50 5.00 SS	1.25	CSM16	1.21	2.50	5.00	\$104.60
CSS 1.25 CSM16 1.21 3.50 6.00 SS	1.25	CSM16	1.21	3.50	6.00	\$111.20
CWS 0.75 CSM10 0.71 0.00 2.00 SS	0.75	CSM10	0.71	0.00	2.00	\$106.40
CWS 0.75 CSM10 0.71 0.75 3.00 SS	0.75	CSM10	0.71	0.75	3.00	\$106.40
CWS 0.75 CSM10 0.71 1.00 4.00 SS	0.75	CSM10	0.71	1.00	4.00	\$113.00
CWS 0.75 CSM10 0.71 2.00 5.00 SS	0.75	CSM10	0.71	2.00	5.00	\$119.60
CWS 0.75 CSM10 0.71 3.00 6.00 SS	0.75	CSM10	0.71	3.00	6.00	\$126.20
CWS 1.00 CSM12 0.96 0.75 3.00 SS	1.00	CSM12	0.96	0.75	3.00	\$106.40
CWS 1.00 CSM12 0.96 1.00 4.00 SS	1.00	CSM12	0.96	1.00	4.00	\$113.00
CWS 1.00 CSM12 0.96 2.00 5.00 SS	1.00	CSM12	0.96	2.00	5.00	\$119.60
CWS 1.00 CSM12 0.96 3.00 6.00 SS	1.00	CSM12	0.96	3.00	6.00	\$126.20
CWS 1.25 CSM16 1.14 1.50 4.00 SS	1.25	CSM16	1.14	1.50	4.00	\$113.00
CWS 1.25 CSM16 1.21 2.50 5.00 SS	1.25	CSM16	1.21	2.50	5.00	\$119.60
CWS 1.25 CSM16 1.21 3.50 6.00 SS	1.25	CSM16	1.21	3.50	6.00	\$126.20

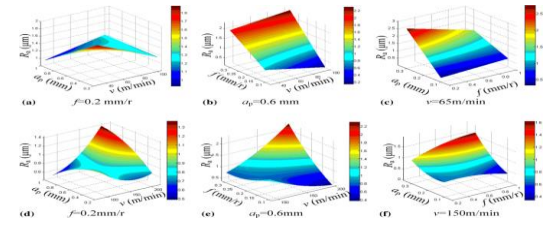


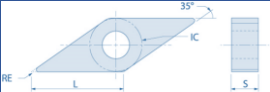
ISO TURNING

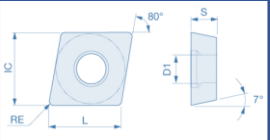


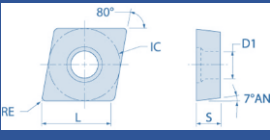
The Best Choice on the Market

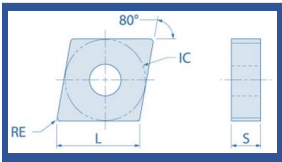
We hand select our ISO Turning inserts through rigorous testing and consistency. Our ISO Turning inserts are the most competitive collection you will find.

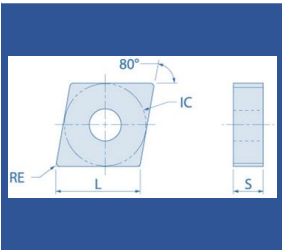


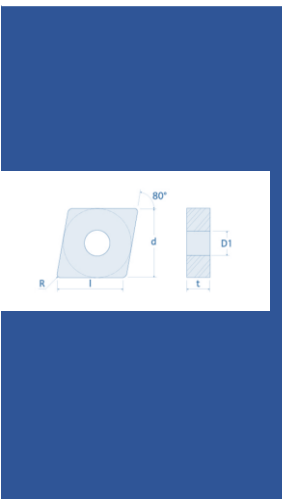
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	N	VNMG160402 / VNMG 330	-	JTK101	0.375"	0.008"	0.187"	\$5.49
	N	VNMG160404 / VNMG 331	-	JTK101	0.375"	0.016"	0.187"	\$5.49
	N	VNMG160408 / VNMG 332	-	JTK101	0.375"	0.031"	0.187"	\$5.49

