



Shape	
A	Rectangle
C	80° Diamond
D	55° Diamond
S	Square
T	Triangle
V	35° Diamond
W	80° Trigon
R	Round

*Exact tolerance is determined by the size of the insert

Tolerance	
Insert I.C.	Thickness
F = ± .002 to ± .004	± .002
G = ± .001	± .005
H = ± .005	± .001
K = ± .005	± .001
M = ± .002 to ± .007*	± .005

Inscribe Circle Size		
Bottom	Top	
1.2 = .156	2.5 = .312	08 = 8mm
1.5 = .187	3 = .375	10 = 10mm
1.8 = .218	4 = .500	11 = 11mm
2 = .250		12 = 12mm
		16 = 16mm

Radius	
Bottom	Top
0 = .004	04 = .015
0.5 = .008	08 = .031
1 = .015	12 = .047
2 = .031	16 = .062
3 = .046	
4 = .062	



Clearance Angle	
B	5° Positive
C	7° Positive
D	15° Positive
N	0° Negative
P	11° Positive

Type	
A	With hole, without chipbreaker
B	Counter sink on one side, with hole
G	Chipbreaker on both sides, with hole
T	Chipbreaker & ISO countersink one side, with hole
W	ISO Countersink on one side, with hole
X	Special Design

Thickness	
Bottom	Top
0.6 = .040	03 = .125
1 = .062	T3 = .156
1.2 = .078	04 = .188
1.5 = .094	06 = .250
2 = .125	
2.5 = .156	
3 = .188	
4 = .250	

Insert Speed & Feed Information

Material	Turning		Milling*		Drilling	
	SFM	Inch/ Rev	SFM	Inch/ Rev	SFM	Inch/ Rev
P Mild Steel Annealed Alloy Steel Hardened Alloy Steel Cast Steel	490-1200		250-800		300-700	
	490-980	.004-.031	200-725	.003-.015	200-650	.0022-.006
	180-500		200-600		100-300	
	180-650		200-600		150-550	
M Stainless Steel	280-810	.004-.015	200-600	.003-.015	250-500	.002-.006
K Low Cast Iron High Cast Iron	590-1240	.004-.024	325-600	.004-.016	300-600	.0025-.009
	360-700		325-600		300-600	
N Alum. Alloy Un-heat Treated Alum. Alloy Heat Treated Cast Alum. & Copper Alloy	850-1980		860-1800		600-1100	
	550-1650	.004-.018	575-1230	.007-.018	315-790	.0038-.011
	360-950		280-930		250-760	
S Heat Resistant Steels	100-300	.002-.006	100-300	.0024-.008	60-150	.0028-.008
K Cast Iron (CBN INSERTS)	400-600	.002-.020				
H Hardened Material (CBN INSERTS)	450-950	.002-.011				

*For APKT inserts refer to the chart below for cutting conditions.

APKT 11T308 Feed Per Tooth (inch)

AP (inch)	Light	Medium	Heavy
.315	.0028	.0031	.0039
.236	.0032	.0047	.0059
.157	.0036	.0059	.0079

Depth of cut ↑

f/t →

APKT 160408 Feed Per Tooth (inch)

AP (inch)	Light	Medium	Heavy
.472	.0028	.0031	.0039
.315	.0039	.0047	.0059
.197	.0047	.0059	.0079

