New

D-CUT

PARTING • GROOVING

Duracarb

Smart Indian Choice

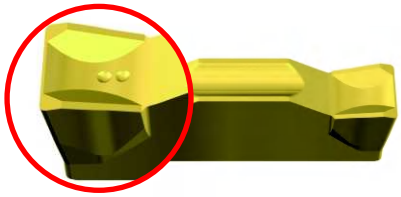
D-CUT — SMART SOLUTIONS FOR PARTING AND GROOVING

The new D-CUT program from Duracarb is a double edge insert solution for parting and grooving. The unique prismatic top and bottom design of the inserts and corresponding seating design in the holder ensures proper seating and alignment of the insert resulting in a rigid and secure clamping.

Dedicated D-CUT tool holders are available for groove depths up to 9mm and 16mm, in popular square shank sizes of 16x16, 20x20 and 25x25.

D-CUT insert grades and geometries are suitable for machining a variety of materials like steel, stainless steel, cast iron, high temperature alloys, brass and aluminium.

SELECTION OF CHIPBREAKERS



DDM

- For hard materials and tough applications.
- For general applications on steel, alloy steel and stainless steel.
- Medium-to-high feeds.

DDL

- For soft materials, parting of tubes, small diameters and thin-walled parts.
- Low forces and smaller burrs.
- Superior straightness.
- Low-to-medium feeds.

WORKPIECE MATERIAL

CUTTING CONDITION	ALLOY STEEL	AUSTENITIC STAINLESS	CAST IRON	NON-FERROUS	HIGH-TEMP ALLOYS
HIGH FEED	DDM	DDM	DDM	DDM BRASS	DDM
LOW FEED	DDL	DDL	DDM	DDL ALUMINIUM	DDL TITANIUM

GRADES

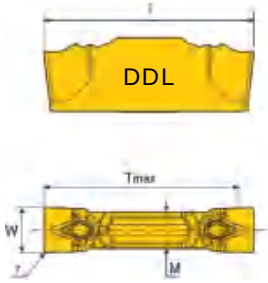
DC154 for medium cutting and semi-roughing of steel and stainless steel. ● Toughness enhanced grade ● TiCN. ● PVD coating.

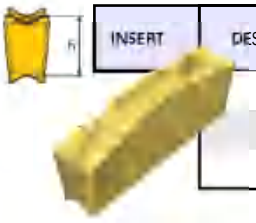
DP5320 for semi-roughing and medium cutting on all kinds of materials. ● High mechanical shock resistance. ● TiAlN coated on sub-micron substrate.

FEED GUIDELINE

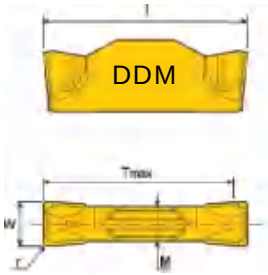
IN A TYPICAL GROOVING OPERATION

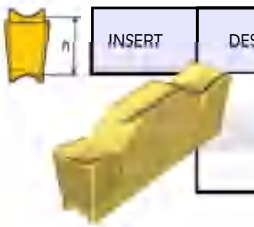
INSERT WIDTH(mm)	CHIPBREAKER DDL	CHIPBREAKER DDM
	FEED (mm/rev)	
2	0.04~0.12	0.05~0.18
3	0.04~0.16	0.07~0.25
4	0.04~0.18	0.09~0.35



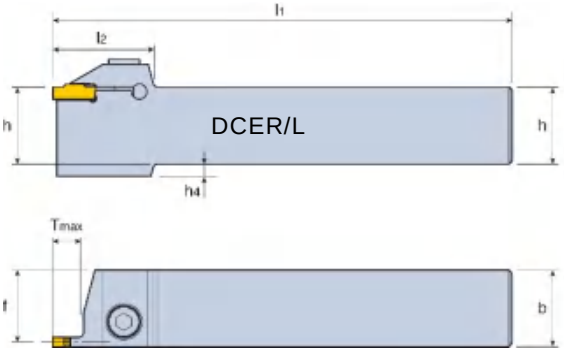


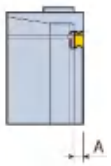
INSERT	DESIGNATION	SEAT SIZE	DIMENSION (mm)						GRADE	
			W ±0.05	r	M	l	h	Tmax	DP5320	DC154
	DDL 2	2	2.0	0.20	1.7	14.0	4.0	13	•	•
	DDL 3	3	3.0	0.20	2.4	14.0	4.0	13	•	•
	DDL 4	4	4.0	0.30	3.0	14.0	4.0	13	•	•