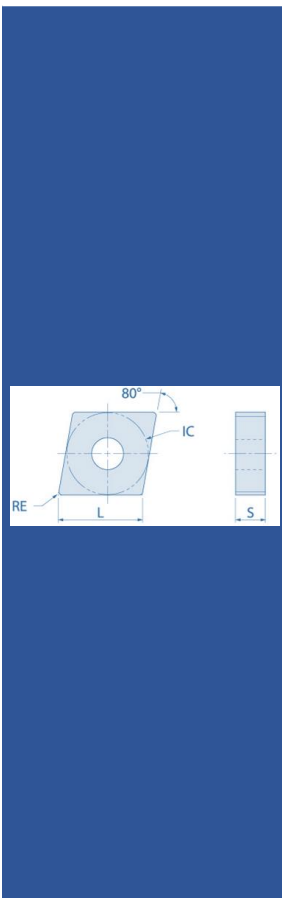
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	CCMT060204 / CCMT 21.51	ITF	IC2115	0.25"	0.016"	0.094"	\$3.29
	P M K	CCMT060204 / CCMT 21.51	ITF	IP1215	0.25"	0.016"	0.094"	\$3.29
	P K	CCMT09T304 / CCMT 32.51	ITF	IC2115	0.375"	0.016"	0.156"	\$3.69
	P M K	CCMT09T304 / CCMT 32.51	ITF	IP1215	0.375"	0.016"	0.156"	\$3.69
	P M K	CCMT09T308 / CCMT 32.52	ITF	IP1215	0.375"	0.031"	0.156"	\$3.69

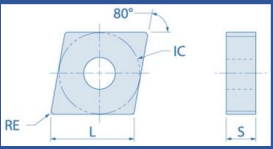
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	CCMT060204 / CCMT 21.51	ITM	IC2115	0.25"	0.016"	0.094"	\$3.29
	P K	CCMT060204 / CCMT 21.51	ITM	IC2325S	0.25"	0.016"	0.094"	\$3.29
	P M K	CCMT060204 / CCMT 21.51	ITM	IP1215	0.25"	0.016"	0.094"	\$3.29
	P K	CCMT060208 / CCMT 21.52	ITM	IC2115	0.25"	0.031"	0.094"	\$3.29
	P K	CCMT060208 / CCMT 21.52	ITM	IC2325S	0.25"	0.031"	0.094"	\$3.29
	P M K	CCMT060208 / CCMT 21.52	ITM	IP1215	0.25"	0.031"	0.094"	\$3.29
	P K	CCMT09T304 / CCMT 32.51	ITM	IC2115	0.375"	0.016"	0.156"	\$3.69
	P K	CCMT09T304 / CCMT 32.51	ITM	IC2325S	0.375"	0.016"	0.156"	\$3.69
	P M K	CCMT09T304 / CCMT 32.51	ITM	IP1215	0.375"	0.016"	0.156"	\$3.69
	P K	CCMT09T308 / CCMT 32.52	ITM	IC2115	0.375"	0.031"	0.156"	\$3.69
	P K	CCMT09T308 / CCMT 32.52	ITM	IC2325S	0.375"	0.031"	0.156"	\$3.69
	P M K	CCMT09T308 / CCMT 32.52	ITM	IP1215	0.375"	0.031"	0.156"	\$3.69

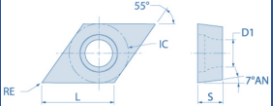
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	K H	CNMA160616 / CNMA 544	-	IC3215	0.625"	0.063"	0.25"	\$8.59

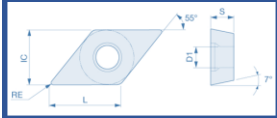
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P M K	CNMM250924 / CNMM 866	RP	IC2415	1.00"	0.094"	0.375"	\$25.69
	P M K	CNMM250924 / CNMM 866	RP	IC2425	1.00"	0.094"	0.375"	\$25.69

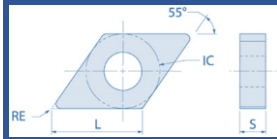
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P M K	CNMG120404 / CNMG 431	MSF	IP1315	0.25"	0.016"	0.094"	\$4.29
	P M K	CNMG120404 / CNMG 431	IMF	IP1315	0.25"	0.016"	0.094"	\$4.29
	P K	CNMG120404 / CNMG 431	IPF	IC2115	0.375"	0.016"	0.156"	\$4.29
	P K	CNMG120404 / CNMG 431	IPF	IC2325S	0.375"	0.016"	0.156"	\$4.29
	P M K	CNMG120408 / CNMG 432	MF	IP1315	0.375"	0.031"	0.156"	\$4.29
	P M K	CNMG120408 / CNMG 432	IMF	IP1315	0.375"	0.031"	0.156"	\$4.29

