



ClappDiCO Corporation  
A KENNAMETAL COMPANY

*The Leader In  
Super Abrasive  
Cutting Tools*



[www.clappdico.com](http://www.clappdico.com)  
QS-9000 Certified



*ClappDiCO Corporation shall manufacture and market cutting tools and related products from Polycrystalline Diamond, Polycrystalline Cubic Boron Nitride, and other superabrasive materials.*

*Working together in an environment of cooperation and teamwork, we will dedicate ourselves to offering cost-effective machining alternatives to processors of Non-Ferrous and Ferrous materials at a level of quality and service that will be unsurpassed by our competition.*



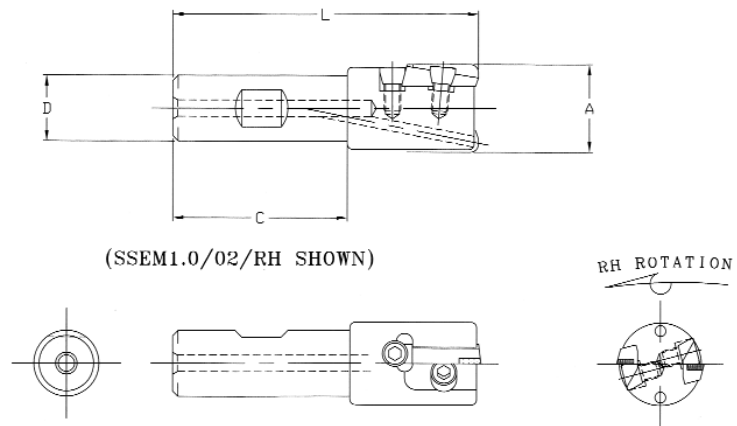
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- Multi-functional “Mini”- Diameter PCD Endmills
- Profile, Plunge and Chamfer Milling Capability
- Coolant Thru
- Axial Adjustment
- Depths of Cut up to .750"

## SUPER FEED™ ENDMILLS

Diameter: 1 – 2 inch (32-50 mm)

- Supplied with coolant thru for maximum tool performance.
- Axial Adjustment on each pocket enables +/- .0001" of desired set height.
- Utilizes replaceable blades. Stock program of commonly used corner radii available.
- Custom ClappDiCO endmill programs available upon request.
- Cost effective recycle programs available for the replaceable blades.