Depth of cut ↑

f/t →

Inserts

ULTRA-DEX USA

- Good
- ◐ Better
- Best

Grade	Description						
		Steel	Stainless Steel	Cast Iron	Ferrite Materials	Heat-Resistant Steel	Hardened Metal
		P	M	K	N	S	H
UD5	Uncoated – Used for machining carbon alloy steels, this grade of insert provides excellent toughness and wear resistance.	○	○		◐		
UD51	General purpose Tin (CVD) coated steel grade - used for roughing and semi-finishing of carbon alloy and stainless steel.	●	○	○		◐	
UD52A→D	Tough general purpose steel grade with multi-layer titanium aluminum nitride coating for alloy steel, aluminum alloys, austenitic stainless and carbon steels, copper alloys and exotic alloys.	●	○			●	
UD5C	Uncoated cermet grade for semi-finishing and finishing applications at medium to high cutting speeds on carbon and alloyed steels. Also used on stainless. Normally used without coolant.		○	○			
UD5CBN	A Polycrystalline Cubic Boron Nitride (PCBN) Insert for precision finishing of hardened steels 50-65 rockwell. Coolant not recommended for use.			◐			●
UD5CT	TIALN coated cermet grade performs extremely well for semi-finish and finish applications in alloyed steels, stainless and high carbon steels.	●	◐	◐			
UD1	Uncoated – Designed with a polished surface and large rake angle, Intended for machining aluminum and other non-ferrous alloys. Also works well for semi machining on cast iron.		◐		●		
UD2	Uncoated - used to cut cast iron, aluminum, non-ferrous alloys, non-metals and most high temp alloys. Provides excellent wear resistance.			○	◐		
UD2CBN	A Polycrystalline Cubic Boron Nitride (PCBN) Insert for cast iron, gray cast iron, chilled cast, and powder metal with long tool life. Coolant not recommended for use.			●			◐
UD21A→F	Multi-layer titanium aluminum nitride grade. Excellent for machining cast iron, stainless steel, nickel based high temperature alloys. Excellent oxidation resistance and bears high, semi dry/dry machining.		●	◐		◐	
UD22	Tin coated insert. Suitable for semi-finishing and finishing of high temp alloys. Intended for cast iron machining.			●		◐	
UD32	TiAlN coated insert. Used in high speed medium load applications of stainless steel and finishing to semi-finishing of high temperature alloys.	◐	●	○	○	●	
UD204	A PVD TiAlN coated fine grain substrate. Excellent for light to medium feeds on Cast Iron and semi-finishing to finishing of high temperature alloys. Excellent for high SFM.	◐		●		◐	
UD404	A PVD TiAlN coated tough general purpose grade. Well suited for milling Alloy Steels, Stainless Steel, High Temperature Alloy Steels and Hardened Steels up to 60 Rc.	●	●	◐		●	
UD602	A CVD coating of TiAl ₂ O ₃ & TiN on a tough substrate. It is suitable for light to heavy milling of alloy steel and non alloy steel, even under unfavorable condition.	◐	◐			◐	



INSERTS / HARDWARE

	Designation	UD51	UD52A	UD52C	UD5C	UD5CT	UD2	UD21A	UD21B	UD1
	CCGW 32.51	--	--	--	--	--	\$7.75	--	\$9.45	--
	CCGW 32.52	--	--	--	--	--	\$7.95	--	\$9.45	--
	CCGX 21.50.5	--	--	--	--	--	--	--	--	\$6.05
	CCGX 21.51	--	--	--	--	--	--	--	--	\$6.05
	CCGX 32.51	--	--	--	--	--	--	--	--	\$6.25
	CCGX 32.52	--	--	--	--	--	--	--	--	\$6.25
	CCMT 21.51	\$6.90	\$7.40	--	--	--	\$6.25	--	\$6.65	--
	CCMT 32.50.5	\$6.30	--	\$7.75	\$6.00	\$7.85	\$6.00	--	\$7.75	--
	CCMT 32.51	\$5.80	\$6.40	--	\$4.90	\$7.85	\$5.00	--	\$6.70	--
	CCMT 32.52	\$5.10	\$6.20	--	\$4.90	\$7.85	\$6.00	--	\$7.75	--
	CCMT 431	\$6.85	\$8.00	--	--	--	--	\$8.40		--
	CCMT 432	\$7.85	--	\$9.75	--	--	--	--	\$8.40	--



	Designation	UD51	UD52B	UD5C	UD5CT	UD2	UD21B
	CDGT 1.510.5	--	--	\$7.85	\$9.45	--	--
	CDGT 1.511	--	--	\$7.85	\$9.45	--	--
	CDGW 1.510	\$7.10	\$8.25	\$7.30	\$8.90	\$6.60	\$8.25
	CDGW 1.510.5	\$7.10	\$8.25	\$7.30	\$8.90	\$6.60	\$8.25
	CDGW 1.511	\$7.10	\$8.25	--	--	\$6.60	\$8.25
	CDHB 1.20.60	\$9.10	\$9.65	--	--	\$8.40	\$10.50
	CDHB 1.20.60.5	\$9.10	\$9.65	--	--	\$8.40	\$10.50

	Designation	UD51	UD52A	UD52D	UD5C	UD5CT	UD2	UD21B	UD21D
	CPGW 21.5.5	--	--	--	--	--	\$7.10	\$8.70	--
	CPGW 21.51	--	--	--	--	--	\$7.10	\$8.70	--
	CPMT 1.81.20.5	\$6.90	--	\$8.40	\$7.60	\$9.40	\$6.30	--	\$7.50
	CPMT 1.81.21	\$6.90	--	\$8.40	\$8.00	\$9.80	\$6.30	--	\$7.50
	CPMT 21.50.5	\$6.90	--	\$7.60	--	--	\$5.90	--	\$7.20
	CPMT 21.51	\$6.90	--	\$7.40	\$6.30	\$8.20	\$5.90	--	\$6.70
	CPMT 21.52	\$6.90	--	\$7.60	\$6.30	\$8.20	\$5.90	--	\$7.20
	CPMT 32.51	\$7.40	\$8.70	--	--	--	\$6.70	--	\$8.70
	CPMT 32.52	\$7.40	\$8.70	--	--	--	\$6.70	--	\$8.70