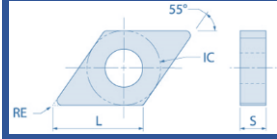
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	N	CNMG120404 / CNMG 431	-	JTK101	0.50"	0.016"	0.187"	\$4.69
	K H	CNMG120404 / CNMG 431	IKM	IC3210	0.50"	0.016"	0.187"	\$4.29
	K H	CNMG120404 / CNMG 431	IKM	IP3220	0.50"	0.016"	0.187"	\$4.29
	P M K	CNMG120404 / CNMG 431	IMM	IC1215	0.50"	0.016"	0.187"	\$4.29
	P K	CNMG120404 / CNMG 431	IPM	IC2115	0.50"	0.016"	0.187"	\$4.29
	N	CNMG120408 / CNMG 432	-	JTK101	0.50"	0.031"	0.187"	\$4.65
	K H	CNMG120408 / CNMG 432	IKM	IC3220	0.50"	0.031"	0.187"	\$4.29
	P M K	CNMG120408 / CNMG 432	IMM	IP1215	0.50"	0.031"	0.187"	\$4.29
	P K	CNMG120408 / CNMG 432	IPM	IP2115	0.50"	0.031"	0.187"	\$4.29
	P K	CNMG120408 / CNMG 432	IPM	IC2325S	0.50"	0.031"	0.187"	\$4.29
	P K	CNMG120412 / CNMG433	IPM	IC2325S	0.50"	0.047"	0.187"	\$4.29
	P M K	CNMG160612 / CNMG 543	OPM	IC2425	0.625"	0.047"	0.25"	\$11.29

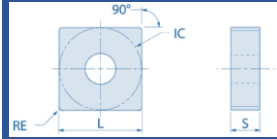
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	K H	CNMG120408 / CNMG 432	IKR	IC3210	0.625"	0.063"	0.25"	\$4.29
	K H	CNMG120408 / CNMG 432	IKR	IC3220	0.625"	0.063"	0.25"	\$4.29
	P K	CNMG120408 / CNMG 432	IPR	IC2330S	0.625"	0.063"	0.25"	\$4.29
	K H	CNMG120412 / CNMG 433	IKR	IC3210	0.50"	0.047"	0.187"	\$4.29
	K H	CNMG120412 / CNMG 433	IKR	IC3220	0.50"	0.047"	0.187"	\$4.29
	P K	CNMG120412 / CNMG 433	IPR	IC2330S	0.50"	0.047"	0.187"	\$4.29
	P M K	CNMG160608 / CNMG 542	OPR	IC2425	0.625"	0.031"	0.25"	\$11.29
	P M K	CNMG160612 / CNMG 543	OPR	IC4215	0.625"	0.047"	0.25"	\$11.29
	K H	CNMG160616 / CNMG 544	-	IC3215	0.625"	0.063"	0.25"	\$8.59
	P M K	CNMG190608 / CNMG 642	OPR	IC2425	0.75"	0.031"	0.25"	\$11.29
	P M K	CNMG190612 / CNMG 643	KPR	IC2425	0.75"	0.047"	0.25"	\$11.29
	P M K	CNMG190612 / CNMG 643	KPR	IC2435	0.75"	0.047"	0.25"	\$11.29
	P M K	CNMG190616 / CNMG 644	-	IC2125	0.75"	0.063"	0.25"	\$11.29
	P M K	CNMG190616 / CNMG 644	KPR	IC2415	0.75"	0.063"	0.25"	\$11.29
	P M K	CNMG190616 / CNMG 644	KPR	IC2425	0.75"	0.063"	0.25"	\$11.29

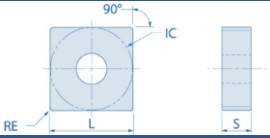
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	DCMT070204 / DCMT 21.51	ITM	IC2115	0.25"	0.016"	0.094"	\$3.79
	P K	DCMT070204 / DCMT 21.51	ITM	IC2325S	0.25"	0.016"	0.094"	\$3.79
	P M K	DCMT070204 / DCMT 21.51	ITM	IP1215	0.25"	0.016"	0.094"	\$3.79
	P K	DCMT11T304 / DCMT 32.51	ITM	IC2115	0.375"	0.016"	0.156"	\$4.09
	P K	DCMT11T304 / DCMT 32.51	ITM	IC2325S	0.375"	0.016"	0.156"	\$4.09
	P M K	DCMT11T304 / DCMT 32.51	ITM	IP1215	0.375"	0.016"	0.156"	\$4.09
	P K	DCMT11T308 / DCMT 32.52	ITM	IC2115	0.375"	0.031"	0.156"	\$4.09
	P K	DCMT11T308 / DCMT 32.52	ITM	IC2325S	0.375"	0.031"	0.156"	\$4.09
	P M K	DCMT11T308 / DCMT 32.52	ITM	IP1215	0.375"	0.031"	0.156"	\$4.09