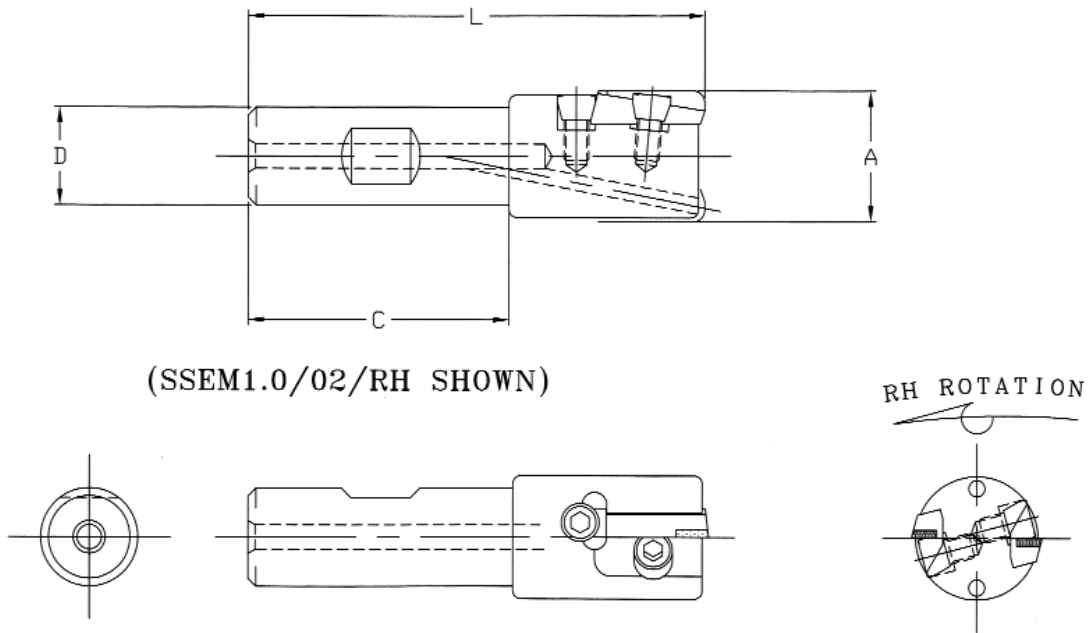


	Cutter Diameter A	Cutter Order Number	Number of Blades	Overall Length L	Shank Length C	Shank Diameter D	Mounting Style
INCH	1.00 in.	SSEM1.0/02/RHSS	2	3.50 in.	2.00 in.	.75 in.	Smooth Shank
	1.25	SSEM1.25/03/RHSS	3	4.00	2.25	1.00	Smooth Shank
	1.50	SSEM1.5/04/RHSS	4	4.00	2.25	1.00	Smooth Shank
	2.00	SSEM2.0/05/RHSS	5	4.50	2.75	1.00	Smooth Shank
	1.00	SSEM1.0/02/RH	2	3.50	2.00	.75	Single Weldon
	1.25	SSEM1.25/03/RH	3	4.00	2.25	1.00	Double Weldon
	1.50	SSEM1.5/04/RH	4	4.00	2.25	1.00	Double Weldon
	2.00	SSEM2.0/05/RH	5	4.50	2.75	1.00	Double Weldon
METRIC	32 mm	SSEM032/03/1	3	100 mm	58 mm	32 mm	Smooth Shank
	40	SSEM040/04/1	4	100	58	32	Smooth Shank
	50	SSEM050/05/1	5	100	58	32	Smooth Shank

### Spare Parts

Inch-Product	Metric-Product
Lock Screw: SWS-32LH, (5/32" Hex Drive)	Lock Screw: SWS-32LH, (5/32" Hex Drive)
Axial Adjustment Screw: SWS-32, (5/32" Hex Drive)	Axial Adjustment Screw: SWS-M5155, (5/32" Hex Drive)

# Easy-Quote Form For SUPER FEED™ Endmills



FACE TOOL INFORMATION			
D	Shank Dia.	z	Number of Blades
L	Overall Length	Rotation	rh lh
A	Cutter Dia.	Coolant	flood thru spindle
C	Shank Length	Hardware	english metric
	Shank Type (Smooth or Weldon)		
	Insert Type		

APPLICATION DESCRIPTION		
Machine Description:	Max. Spindle RPM:	Material to Cut:

ADDITIONAL COMMENTS

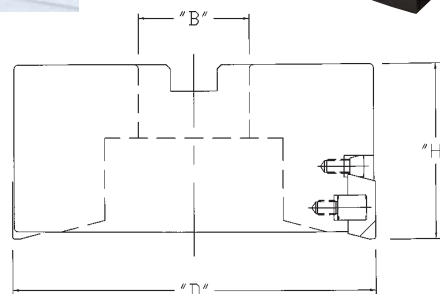
**FAX: 419.877.5196**

Complete this form and fax to ClappDiCO for a quote on SUPER FEED™ Endmills  
or visit our web site to fill out this form online and e-mail.

## SUPER FEED™ FACE MILLS

### High Density Milling Cutter

Diameter: 2.5 – 8 inch (63-125 mm)



	Nominal Diameter D	Cutter Order Number	Number of Blades	Overall Height H	Bore Diameter B	Shower Screw or Plate	Maximum RPM	Weight (lbs.)
INCH	2.50 in.	SF-025-06-RH	6	2.000 in.	1.00 in.	SALS-25	20,000	1.0
	3.00	SF-03-08-RH	8	2.000	1.00	SALS-30	20,000	1.5
	4.00	SF-04-12-RH	12	2.000	1.25	SALS-40	17,320	2.0
	5.00	SF-05-15-RH	15	2.375	1.50	SALS-50	15,500	3.0
	6.00	SF-06-18-RH	18	2.375	1.50	SALS-60	14,150	4.5
	8.00	SF-08-24-RH	24	2.375	2.50	SSP-08	12,240	6.5
METRIC	63.00 mm	SF-063-06-RH	6	40.00 mm	22.00 mm	SALS-063	20,000	1.0
	80.00	SF-080-08-RH	8	50.00	27.00	SALS-080	20,000	1.6
	100.00	SF-100-12-RH	12	50.00	32.00	SALS-100	17,320	1.9
	125.00	SF-125-15-RH	15	63.00	40.00	SALS-125	15,500	2.9
	63.00	HSK63A/063/06/RH	6			SALS-063	20,000	5.0
	80.00	HSK63A/080/08/RH	8			SALS-080	20,000	5.6
	100.00	HSK63A/100/12/RH	12			SALS-100	17,320	6.9