INSERT	DESIGNATION	SEAT SIZE	DIMENSION (mm)						GRADE	
			W ±0.05	r	M	l	h	Tmax	DP5320	DC154
	DDM 2	2	2.0	0.20	1.7	14.0	4.0	13	•	•
	DDM 3	3	3.0	0.20	2.4	14.0	4.0	13	•	•
	DDM 4	4	4.0	0.30	3.0	14.0	4.0	13	•	•





DESIGNATION		INSERT SEAT SIZE	DIMENSION(mm)							SPARES	
			h	b	l1	l2	A	h4	Tmax	SCREW	WRENCH
DCER/ L	16T09-2	2	16	16	110	33	1.8	4	9.0	DS M6X1X20-SH	DHLW-5
	20T09-2	2	20	20	125	33	1.8	—	9.0	DS M6X1X20-SH	DHLW-5
	25T09-2	2	25	25	150	33	1.8	—	9.0	DS M6X1X25-SH	DHLW-5
	16T16-2	2	16	16	110	35	1.8	4	16.0	DS M6X1X20-SH	DHLW-5
	20T16-2	2	20	20	125	35	1.8	—	16.0	DS M6X1X20-SH	DHLW-5
	25T16-2	2	25	25	150	35	1.8	—	16.0	DS M6X1X25-SH	DHLW-5
	16T09-3	3	16	16	110	33	2.4	4	9.0	DS M6X1X20-SH	DHLW-5
	20T09-3	3	20	20	125	33	2.4	—	9.0	DS M6X1X20-SH	DHLW-5
	25T09-3	3	25	25	150	33	2.4	—	9.0	DS M6X1X25-SH	DHLW-5
	16T16-3	3	16	16	110	35	2.4	4	16.0	DS M6X1X20-SH	DHLW-5
	20T16-3	3	20	20	125	35	2.4	—	16.0	DS M6X1X20-SH	DHLW-5
	25T16-3	3	25	25	150	35	2.4	—	16.0	DS M6X1X25-SH	DHLW-5
	16T09-4	4	16	16	110	33	3.0	4	9.0	DS M6X1X20-SH	DHLW-5
	20T09-4	4	20	20	125	33	3.0	—	9.0	DS M6X1X20-SH	DHLW-5
	25T09-4	4	25	25	150	33	3.0	—	9.0	DS M6X1X25-SH	DHLW-5
	16T16-4	4	16	16	110	35	3.0	4	16.0	DS M6X1X20-SH	DHLW-5
	20T16-4	4	20	20	125	35	3.0	—	16.0	DS M6X1X20-SH	DHLW-5
	25T16-4	4	25	25	150	35	3.0	—	16.0	DS M6X1X25-SH	DHLW-5

RECOMMENDED CUTTING CONDITIONS

ISO	MATERIAL		CONDITION	TENSILE STRENGTH N/mm^2	HARDNESS HB	CUTTING SPEED Vc(m/min)
P	Non alloy steel, cast steel, free cutting steel.	<0.25%C	Annealed.	420	125	140-250
		>=0.25%C	Annealed.	650	190	130-220
		<0.55%C	Quenched and tempered.	850	250	90-200
		>=0.55%C	Annealed.	750	220	100-220
			Quenched and tempered.	1000	300	70-170
	Low alloy steel and cast steel (less than 5% of alloying elements).		Annealed.	600	200	90-120
				930	275	80-170
			Quenched and tempered.	1000	300	70-130
				1200	350	50-120
	High alloy steel, cast steel and tool steel.		Annealed.	680	200	60-140
			Quenched and tempered.	1100	325	50-70
M	Stainless steel and cast steel.		Ferritic/ martensitic.	680	200	70-170
			Martensitic.	820	240	60-150
			Austenitic.	600	180	90-180
K	Gray cast iron (GG).		Ferritic.		160	100-230
			Pearlitic.		250	90-180
	Cast iron nodular (GGG).		Ferritic.		180	190-300
			Pearlitic.		260	120-220
	Malleable cast iron.		Ferritic.		130	120-250
			Pearlitic.		230	100-210
S	High temp alloys	Fe based.	Annealed.		200	40-70
			Cured.		280	30-50
		Ni or Co based.	Annealed.		250	30-40
			Cured.		350	15-25
			Cast.		320	15-30
	Titanium, Ti alloys.					90-190
			Alpha+beta alloys cured.			30-60