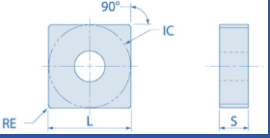
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	DCMT070204 / DCMT 21.51	ITF	IC2115	0.25"	0.016"	0.094"	\$3.79
	P M K	DCMT070204 / DCMT 21.51	ITF	IP1215	0.25"	0.016"	0.094"	\$3.79
	P K	DCMT11T304 / DCMT 32.51	ITF	IC2115	0.375"	0.016"	0.156"	\$4.09
	P M K	DCMT11T304 / DCMT 32.51	ITF	IP1215	0.375"	0.016"	0.156"	\$4.09

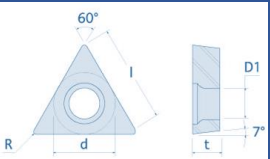
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	K H	DNMG150408 / DNMG 432	IKR	IC3220	0.50"	0.031"	0.187"	\$5.39
	K H	DNMG150412 / DNMG 433	IKR	IC3210	0.50"	0.047"	0.187"	\$5.39
	K H	DNMG150412 / DNMG 433	IKR	IC3220	0.50"	0.047"	0.187"	\$5.39

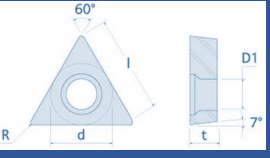
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	N	DNMG150404 / DNMG 431	-	JTK101	0.50"	0.016"	0.187"	\$6.99
	K H	DNMG150404 / DNMG 431	IKM	IC3210	0.50"	0.016"	0.187"	\$5.39
	K H	DNMG150404 / DNMG 431	IKM	IP3220	0.50"	0.016"	0.187"	\$5.39
	P M K	DNMG150404 / DNMG 431	IMM	IC1215	0.50"	0.016"	0.187"	\$5.39
	P K	DNMG150404 / DNMG 431	IPM	IC2115	0.50"	0.016"	0.187"	\$5.39
	P K	DNMG150404 / DNMG 431	IPM	IC2325S	0.50"	0.016"	0.187"	\$5.39
	N	DNMG150408 / DNMG 432	-	JTK101	0.50"	0.031"	0.187"	\$6.99
	K H	DNMG150408 / DNMG 432	IKM	IC3210	0.50"	0.031"	0.187"	\$5.39
	K H	DNMG150408 / DNMG 432	IKM	IC3220	0.50"	0.031"	0.187"	\$5.39
	P M K	DNMG150408 / DNMG 432	IPM	IC2115	0.50"	0.031"	0.187"	\$5.39
	P M K	DNMG150408 / DNMG 432	IPM	IC2325S	0.50"	0.031"	0.187"	\$5.39
	P K	DNMG150412 / DNMG 433	IPM	IC2325S	0.50"	0.047"	0.187"	\$5.39

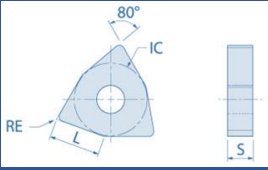
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	SNMG120408 / SNMG 432	IPM	IC2115	0.50"	0.031"	0.187"	\$4.29
	P K	SNMG120408 / SNMG 432	IPM	IC2325S	0.50"	0.031"	0.187"	\$4.29
	P K	SNMG120412 / SNMG 433	IPM	IC2115	0.50"	0.047"	0.187"	\$4.29
	P K	SNMG120412 / SNMG 433	IPM	IC2325S	0.50"	0.047"	0.187"	\$4.29

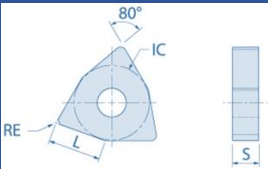
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P M K	SNMM250924 / SNMM 866	PR	IC2415	1.00"	0.094"	0.375"	\$25.69
	P M K	SNMM250924 / SNMM 866	RP	IC2425	1.00"	0.094"	0.375"	\$25.69

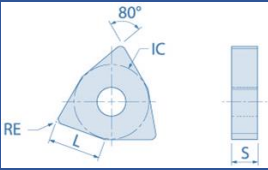
	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	SNMG120412 / SNMG 433	IPR	IC2325S	0.50"	0.047"	0.187"	\$4.29
	P K	SNMG120412 / SNMG 433	IPR	IC2330S	0.50"	0.047"	0.187"	\$4.29
	P M K	SNMG190612 / SNMG 643	KPR	IC2425	0.75"	0.047"	0.25"	\$11.29
	P M K	SNMG190616 / SNMG 644	KPR	IC2415	0.75"	0.063"	0.25"	\$11.29
	P M K	SNMG190616 / SNMG 644	KPR	IC2425	0.75"	0.063"	0.25"	\$11.29