### Spare Parts

#### Inch-Product

Extended Wedge	HDW6EU-4
Short Wedge	HDW-6
Wedge Lock Screw	DLS-6
Axial Adjustment Screw	SWS-38

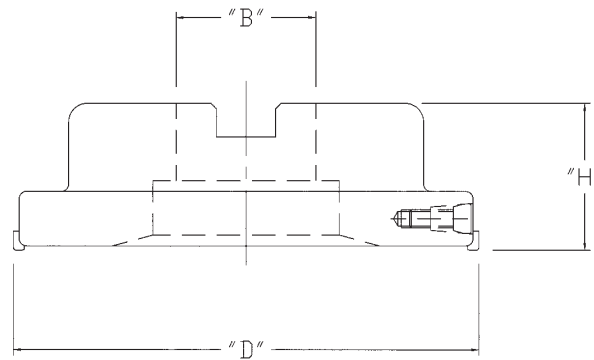
#### Metric-Product

Extended Wedge	HDW-M5EU-4
Wedge Lock Screw	LS-103
Axial Adjustment Screw	SWSM5-15

## *SUPER SPEED™ FACE MILLS*

### High Velocity Milling Cutter

Diameter: 80 – 125 mm

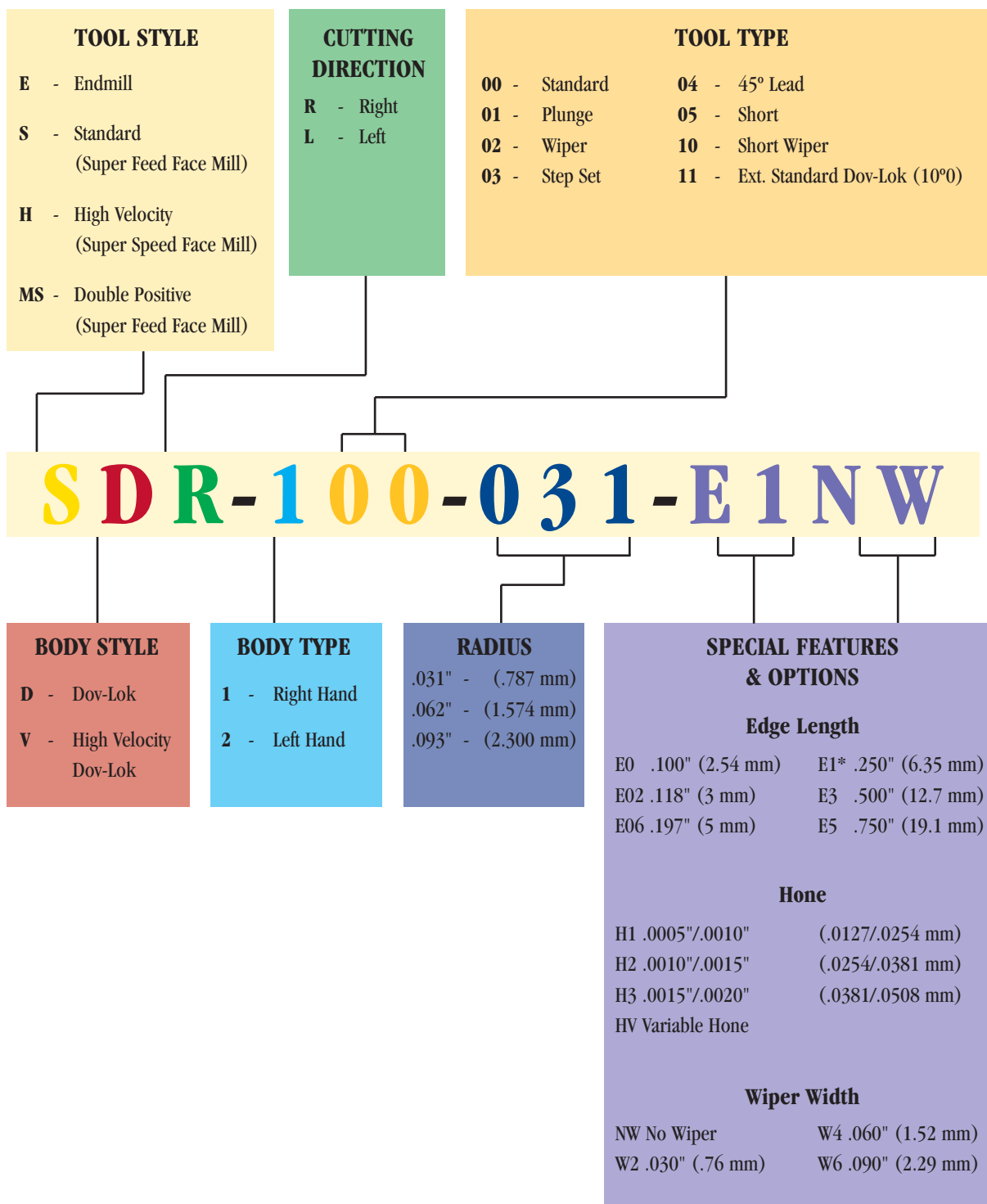


	Nominal Diameter D	Cutter Order Number	Number of Blades	Overall Height H	Bore Diameter B	Shower Screw or Plate	Maximum RPM	Weight (kg)
METRIC	80 mm	HVM-080-08RH	8	40 mm	27 mm	HVCS-080	20,000	0.76
	100	HVM-100-12RH	12	40	32	HVCS-100	17,320	1.63
	125	HVM-125-16RH	16	40	40	HVCS-125	15,500	2.54

### Spare Parts

Lock Screw	HVLS-M512 HVLS-M516	(for HVCS-080) (for HVCS-100 & HVCS-125)
Cam Wrench	HVCW-1	

## How to Order ... Milling Blade Identification Chart



Other Custom Radii, Features & Options available upon request.

\* End Mill E1 = .150" (3.81 mm)



## ClappDiCO's Mill Cutter Set-Up Procedure

### General Information

- **Non Contact Gauges are preferred.** However, contact gauges can be used with the following precautions:
  - The indicator point must be flat and parallel to the base.
  - Always approach the PCD blade from the bottom or relief angle under the PCD tip.
  - Do **NOT** let indicator drop on the PCD tip.
- Remove all worn PCD blades.
- Clean the cutter body completely.