PRACTICAL TROUBLE SHOOTING

- REDUCE BURR: ● Ensure centre height of cutting edge within +/-0.1mm. ● Use Narrow and sharp geometry insert.
- IMPROVE FLATNESS: ● Minimise tool holder overhang ● Check alignment and perpendicularity of tool to machine spindle axis ● Optimise work piece holding.
- IMPROVE SURFACE FINISH: ● Increase cutting speed. ● Ensure optimum chip control. ● Eliminate chatter.
- IMPROVE CHIP CONTROL: ● Choose recommended chip breaker ● Check alignment and perpendicularity of tool to machine spindle axis. ● Increase feed. ● Increase coolant flow. ● Minimise tool holder overhang. ● Use correct parameters.
- PREVENT CHIPPING OF CUTTING EDGE: ● Use recommended grade and geometry. ● Reduce feed at end of cut. ● Eliminate chatter. ● Increase speed. ● Eliminate built-up edge. ● Ensure rigid setup.
- PREVENT/REDUCE BUIT-UP EDGE: ● Use recommended grade and geometry. ● Increase speed. ● Reduce feed. ● Increase coolant flow/concentration.

Smarttools update

Duracarb

Smart Indian Choice

DURACARB

DURACARB. DESIGN AND PERFORMANCE

Duracarb smart tools defines simplicity.

User feedback are incorporated to ensure that the process of selection and usage of these products are simple, without any compromise on performance and reliability.

DURACARB. MANUFACTURING.

Each Duracarb smart tool is crafted to highest standards in state-of-the-art IMC facilities around the world. Needless to say, all these facilities are certified for quality management system and environment management system. You get the best!

DURACARB. GRADE OF CARBIDE.

Decades of knowledge acquired by IMC group on formulation of basic carbide and coating, gives unmatched advantage for Duracarb R&D.

This ensures that the grades on offer meet the exacting demands of industries, like Automotive, Power, Aerospace to name a few.

DURACARB. THE RANGE.

Duracarb smart tools began its journey with a compact popular program to meet all your day-to-day tooling requirement.

You can expect exciting new additions to the ever increasing range from time to time.

Life is easy with DURACARB.

DURACARB. SELECTION AND USE.

Our philosophy in Duracarb is to make the product easy-to-choose and easy-to-use. At every stage we will ensure that the process of selection gets simple and user friendly.

DURACARB. AVAILABILITY.

At Duracarb, we understand the essence of a good tool supplier partnership hinges largely on timely availability. Our mature logistics system ensures the same.

DURACARB. AFTER-SALES SERVICE.

We have set up well-trained network of application engineers and channel partners to serve our customers across the length and breadth of the country.

And Duracarb is expanding.

DURACARB smart tools

Enabling MAKE IN INDIA

DMill

Milling constitutes about 25% of machining on the shop floor. Hence, productivity is very important to keep Cost Per Component (CPC) low.

Several factors are critical to help achieve stable and productive milling operations:

1. *Geometry of insert*
2. *Geometry of cutter*
3. *Choice of grade of carbide*
4. *Selection of milling strategy (upmilling/ downmilling)*
5. *Selection of milling parameters*

Duracarb, In the following pages, unveils its repertoire of outstanding high-productivity milling cutters.

D-MILL45°SD
SQUARE

HIGH PERFORMANCE GUARANTEED EVEN WITH LOW POWERED MACHINES

- Thick and unique geometry for high strength cutting.
- Ideal for low powered machines.
- Available in grades suited for CI, Steel, SS and heat resistant alloys.
- Effective cutting depth up to 4mm.
- Available in options of normal and close pitches.