	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	TCMT110204 / TCMT 21.51	ITF	IC2115	0.25"	0.016"	0.094"	\$3.09
	P M K	TCMT110204 / TCMT 21.51	ITF	IP1215	0.25"	0.016"	0.094"	\$3.09
	P K	TCMT16T304 / TCMT 32.51	ITF	IC2115	0.375"	0.016"	0.156"	\$3.89
	P M K	TCMT16T304 / TCMT 32.51	ITF	IP1215	0.375"	0.016"	0.156"	\$3.89
	P M K	TCMT16T308 / TCMT 32.52	ITF	IP1215	0.375"	0.031"	0.156"	\$3.89

	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	TCMT110204 / TCMT 21.51	ITM	IC2115	0.25"	0.016"	0.094"	\$3.09
	P K	TCMT110204 / TCMT 21.51	ITM	IC2325S	0.25"	0.016"	0.094"	\$3.09
	P M K	TCMT110204 / TCMT 21.51	ITM	IP1215	0.25"	0.016"	0.094"	\$3.09
	P K	TCMT110208 / TCMT 21.52	ITM	IC2115	0.25"	0.031"	0.094"	\$3.09
	P K	TCMT110208 / TCMT 21.52	ITM	IC2325S	0.25"	0.031"	0.094"	\$3.09
	P M K	TCMT110208 / TCMT 21.52	ITM	IP1215	0.25"	0.031"	0.094"	\$3.09
	P K	TCMT16T304 / TCMT 32.51	ITM	IC2115	0.375"	0.016"	0.156"	\$3.89
	P K	TCMT16T304 / TCMT 32.51	ITM	IC2325S	0.375"	0.016"	0.156"	\$3.89
	P M K	TCMT16T304 / TCMT 32.51	ITM	IP1215	0.375"	0.016"	0.156"	\$3.89
	P M K	TCMT16T308 / TCMT 32.52	ITM	IC2115	0.375"	0.031"	0.156"	\$3.89
	P K	TCMT16T308 / TCMT 32.52	ITM	IC2325S	0.375"	0.031"	0.156"	\$3.89
	P M K	TCMT16T308 / TCMT 32.52	ITM	IP1215	0.375"	0.031"	0.156"	\$3.89

	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	P K	WNMG080404 / WNMG 431	MSF	IP1315	0.50"	0.016"	0.187"	\$4.29
	P M K	WNMG080404 / WNMG 431	IMF	IP1315	0.50"	0.016"	0.187"	\$4.29
	P K	WNMG080404 / WNMG 431	IPF	IC2115	0.50"	0.016"	0.187"	\$4.29
	P M K	WNMG080408 / WNMG 432	MF	IP1315	0.50"	0.031"	0.187"	\$4.29

	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	N	WNMG080404/ WNMG 431	-	JTK101	0.50"	0.016"	0.187"	\$4.69
	K H	WNMG080404/ WNMG 431	IKM	IC3210	0.50"	0.016"	0.187"	\$4.29
	K H	WNMG080404/ WNMG 431	IKM	IC3220	0.50"	0.016"	0.187"	\$4.29
	P M K	WNMG080404/ WNMG 431	IMM	IP1215	0.50"	0.016"	0.187"	\$4.29
	P K	WNMG080404/ WNMG 431	IPM	IC2115	0.50"	0.016"	0.187"	\$4.29
	P K	WNMG080404/ WNMG 431	IPM	IC2325S	0.50"	0.016"	0.187"	\$4.29
	N	WNMG080408 / WNMG 432	-	JTK101	0.50"	0.031"	0.187"	\$4.99
	K H	WNMG080408 / WNMG 432	IKM	IC3210	0.50"	0.031"	0.187"	\$4.29
	K H	WNMG080408 / WNMG 432	IKM	IC3220	0.50"	0.031"	0.187"	\$4.29
	P K	WNMG080408 / WNMG 432	IPM	IC2115	0.50"	0.031"	0.187"	\$4.29
	P K	WNMG080408 / WNMG 432	IPM	IC2325S	0.50"	0.031"	0.187"	\$4.29
	P K	WNMG080412 / WNMG 433	IPM	IC2325S	0.50"	0.047"	0.187"	\$4.29

	Material Cutting	Geometry	Chip Breaker	Grade	IC	RE	S	Price
	K H	WNMG080408 / WNMG 432	IKR	IC3220	0.50"	0.031"	0.187"	\$4.29
	P K	WNMG080408 / WNMG 432	IPR	IC2330S	0.50"	0.031"	0.187"	\$4.29
	K H	WNMG080412 / WNMG 433	IKR	IC3210	0.50"	0.047"	0.187"	\$4.29
	K H	WNMG080412 / WNMG 433	IKR	IC3220	0.50"	0.047"	0.187"	\$4.29
	P K	WNMG080412 / WNMG 433	IPR	IC2330S	0.50"	0.047"	0.187"	\$4.29