	Designation	UD51	UD52A	UD52D	UD52E	UD2	UD21A	UD21D	UD21E	UD1
	DCGX 21.50.5	--	--	--	--	--	--	--	--	\$5.75
	DCGX 21.51	--	--	--	--	--	--	--	--	\$5.75
	DCGX 32.51	--	--	--	--	--	--	--	--	\$6.35
	DCGX 32.52	--	--	--	--	--	--	--	--	\$6.35
	DCMT 21.50.5	\$6.30	--	\$8.30	--	\$5.50	--	\$7.90	--	--
	DCMT 21.51	\$5.45	\$6.85	--	--	\$5.50	\$7.90	--	--	--
	DCMT 32.51	\$6.00	\$7.90	--	--	\$6.40	--	\$8.80	--	--
	DCMT 32.52	\$6.00	\$7.90	--	--	\$6.40	--	\$8.80	--	UD22
	DPMT 32.51	\$5.40	--	--	\$6.85	\$5.20	--	--	\$6.85	\$5.40
	DPMT 32.52	\$5.40	--	--	\$6.85	\$5.20	--	--	\$6.85	\$5.40



INSERTS / HARDWARE

Inserts

ULTRA-DEX USA



Designation	UD51	UD52A
VBMT 21.50	\$6.80	\$8.30
VBMT 21.51	\$6.80	\$8.30
VBMT 331	\$7.50	\$9.00
VBMT 332	\$7.50	\$9.00



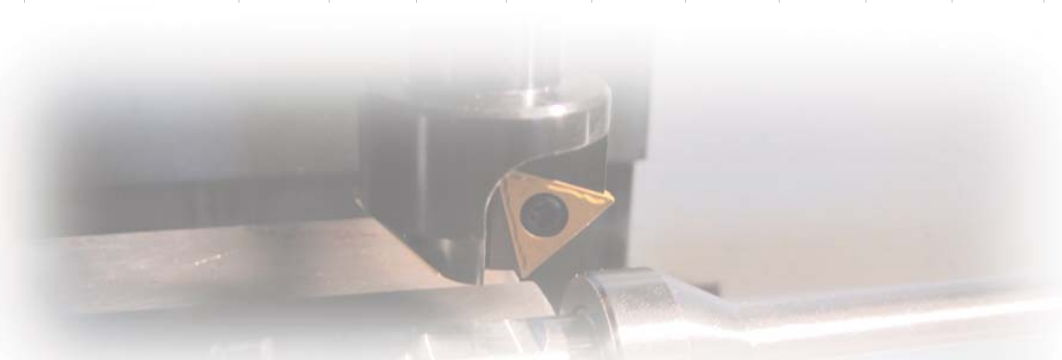
Designation	UD51	UD52A	UD52D	UD52E	UD2	UD22	UD21A	UD21E	UD1
SCMW 21.51	\$5.30	--	\$5.75	--	\$4.20	\$5.30	\$5.75	--	--
SCGX 32.50.5	--	--	--	--	--	--	--	--	\$7.15
SCGX 32.51	--	--	--	--	--	--	--	--	\$7.15
SCGX 32.52	--	--	--	--	--	--	--	--	\$7.15
SCMT 21.51	\$5.30	--	--	\$5.75	\$4.20	\$5.30	--	\$5.75	--
SCMT 32.51	\$6.80	\$6.50	--	--	--	\$4.90	--	--	--
SCMT 32.52	\$6.80	\$6.50	--	--	--	\$4.90	--	--	--
SCMT 431	\$6.15	\$8.00	--	--	--	--	--	--	--
SCMT 432	\$6.15	\$8.00	--	--	--	--	--	--	--