### SUPER FEED™ Mill Set-Up Procedure

- Apply a small amount of lubricant in the pocket area where the wedge assembly fits (slides), and also apply to the threads of each lock screw and axial adjustment screw.
- Install blades and wedge assemblies by applying a light hand torque to the wedge assembly lock screws.
- Turn the axial adjustment screw until the blade is approximately .0004" to .0006" (.010 mm to .015 mm) below the final set height.
- Tighten the lock screw of the extended wedge assembly to a final torque of 35 inch lbs. (3.955 N-m). This will leave about .0002" (.005 mm) below the final set height.
- Now adjust the axial adjustment screw again to move the blade to its zero set height position.
- Adjust all remaining blades as above.



### SUPER FEED™ Endmill Set-Up Procedure

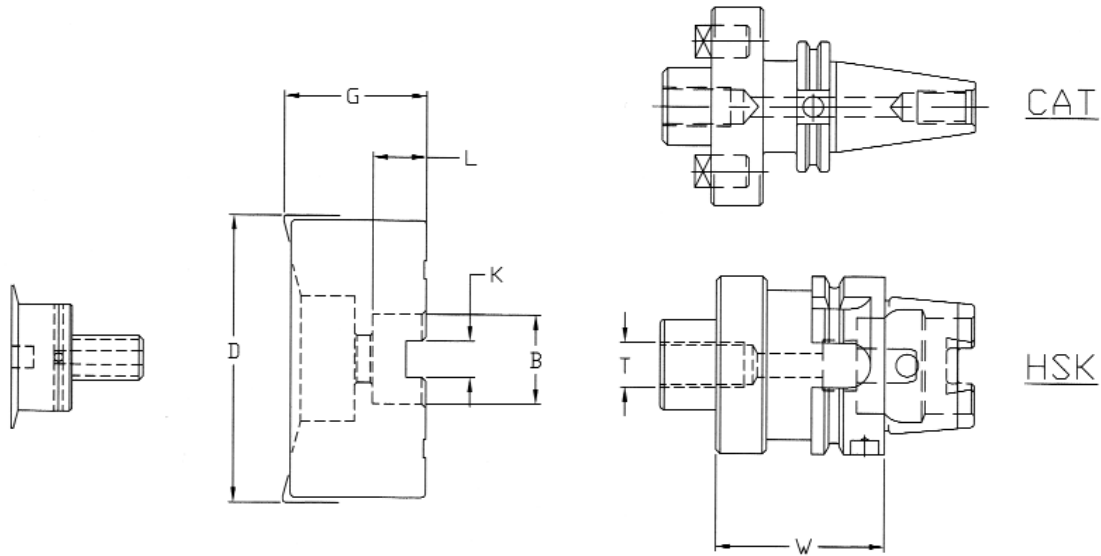
- Apply a small amount of lubricant to the threads of each lock screw and axial adjustment screw.
- Install blades, locking screws, and axial adjustment screws by applying a light hand torque to the locking screws.
- Turn the axial adjustment screw until the blade is approximately .0004" to .0006" (.010 mm to .015 mm) below the final set height.
- Tighten the lock screw (left hand thread) to its final torque setting of 70 inch lbs. (7.910 N-m).
- Now adjust the axial adjustment screw again to move the blade to its zero set height position.
- Adjust all remaining blades as above.