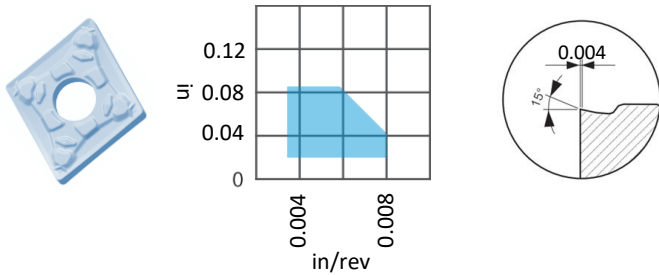
Let's Start Right

In today's modern world, finding the right insert can be daunting. There are a million choices and most are not that good. Our inserts are put into our catalog only when they perform better than the industry standard. To take the stress away, you can try any of our products for free. We will even pay shipping!

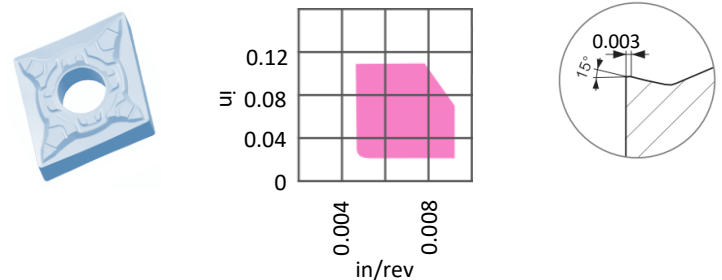
Chip Breakers

C N M G 12 04 08 - IPM

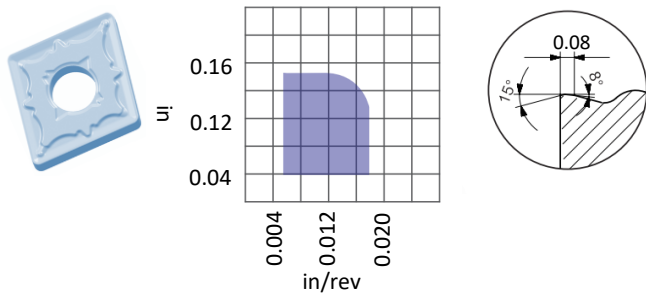
IPF – Steel Finishing



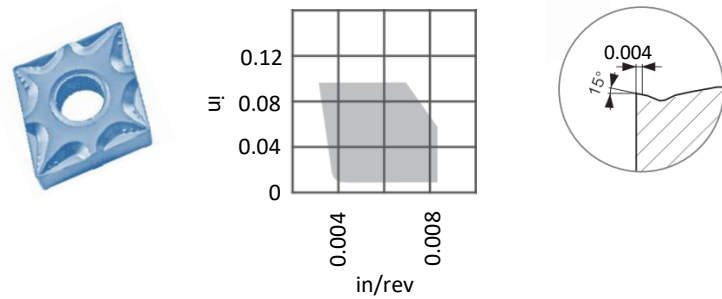
MSF – Stainless Steel Finishing



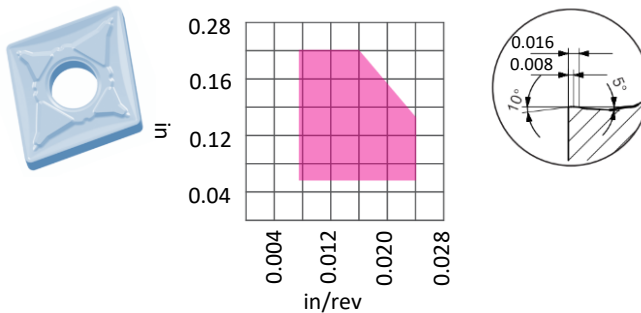
IPM – Steel Semi-Finishing



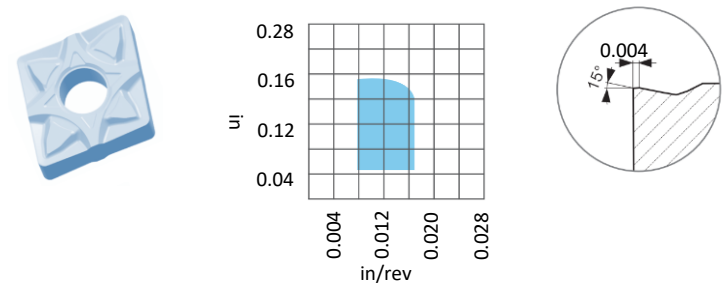
IMF – Stainless Steel Finishing