Designation	UD51	UD52A	UD52D	UD2	UD22	UD21A	UD21B	UD21D	UD1
TCGX 21.50.5	--	--	--	--	--	--	--	--	\$6.25
TCGX 21.51	--	--	--	--	--	--	--	--	\$6.25
TCGX 32.51	--	--	--	--	--	--	--	--	\$7.15
TCGX 32.52	--	--	--	--	--	--	--	--	\$7.15
TCMT 1.21.20.5	\$6.90	--	\$7.70	--	--	--	--	\$8.20	--
TCMT 21.51	\$5.30	\$6.40	--	--	--	\$6.40	--	--	--
TCMT 21.52	\$5.30	\$6.40	--	--	--	\$6.40	--	--	--
TCMT 32.51	\$7.20	\$7.40	--	\$5.90	\$6.25	\$8.00	--	--	--
TCMT 32.52	\$7.20	\$7.40	--	\$5.90	\$6.25	--	\$8.50	--	--
TPMT 21.51	\$6.60	--	\$7.50	\$5.70	--	--	--	\$7.50	--
TPMT 21.52	\$6.60	--	\$8.00	\$5.20	--	--	--	\$7.50	--
TPMT 32.51	\$8.20	--	\$9.60	\$6.70	--	--	--	\$8.80	--
TPMT 32.52	\$8.20	--	\$9.60	\$6.70	--	--	--	\$8.80	--

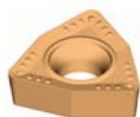


INSERTS / HARDWARE





Designation	UD51	UD52C	UD52D	UD52F	UD2	UD21B	UD21D	UD21F
WCMT 1.210.5	\$10.65	--	--	\$11.45	\$9.94	--	--	\$11.45
WCMT 1.211	\$10.65	--	--	\$11.45	\$9.94	--	--	\$11.45
WCMT 1.51.50.5	\$10.65	--	--	\$11.45	\$9.94	--	--	\$11.45
WCMT 1.51.51	\$10.65	--	--	\$11.45	\$9.94	--	--	\$11.45
WCMT 21.51	\$6.55	\$7.85	--	--	\$5.45	--	\$7.30	--
WCMT 21.52	\$6.20	--	\$7.40	--	\$5.45	--	\$7.30	--
WCMT 32.51	\$7.70	\$9.10	--	--	\$6.80	\$8.75	--	--
WCMT 32.52	\$7.25	--	\$8.60	--	\$6.80	--	\$9.30	--



Drilling

Designation	UD51	UD52C	UD52D	UD52F	UD2	UD21B	UD21D	UD21F	UD32
WCMX 1.81.52	\$6.85	\$8.40	--	--	\$6.85	\$8.40	--	--	\$6.85
WCMX 21.52	\$6.85	\$8.40	--	--	\$6.85	\$8.40	--	--	\$6.85
WCMX 2.522	\$6.85	\$8.40	--	--	\$6.85	\$8.40	--	--	\$6.85
WCMX 32.52	\$7.45	\$9.00	--	--	\$7.45	\$9.00	--	--	\$7.45
WCMX 433	\$7.45	\$9.30	--	--	\$7.45	\$9.30	--	--	\$7.45



Designation	UD51	UD52A	UD52C	UD2	UD21A	UD21B	UD21C	UD21D	UD32
CNMG 321	\$6.85	--	\$7.50	--	--	--	\$7.40	--	--
CNMG 322	\$6.45	\$7.06	--	--	--	--	\$7.40	--	--
CNMG 431	\$7.40	--	\$8.90	\$7.00	--	\$8.90	--	--	--
CNMG 432	\$7.40	--	\$8.90	\$7.00	--	\$8.90	--	--	--



Designation	UD51	UD52A	UD52C	UD2	UD21A	UD21B	UD21C	UD21D	UD32
DNMG 331	\$6.65	--	\$8.40	\$6.65	--	\$8.35	--	--	--
DNMG 332	\$6.65	--	\$8.40	\$6.65	--	\$8.35	--	--	--
DNMG 431	\$8.50	--	\$10.50	--	--	--	\$10.50	--	--
DNMG 432	\$7.70	\$9.30	--	--	\$9.90	--	--	--	\$9.30



Designation	UD51	UD52A	UD52C	UD2	UD21A	UD21B	UD21C	UD21D	UD32
SNMG 431	\$5.60	\$7.46	--	--	\$5.60	--	--	--	--
SNMG 432	\$5.60	\$7.46	--	--	\$5.60	--	--	--	--



INSERTS / HARDWARE

Inserts



Designation	UD51	UD52A	UD52C	UD52D	UD2	UD21A	UD21B	UD21C	UD21D
TNMG 331	\$6.80	--	\$8.50	--	--	--	--	\$8.50	--
TNMG 332	\$6.80	--	\$8.50	--	--	--	--	--	\$8.50
TNMG 431	\$9.75	--	\$11.65	--	--	--	--	\$11.65	--
TNMG 432	\$9.75	--	\$11.65	--	--	--	--	\$11.65	--