### SUPER SPEED™ Mill Set-Up Procedure

- Apply a small amount of lubricant to the threads of each lock screw.
- Install all lock screws and do not torque.
- Install the cam wrench and a blade, ensuring the blade is positioned against the back wall and resting upon the cam wrench. Apply a light hand torque to the lock screw.
- Turn the cam until the blade is approximately 0" to .0002" (0 mm to .005 mm) below the final set height.
- Tighten the lock screw to a final torque of 35 inch lbs. (3.955 N-m).
- Adjust all remaining blades as above.

# Easy-Quote Form For Face Mills



FACE TOOL INFORMATION			ADAPTER INFORMATION	
D	Major Dia.			Adapter Style/Size
G	Set Hgt.		W	Gage Lgth.
B	Bore Dia.			Retention Knob
L	Bore Lgth.			Thru Spindle Coolant
K	Keyway Dim.			Data Carrier Chip
	Insert Type		T	Thread Size/Pitch
z	Number of Blades			
	Rotation	rh      lh		
	Coolant	flood      thru spindle		
	Hardware	english      metric		
	Axial Rake			
	Radial Rake			

APPLICATION DESCRIPTION		
Machine Description:	Max. Spindle RPM:	Material to Cut:

ADDITIONAL COMMENTS

**FAX: 419.877.5196**

Complete this form and fax to ClappDiCO for a quote on Face Mills  
or visit our web site to fill out this form online and e-mail.

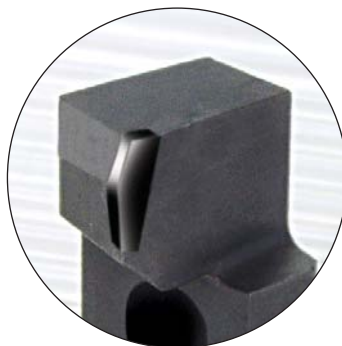


# PCD Stock Milling Inserts

## *POLYCRYSTALLINE DIAMOND MILLING INSERTS*

ClappDiCO is focused on reducing our customers' unit manufacturing costs through the application of our high performance milling products contained within this catalog.

However, if mill tooling investment has already been made in a different program, we can reduce our customers' unit manufacturing costs through insert refurbishment programs. This single source opportunity can also enable our customers to minimize their vendor base. For more details, ask your sales representative or call our customer service at **800-537-6445**.