IPR – Steel Roughing



MF – Stainless Steel Finishing

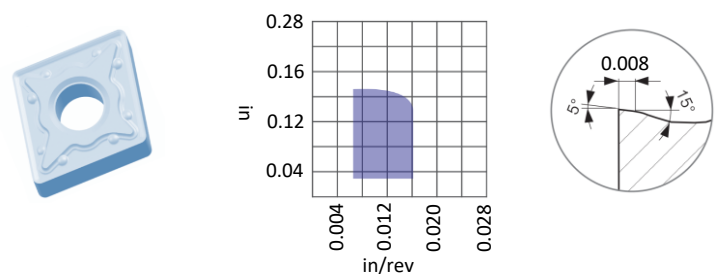


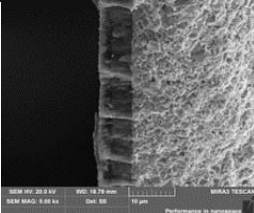
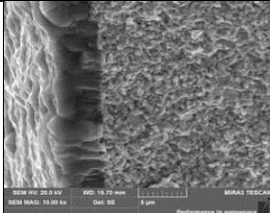
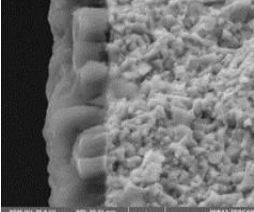
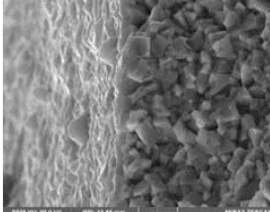
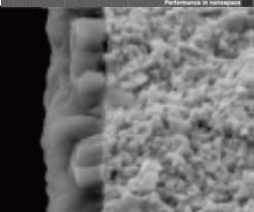
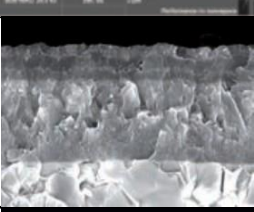
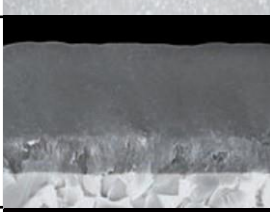
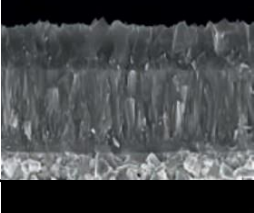
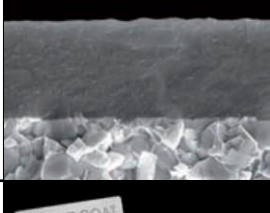
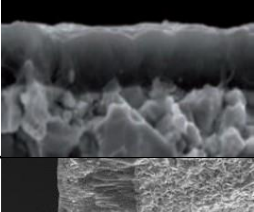
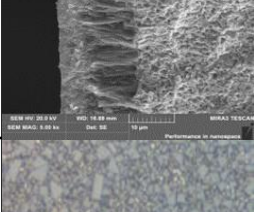
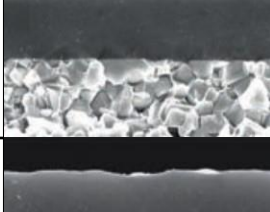
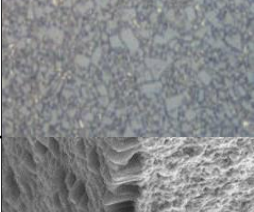
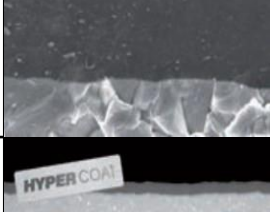
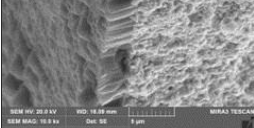
Clearance Angles