PROGRAM

INSERT	FACE MILL CUTTER RANGE	MAXIMUM DEPTH OF CUT
SDKT 1305 XTR-M	Ø50, Ø63, Ø80, Ø100, Ø125.	4 mm

Inserts available in popular grades of: DC9200, DC9300, DC9800, DP5035, DP7320

4 EDGES smart milling AVAILABLE IN BOTH NORMAL AND CLOSE PITCH OPTIONS.

D2MILL90°SN
SQUARE

8 EDGE ECONOMICAL AND RELIABLE SOLUTION FOR 90° FACE MILLING.

- 8 corners for cost effective machining.
- Tougher cutting edge for larger depths up to 6mm.
- Helical edge provides for smooth and chatter free operation.
- Unique Chip former for lowering chip contact area thus reducing operating temperature.
- Unique angled screw clamping gives secure insert clamping with higher pitch.
- Available in Specialized grades for use on steel, SS, cast iron and Heat resistant alloys.

8 EDGES smart milling AVAILABLE IN BOTH NORMAL AND FINE PITCH OPTIONS.

PROGRAM

INSERT	FACE MILL CUTTER RANGE	MAXIMUM DEPTH OF CUT
SNGU 120508-M	Ø50, Ø63, Ø80, Ø100, Ø125.	6 mm

Inserts available in popular grades of: DP5320, DC9200, DC9800, DP5035

D2MILL90°GN
R E C T A N G L E

HIGH PERFORMANCE SOLUTION FOR FULL DEPTH 90° SLOT/SHOULDER MILLING.

- True 90° Shoulder generation capability with 4 corners.
- High productivity inserts characterized by thicker and stronger cutting edges.
- High helix on cutting edge ensures smoother cutting.
- Double sided durable insert with high positive rake angle for low cutting loads and temperature.
- Can be used on low to medium powered machines.
- Available in both Face mill and End mill options.

4 EDGES smart milling
AVAILABLE IN BOTH FACE MILL AND END MILL OPTIONS.

PROGRAM

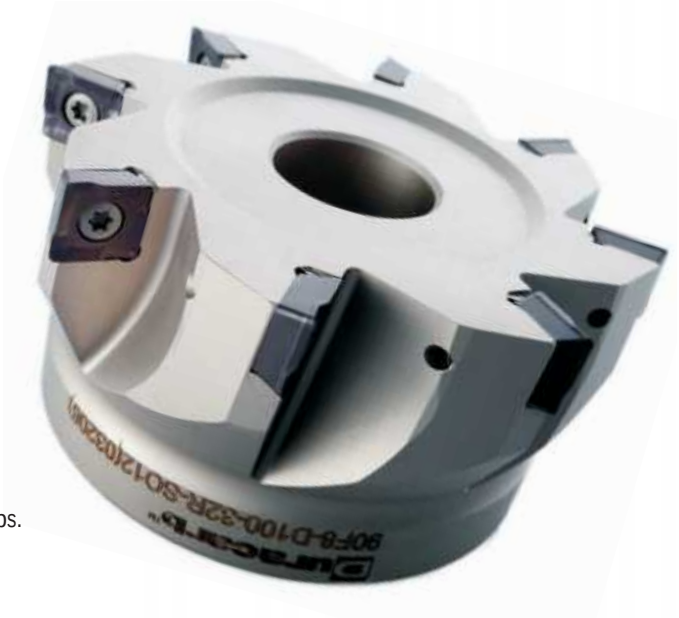
INSERT	FACE MILL CUTTER RANGE	END MILL RANGE	MAXIMUM DEPTH OF CUT
GNMU 110605R-M GNHU 110608R-M	Ø40, Ø50, Ø63, Ø80, Ø100	Ø20, Ø25, Ø32.	10 mm
GNMU 161008R-M	Ø50, Ø63, Ø80, Ø100	Ø32,Ø40.	14.5 mm

Inserts available in popular grades of: DP5320, DC9200, DC9800, DP5035, DP7320.