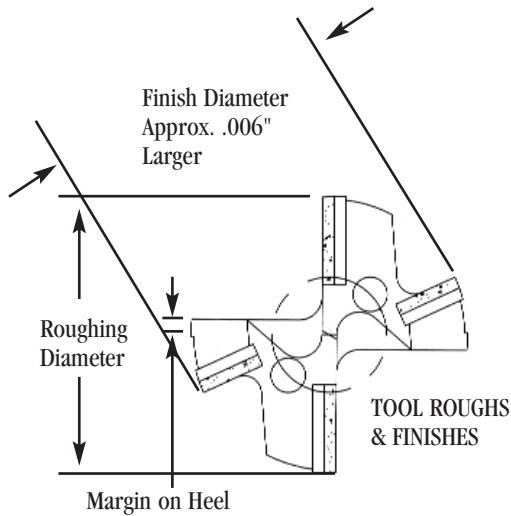


**PCD ROTARY TOOLS FOR ALUMINUM**

**DRILLS**

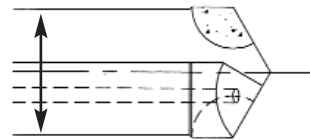
**GENERAL PURPOSE DESIGN USED FOR SHORTER DEPTH HOLES**

**STEP DESIGN  
AGGRESSIVE FEED,  
GOOD SURFACE FINISH**

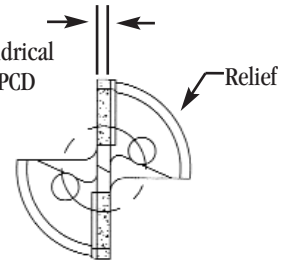


- PCD Tips
- Coolant or Non-Coolant
- Straight or Spiral Flute

Undercut behind PCDS



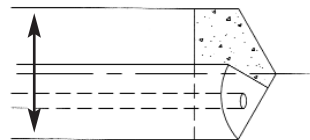
Full Cylindrical Land on PCD Layer



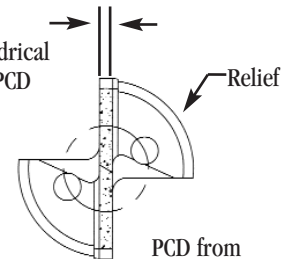
- PCD Tips on Both Shoulders
- Coolant or Non-Coolant
- Straight or Spiral Flute

**GOOD FOR HIGH SILICON ALUMINUM, ELIMINATES CHIP WELDING AT CENTER POINT**

Back Taper Cylindrical Land on Carbide



Full Cylindrical Land on PCD Layer

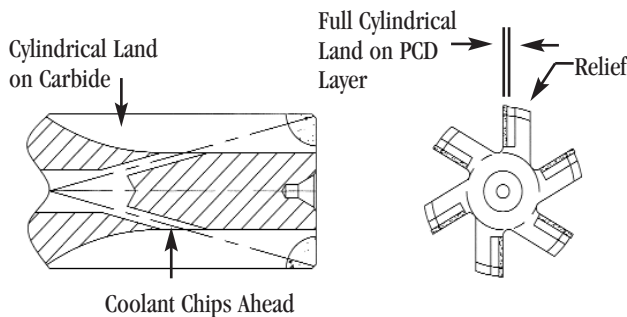


- Coolant or Non-Coolant
- Straight or Spiral Flute

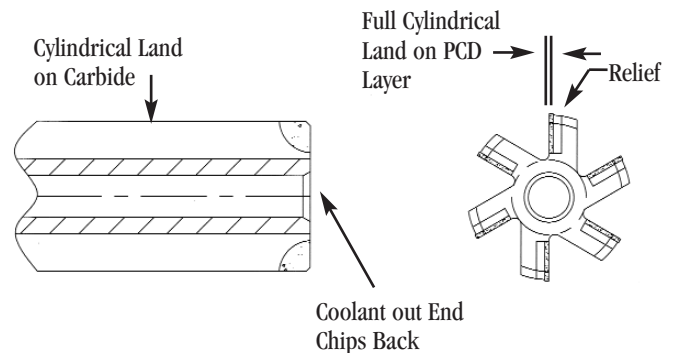
PCD from Periphery to Center Point

**REAMERS**

**MULTIPLE FLUTE THROUGH HOLE DESIGN**



**MULTIPLE FLUTE BLIND HOLE DESIGN**





*We also provide  
resharpen and retip  
services on ClappDiCO  
and other vendor  
rotary tooling.*

## *ROTARY TOOL APPLICATION INFORMATION*

1. Material Specification \_\_\_\_\_  
Material Hardness \_\_\_\_\_
  
2. Through Hole \_\_\_\_\_  
Blind Hole \_\_\_\_\_  
Cutting From Solid \_\_\_\_\_  
Pre-Drilled Hole \_\_\_\_\_  
Existing Hole Size & Depth \_\_\_\_\_
  
3. Coolant  
Internal \_\_\_\_\_  
External \_\_\_\_\_
  
4. Machine Name \_\_\_\_\_  
Holder Type \_\_\_\_\_  
Shank Size \_\_\_\_\_
  
5. Tool Type  
Drill \_\_\_\_\_  
Reamer \_\_\_\_\_  
Endmill \_\_\_\_\_
  
6. Requested Cutting Tool Material  
Carbide \_\_\_\_\_  
PCD \_\_\_\_\_  
PCBN \_\_\_\_\_

**FAX: 419.877.5196**

Complete this form and fax to ClappDiCO for a quote on Rotary Tools  
or visit our web site to fill out this form online and e-mail.