Designation	UD51	UD52A	UD52C	UD52D	UD2	UD21A	UD22	UD21B	UD21C	UD21D
VNMG 331	\$9.45	--	\$10.50	--	--	--	--	--	\$9.55	--
VNMG 332	\$9.45	--	\$10.50	--	--	--	--	--	\$9.55	--
VNMG 432	\$11.00	--	--	\$12.10	\$10.30	--	--	--	--	\$12.90



Designation	UD51	UD52A	UD52C	UD52D	UD2	UD21A	UD22	UD21B
WNMG 331	\$6.45	--	\$8.15	--	\$6.45	--	--	\$7.85
WNMG 332	\$6.45	--	\$8.15	--	\$6.45	--	--	\$8.15
WNMG 431	\$7.00	--	\$8.90	--	--	--	\$7.00	\$8.90
WNMG 432	\$7.00	--	\$8.90	--	\$7.00	--	\$7.00	\$8.90



Designation	UD5CBN	UD2CBN
CCMW 21.51-1	\$34.75	\$34.75
CCMW 21.52-1	\$34.75	\$34.75
CCMW 32.51-2	\$48.10	\$48.10
CCMW 32.52-2	\$48.10	\$48.10
CNMA 431-2	\$48.10	\$48.10
CNMA 432-2	\$48.10	\$48.10
DCMW 21.51-1	\$34.75	\$34.75
DCMW 32.51-2	\$48.10	\$48.10
DCMW 32.52-2	\$48.10	\$48.10
DNMA 431-2	\$48.10	\$48.10
DNMA 432-2	\$48.10	\$48.10

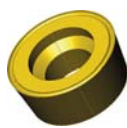


Designation	UD5CBN	UD2CBN
TCMW 21.51-1	--	\$34.75
TCMW 21.52-1	\$34.75	\$34.75
TCMW 32.51-1	\$34.75	\$34.75
TCMW 32.52-1	\$34.75	\$34.75
TNMA 331-1	\$34.75	\$34.75
TNMA 332-1	\$34.75	\$34.75
VNMA 331-2	--	\$48.10
VNMA 332-2	\$48.10	\$48.10



INSERTS / HARDWARE





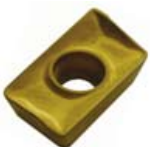
Designation	UD1	UD404	UD602
RDKW 0803	--	\$4.55	\$4.55
RCKT 10T3	\$3.60	\$4.35	\$4.35
RCKT 1204	\$4.45	\$5.25	\$5.25
RCKT 1606	--	\$7.60	\$7.60



Designation	UD51	UD52E	UD2	UD21E	UD22
RCMT 21.5	\$5.65	\$6.00	\$4.60	\$6.00	\$5.65
RCMT 32.5	\$6.60	\$7.00	\$5.40	\$7.00	\$6.60
RCMT 43	\$7.85	\$8.35	\$6.55	\$8.35	\$7.85



Designation	Radius	UD1	UD204	UD404	UD602
APKT 11T304-PF	.015	--	\$7.00	\$7.00	\$7.00
APKT 11T308-PF	.031	--	\$7.00	\$7.00	\$7.00
APKT 11T316-PF	.062	--	\$7.00	\$7.00	--
APKT 160408-PF	.031	--	--	\$8.30	\$8.30
APKT 11T304-PM	.015	--	\$7.00	\$7.00	\$7.00
APKT 11T308-PM	.031	--	\$7.00	\$5.40	\$7.00
APKT 11T312-PM	.047	--	--	\$6.45	--
APKT 11T316-PM	.062	--	\$7.00	\$7.00	--
APKT 160408-PM	.031	--	\$8.30	\$6.90	\$8.30
APKT 11T304-PR	.015	--	\$7.00	\$7.00	\$7.00
APKT 11T304-AL	.015	\$6.05	--	--	--
APKT 11T308-AL	.031	\$6.05	--	--	--
APKT 160408-AL	.031	\$6.70	--	--	--



Finish

Semi-Rough

Rough

Aluminum



INSERTS / HARDWARE

Threading Inserts

ULTRA-DEX USA

Right hand shown below

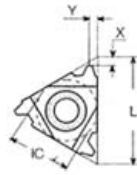


Figure 1

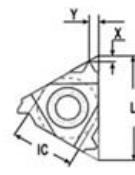


Figure 2

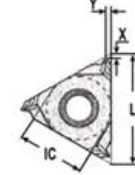
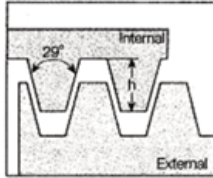