C N M G 12 04 08 - IPM

A	B	C	D	E
F	G	N	P	O
				OTHERS

IMM – Stainless Steel Semi-Finishing



ICC4225	CVD	Strong medium coarse carbide substrate combine with relative thin MT-TiCN and thin AL2O3 coating, after coating treatment, it gives insert excellent strength and wear resistance. Suitable for semi-finishing and roughing of steel.		ICP1030	PVD	High Co content and ultra fine WC grain substrate, gives wonderful toughness, combines with PVD AlTiN coating, it has good strength and versatility. Suitable for steel and stainless steel milling and drilling.	
ICP1215	PVD	High Co content and fine WC grain substrate, gives wonderful cutting edge strength, combines with good thermal stability silicon coating, it has very small coefficient of friction, and good nano hardness. Good at stainless steel semi-finishing turning. Preferred grade for steel.		ICP315	PVD	High Co content and fine WC grain substrate, great cutting edge strength, combines with new AlTiN coating, it has very small coefficient of friction, high antioxidant temperature, and good nano hardness. preferred grade for steel and stainless steel milling.	
ICP1205H	PVD	High Co content and ultra fine WC grain substrate, strong cutting edge strength, combines with good thermal stability silicon coating, with very small coefficient of friction, and good nano hardness. Suitable for steel and stainless steel semi rough and finishing.		ICP1235	PVD	Composition: Co 9.0 %; mixed carbides 4.0 %; WC balance Grain size: 1-1.5 µm Hardness: HV 1510 Coating specification: PVD (TiAl)N+ TiN; 4 µm. First choice for dry machining of steels.	
ICC5235	CVD	Composition: 10.0 % binder; WC balance Grain size: 2 µm. Hardness: HV30 1330. Coating specification: CVD TiCN-Al2O3 multi-layer. Very suitable for the machining of heat-resistant steels and iron-based alloys.		ICC5240	CVD	Composition: Co 10.0 %; WC balance Grain size: 2 µm Hardness: HV 1330 Coating specification: CVD TiN + TiB2; 4 µm. Recommended for the machining of titanium materials.	
ICC230	CVD	Composition: Co 10.5 %; mixed carbides 2.0 %; WC balance Grain size: 1-2 µm Hardness: HV30 1400 Coating specification: CVD TiCN-Al2O3. First choice for dry machining of steels at high cutting speeds.		ICP235	PVD	Composition: Co 10.5 %; mixed carbide 2.0 %; WC balance Grain size: 1-2 µm Hardness: HV30 1400 Coating specification: PVD TiAlTiN. Particularly suitable for the wet machining of steels.	
IC235HP	PVD	Composition: Co 10.0 %; other 1.5 %; rest TC Grain size: coarse Hardness: HV30 1330 Layer system: PVD TiAl/TaAlN. Particularly suitable for the machining of high-alloy steels (austenitic).		ICP2235	PVD	Composition: Co 12.5 %; mixed carbide 2.0 %; WC balance Grain size: 1 µm Hardness: HV 1380. Coating specification: PVD (TiAl)N; 4 µm. Particularly suitable for the machining of stainless.	
ICC3215	CVD	The medium-coarse substrate combine with thick TiCN and textured Al2O3, after special after coating treatment, it has outstanding wearing resistance. Suitable for high speed semi-finishing cast iron.		ICP240	PVD	Composition: Co 12.5 %; mixed carbides 2.0 %; WC balance Grain size: 1 µm Hardness: HV30 1380 Coating specification: PVD TiAlTiN. The first choice for the machining of austenitic steels.	
IC216T	None	Composition: Co 6.0 %; WC balance Grain size: 1 µm Hardness: HV30 1630. The uncoated carbide grade for the machining of aluminum. It's a high wear and high heat resistant carbide with a low tendency to adhesion.		ICP235M	PVD	Composition: Co 11 %; other 0.75 %; WC balance Grain size: 0.5-0.8 µm Hardness: HV30 1500 Coating specification: PVD TiAlTiN. The first choice for the machining of authentic steels.	
ICP2202	PVD	High Co content and ultra fine WC grain substrate, gives wonderful cutting edge strength, combines with PVD AlTiN coating, it has outstanding wearing resistance. Suitable for steel and cast iron slight milling.		ICP1235C		Composition: Co 9.0 %; mixed carbides 4.0 %; WC balance Grain size: 1-1.5 µm. Hardness: HV 1510. Coating specification: PVD (TiAl)N + TiN; 4 µm. Recommended application: First choice for dry machining of steels.	

S				N				K				M				P							
HI-TEMP ALLOY				ALUMINUM ALLOY				CAST IRON				STAINLESS STEEL				STEEL							
01 10 20 30				01 10 20 30				01 10 20 30 40				01 10 20 30 40				01 10 20 30 40							
CVD				PVD				UNCOATED				CVD				PVD				UNCOATED			
ISO TURNING				THREADING				PARTING & GROOVING				MILLING				DRILLING							
ITC5235				ITC3215				IC3105 IC3115D IC3215 ITC3215				IC4225				IC2015 IC2115 IC2025 IC2125 IC2325							
IP1215				IK434 ID101								IP1215 ITP2235				ICP1235 IP1215							
												IP1205				IP1205							
								IC2025															
												IP1215				IP1215							
ITC5235				ITC3215				ITC3215				IC4025 IC4035				IC4225							
IP1215								IP2022				IP1215 ITP2235 IP1315				IP1215 IP1315 IP2022 ICP1235 ITP1235							
								IP1215				IP1215 IP1030											