## Polycrystalline Diamond

ID Boring				
ANSI	ISO	IC Size	T	R
CCMW21.51	CCGW060204	0.250	0.094	0.016
CCMW32.51	CCGW09T304	0.375	0.156	0.016
CCMW32.52	CCGW09T308	0.375	0.156	0.031
DCMW21.51	DCGW060204	0.250	0.094	0.016
DCMW32.51	DCGW09T304	0.375	0.156	0.016
DCMW32.52	DCGW09T308	0.375	0.156	0.031
TCMW21.51	TCGW060204	0.250	0.094	0.016
TCMW32.51	TCGW09T304	0.375	0.156	0.016
TCMW32.52	TCGW09T308	0.375	0.156	0.031

Turning				
	TPHB090204FN	0.219	0.094	0.016
	TPHB110204FN	0.250	0.205	0.016
	TPHB090204FE	0.219	0.094	0.016
	TPHB110204FE	0.250	0.205	0.016

Profiling				
VPGR331	VPGR160404	0.375	0.188	0.016
VPGR332	VPGR160408	0.375	0.188	0.031
VPGR333	VPGR160412	0.375	0.188	0.047
VPGT333	VPGT160412	0.375	0.188	0.047
GIDA80-40				
GIPA6.00-3.00				

## Polycrystalline Cubic Boron Nitride

Solid & Full Top PCBN Inserts				
ANSI	ISO	IC Size	T	R
CNM322	CNMN090308	0.375	0.125	
RNM32	RNMN090300	0.375	0.125	
RNM43	RNMN120300	0.500	0.125	
SNM322	SNMN090308	0.375	0.125	0.031
SNM323	SNMN090312	0.375	0.125	0.047
SNM324	SNMN090316	0.375	0.125	0.063
SNM432	SNMA120408	0.500	0.187	0.031
SNM433	SNMA120412	0.500	0.187	0.047
SNM434	SNMA120416	0.500	0.187	0.063
TNM222	TNM110308	0.250	0.125	0.031

Full Top PCBN Inserts Only				
TPEE531		0.156	0.094	0.031
TPEE631		0.188	0.094	0.031
TPEE731		0.219	0.094	0.031

# Easy-Quote Form For Turning Products

## Application

- Chamfer
- Cut-off
- Face
- ID Bore
- OD Turn
- Groove
- Profile
- Thread
- Wear Surface



## MATERIAL DEFINITION

Material \_\_\_\_\_

Hardness \_\_\_\_\_

Silicon Content \_\_\_\_\_

## PROCESS DEFINITION

<input type="checkbox"/> Rough Operation	Coolant	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Semi-Finish Operation	Speed	_____	
<input type="checkbox"/> Finish Operation	Feed	_____	
<input type="checkbox"/> Continuous	Depth of Cut	_____	
<input type="checkbox"/> Lightly Interrupted	Toolholder Type	_____	
<input type="checkbox"/> Heavily Interrupted	Machine Desc./RPM	_____	

## ADDITIONAL COMMENTS

**FAX: 419.877.5196**

Complete this form and fax to ClappDiCO for a quote on Turning Tools  
or visit our web site to fill out this form online and e-mail.

## *Value-Added Programs*

ClappDiCO offers a number of value-added programs that reduces our customers' manufacturing costs on a per unit basis.

## *Refurbishment Service*

A complete refurbishment service to restore perishable and durable tooling to its original performance at a fraction of the cost of new tooling. Services include regrinding, resetting or retipping of used perishable tools and refurbishment of used milling cutters.

## *Refurbishment Delivery Service*

A delivery service is provided for both pick up of used tools and delivery of all refurbished tools for our customers. Our technicians will visit your facility on an as-requested basis to deliver the refurbished products in line with your production requirements with minimal inventory investment.

## *Just In Time Inventory Programs*

Customer and tool specific inventory stocking programs are available and managed effectively with weekly communication of inventory balances and usage information.

## *Commodity Management*

An encompassing PCD and PCBN tool supply management program combines our expertise in tool fabrication, inventory management, technical application and process improvement.

*North American Headquarters*



*ClappDiCO Corporation*  
A KENNAMETAL COMPANY

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