Figure 3



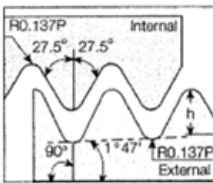
Figure 4

American Acme Figure 1



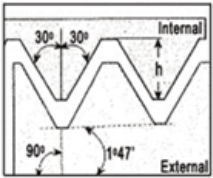
Designation		IC	L	Pitch (tpi)	h (min)	X	Y	Anvil Right	Anvil Left	Price
Right Hand	Left Hand									
3IR16ACME	3IL16ACME	3/8"	.63	16	.036	.04	.04	YI3	YE3	\$16.90
3IR14ACME	3IL14ACME	3/8"	.63	14	.041	.04	.05	YI3	YE3	\$16.90
3IR12ACME	3IL12ACME	3/8"	.63	12	.047	.05	.05	YI3	YE3	\$16.90
3IR10ACME	3IL10ACME	3/8"	.63	10	.060	.05	.05	YI3	YE3	\$16.90
3IR8ACME	3IL8ACME	3/8"	.63	8	.072	.06	.06	YI3	YE3	\$16.90

BSPT Figure 2



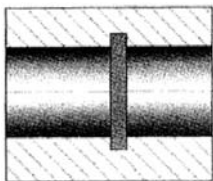
Designation		IC	L	Pitch (tpi)	h (min)	X	Y	Anvil Right	Anvil Left	Price
Right Hand	Left Hand									
3IR28BSPT	3IL28BSPT	3/8"	.63	28	.023	.02	.02	YI3	YE3	\$16.90
3IR19BSPT	3IL19BSPT	3/8"	.63	19	.034	.03	.04	YI3	YE3	\$16.90
--	3IL14BSPT	3/8"	.63	14	.046	.04	.05	--	YE3	\$16.90
--	3IL11BSPT	3/8"	.63	11	.058	.04	.06	--	YE3	\$16.90

NPT Figure 3



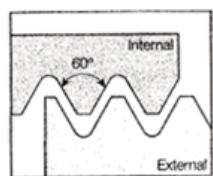
Designation		IC	L	Pitch (tpi)	h (min)	X	Y	Anvil Right	Anvil Left	Price
Right Hand	Left Hand									
3IR27NPT	--	3/8"	.63	27	.026	.030	.030	YI3	--	\$16.90
3IR18NPT	--	3/8"	.63	18	.040	.030	.040	YI3	--	\$16.90
3IR14NPT	--	3/8"	.63	14	.052	.040	.050	YI3	--	\$16.90
3JIR27NPT	--	3/8" SCB	.63	27	.026	.020	.030	YI3	--	\$16.90
3JIR18NPT	--	3/8" SCB	.63	18	.040	.020	.030	YI3	--	\$16.90
3JIR14NPT	--	3/8" SCB	.63	14	.052	.040	.060	YI3	--	\$16.90

Grooving Figure 4



Designation	IC	W	t	Anvil Right	Price
Right Hand					
3IR1.10-D472-1.30	3/8"	.031	.05	YI3M-1.5N	\$16.85
3IR1.30-D472-1.50	3/8"	.047	.07	YI3M-1.5N	\$16.85
3IR1.60-D472-1.80	3/8"	.062	.08	YI3M-1.5N	\$16.85
3IR1.85-D472-2.00	3/8"	.093	.07	YI3	\$16.85

Partial Profile 60° Figure 3



Designation		IC	L	Pitch (mm)	Pitch (tpi)	r	X	Y	Anvil Right	Anvil Left	Price
Right Hand	Left Hand										
2JIRA60	2JILA60	1/4"	.63	.05-1.5	48-16	.002	.030	.035	YI3	YE3	\$9.25
2JIR12UN	2JIL12UN	1/4"	.63	.05-1.5	48-16	.002	.030	.035	YI3	YE3	\$9.25
3IRA60	3ILA60	3/8"	.63	.05-1.5	48-16	.002	.030	.040	YI3	YE3	\$16.35
3IRG60	3ILG60	3/8"	.63	1.75-3.0	14-8	.006	.050	.070	YI3	YE3	\$16.35
3IRAG60	3ILAG60	3/8"	.63	.05-3.0	48-8	.002	.050	.070	YI3	YE3	\$16.35
3JIRA60	--	3/8" SCB	.63	.05-1.5	48-16	.002	.020	.030	YI3	--	\$16.35
3JIRG60	--	3/8" SCB	.63	1.75-3.0	14-8	.006	.040	.060	YI3	--	\$16.35
3JIRAG60	--	3/8" SCB	.63	.05-3.0	48-8	.002	.040	.060	YI3	--	\$16.35

M

INSERTS / HARDWARE

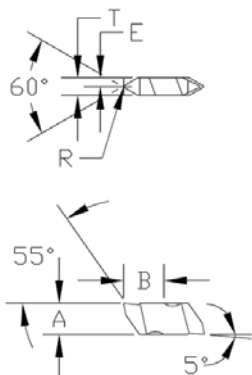


Figure 5

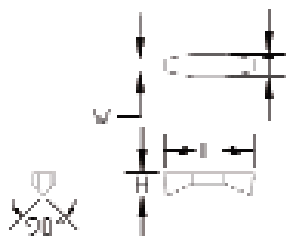


Figure 6



Figure 7

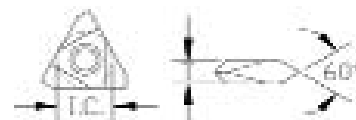
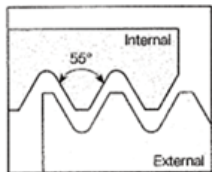


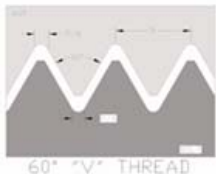
Figure 8

Partial Profile 55° Figure 3



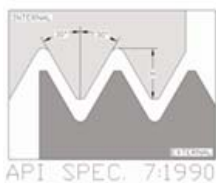
Designation		IC	L	Pitch (mm)	Pitch (tpi)	r	X	Y	Anvil Right	Anvil Left	Price
Right Hand	Left Hand										
3JIRA55	3JILA55	3/8"	.63	.05-1.5	48-16	.002	.030	.040	YI3	YE3	\$16.35
3JIRG55	3JILG55	3/8"	.63	1.75-3.0	14-8	.008	.050	.070	YI3	YE3	\$16.35
3JIRAG55	3JILAG55	3/8"	.63	.05-3.0	48-8	.003	.050	.070	YI3	YE3	\$16.35

Top Notch Figure 5



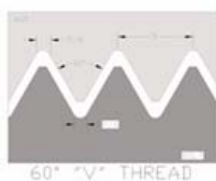
Designation		A	B	E	R	T	Ext. TPI	Int. TPI	Price
Right Hand	Left Hand								
NTP-3R	NTP-3L	.344	.400	.098	.005/.008	.195	6-20	5-12	\$11.00
NTP-4R	NTP-4L	.453	.629	.128	.005/.008	.255	4-20	4-12	\$24.10

API Figure 7



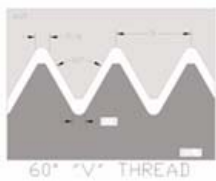
Designation		IC	L	TPI	H	X	Y	Anvil	Price
Right Hand	Left Hand								
4IR4API503	4IL4API503	.500	.870	4	.148	.08	.11	YI4	\$23.35
5IRAPI382	5ILAPI382	.625	1.063	4	.122	.08	.11	YI5OIL	\$29.45
5IRAPI383	5ILAPI383	.625	1.063	4	.122	.08	.11	YI5OIL	\$29.45
5IR4API502	5IL4API502	.625	1.063	4	.148	.08	.12	YI5OIL	\$29.45
5IR4API503	5IL4API503	.625	1.063	4	.148	.08	.12	YI5OIL	\$29.45

V-Bottom Figure 6



Designation	T	L	Radius	TPI	Price
V84-NV	.250	1.000	.006/.008	5-20	\$20.53
V84-NV-.010R	.250	1.000	.010	4-20	\$22.15
V84-NV-.020R	.250	1.000	.020	4-12	\$22.15
V84-NV-.025R	.250	1.000	.025	4/8	\$22.15
V84-NV-.038R	.250	1.000	.038	4/6	\$22.15
V85-NV	.312	1.000	.006/.008	5-20	\$24.05

On Edge Figure 8



Designation	I.C.	T	Radius	TPI	Price
TNMA-43NV	.500	.187	.003/.005	5-24	\$19.05
TNMA-43NV .010	.500	.187	.001	4-20	\$21.19
TNMC-43NV	.500	.187	.003/.005	5-24	\$19.05
TNMC-43NV .010	.500	.187	.001	4-20	\$21.09



INSERTS / HARDWARE

Boring Bars

Insert Screws	Price Each	Key	Price Each	Shim Seat	Price Each	Clamp	Price Each	Lock Pin	Price Each	Clamp Screw	Price Each
MTS-182	\$2.15	T-6	\$2.85	ICSN-433	\$2.65	CL-7	\$4.15	NL-33	\$1.80	XNS-36	\$0.80
MTS-183	\$2.15	T-7	\$2.60	IDSN-322	\$2.25	CL-12	\$3.10	NL-33L	\$1.80	XNS-47	\$0.80
MTS-184	\$2.15	T-10	\$4.40	IDSN-433	\$2.45	CL-19	\$3.10	NL-34L	\$1.80	XNS-48	\$0.80
MTS-2	\$1.95	T-15	\$2.60	ISSN-432	\$2.55	CL-20	\$3.10	NL-44	\$1.80	XNS-59	\$0.80
MTS-224	\$2.15	T-20	\$2.65	ISSN-633	\$4.10	CL-21	\$7.70	NL-46	\$1.65	XNS-510	\$0.80
MTS-255	\$2.15	sold in QTY 5		ITSN-323	\$1.90	CL-22	\$7.90	sold in QTY 5		PB4-CS	\$0.40
MTS-35	\$2.15			ITSN-432	\$3.10	CL-30	\$4.65				
MTS-2.5L	\$1.95			ITSN-433	\$3.10	CL-84	\$21.20				
sold in QTY 5				ITSN-533	\$3.35	CL-85	\$21.20				
MTS-3.5L	\$5.80			IVSN-322	\$2.20	Clamp Assy.				Shim Screw	Price Each
MTS-4	\$6.80			IVSN-432	\$2.75	PB4	\$17.50			PB4-SS	\$1.55
				IWSN-433	\$3.35	PB4-CC	\$25.95			sold in QTY 5	
				sold in QTY 10							

Modular Boring

Set Screws	Price Each
MH12S	\$1.15
MH16S	\$1.41
MH20S	\$1.67
MH24S	\$1.93
MH28S	\$2.19
MH32S	\$2.45

sold in QTY 2

Laydown Threaders

Anvil Screw	Price Each	Anvil	Price Each
SY3T	\$1.20	YI3	\$10.45
SY4T	\$1.55	YE3	\$10.45
SY5T	\$4.15	YI4	\$18.10
		YI3AC6	\$11.50
		YE3AC6	\$11.50
		YI3M-1.5N	\$11.50
		YE4	\$18.10
		YI5	\$32.00
		YE5	\$32.00

sold in QTY 5

Top Notch

Clamp	Price Each	Clamp Screw	Price Each
CM-72	\$6.60	6-32	\$0.45
CM-73	\$7.55	10-32	\$0.45
CM-74	\$10.45	MTS-526	\$6.80
CM-75	\$10.45	sold in QTY 5	
CM-120	\$11.00		
CM-121	\$11.00		
CM-146	\$30.30		
CM-147	\$30.30		

End / Shell Mill Holders

Lock Screws	Price Each
U5001	\$7.49
U5002	\$7.99
U5003	\$9.99
U5004	\$12.99
U5005	\$18.99
U5006	\$23.99
U5007	\$32.99

ER Holders

ER Nut	Price Each	ER Screw	Price Each	ER Wrench	Price Each
ER-11HN	\$15.90	ER-11S	\$5.60	ER-11MW	\$29.70
ER-16HN	\$16.90	ER-16S	\$5.90	ER-16MW	\$29.70
ER-20HN	\$18.90	ER-20S	\$6.60	ER-16W	\$11.00
ER-25SN	\$21.90	ER-25S	\$7.70	ER-20MW	\$33.65
ER-32SN	\$23.90	ER-32S	\$8.40	ER-20W	\$11.00
ER-40SN	\$27.90	ER-40S	\$9.80	ER-25W	\$12.10
				ER-32W	\$13.85
				ER-40W	\$19.70

Saber Mills

Screw	Price Each
SR34505	\$1.95
SR14544	\$1.95
SR34505L	\$2.15

sold in QTY 5

Indexable Drills

Wrench	Price Each	Screw	Price Each
T-6-S	\$3.60	MTS-184	\$2.15
T-7-S	\$3.45	MTS-2	\$1.95
T-8-S	\$3.60	MTS-255	\$2.15
T-9-S	\$4.10	MTS 25-DR	\$1.95
T-10-S	\$4.10	MTS 3-DR	\$1.95
T-15-S	\$4.10	MTS 35-DR	\$2.30
T-20-S	\$7.30	MTS 4-DR	\$1.95

sold in QTY 5

sold in QTY 5