D-MILL90°SO
S Q U A R E

90° FACE MILL FOR LOW POWER AND LESS RIGID APPLICATIONS

- Innovative cutting edge for effective chip evacuation.
- Super high positive axial rake that generates low cutting forces.
- Wider wiping edge for enhanced surface finish quality.
- Offers 90°sholuder for full 7mm DOC.
- Suitable for low powered machines and less rigid setups.
- Available in variety of grades for use on steel, SS, cast iron, Aluminum** and Heat resistant alloys



PROGRAM

INSERT	FACE MILL CUTTER RANGE	MAXIMUM DEPTH OF CUT
SOMX 120508 PEER-DM SOMX 120508 PEER-A	Ø50, Ø63, Ø80, Ø100, Ø125	7 mm

4 EDGES smart milling
AVAILABLE FOR STEEL, SS, CAST IRON ALUMINIUM AND HEAT RESISTANT ALLOYS.

Inserts available in popular grades of: DC9200, DC9300, DC7800, DP5035, DC210

D2MILL43°ON
O C T A G O N A L

16 EDGE ECONOMY WITH SUPREME PERFORMANCE IN FACE MILLING

- 16 Cutting edge offers best in class economy
- Ideal for high performance face milling on cast iron and steel.
- 43° Approach angle results in balanced axial and radial loads for enhanced component edge quality on CI.
- Simple but Rigid screw clamping eliminates need of expensive spares.
- Positive geometry with helical edge result in smoother cutting action.
- Boarder wiping edge offers better surface finish.
- Offered in optimized geometries of M & ML for Roughing and Finishing.
- Available in wide- range of grades suited for CI, Steel, SS and heat resistant alloys.
- Cutters available with Fine pitch and normal pitch options.

PROGRAM

INSERT	FACE MILL CUTTER RANGE	END MILL RANGE	MAXIMUM DEPTH OF CUT
ONMU 050505-M	Ø50, Ø63, Ø80, Ø100, Ø125.	Ø25, Ø32, Ø40.	2 mm
ONMU 070608-M ONHU 070608-ML	Ø63, Ø80, Ø100, Ø125, Ø160.	-	4 mm

Inserts available in popular grades of: DP5320, DC9200, DC9800, DP5035, DP7320

16 EDGES smart milling
AVAILABLE IN 2 SIZES OF INSERTS TO OPTIMIZE YOUR MANUFACTURING COST

8 EDGES smart milling
AVAILABLE IN BOTH NORMAL AND FINE PITCH OPTIONS.

D2MILL45°SN
S Q U A R E

8 EDGE ECONOMICAL AND RELIABLE SOLUTION FOR 45° FACE MILLING.

- 45° approach angle for balanced machining.
- Helical edge with positive rake for lower cutting forces.
- Unique Chip former for lowering chip contact area thus reducing operating temperature.
- Unique angled screw clamping gives secure insert clamping with higher pitch.
- DOC up to 6 mm.

PROGRAM

INSERT	FACE MILL CUTTER RANGE	MAXIMUM DEPTH OF CUT
SNKU 1205 XTN SNGX 1205 XTN	Ø50, Ø63, Ø80, Ø100, Ø125	6 mm

Inserts available in popular grades of: DP5320, DC9200, DC9800, DP5035, DP7320

D-MILL90°TO
T R I A N G L E

SUPER HIGH POSITIVE INSERT FOR SHOULDER MILLING

NEW

- Super high double positive rake angles for low cutting forces.
- Wider wiping edge for enhanced surface finish quality.
- True 90° cutting edge guarantees squareness and accuracy.
- High density cuter maximizes Productivity.
- Available in variety of grades for use on steel, SS, cast iron, Aluminum and Heat resistant alloys

PROGRAM

INSERT	FACE MILL CUTTER RANGE	END MILL RANGE	MAXIMUM DEPTH OF CUT
TOMX 100408PDTR-DM	Ø40, Ø50, Ø63, Ø80.	Ø20, Ø25, Ø32, Ø40.	6 mm

Inserts available in popular grades of: DP5320, DC9200, DC9800, DP5035, DP7320

3 CORNERS smart milling
TRUE SHOULDER GENERATION CAPABILITY WITH 3 CORNERS

D-MILL90°AP
R E C T A N G L E

PERFECT 90° SHOULDER MILLING SOLUTION

2 CORNERS smart milling
TRUE SHOULDER GENERATION CAPABILITY WITH 4 CORNERS

- 90° True Shoulder generation capability for full depth.
- Highly positive rake angle for smooth and chatter free machining.
- Thicker and stronger insert design.
- Higher helix angles ensure smoother cutting.
- Step less machining in multiple axial pass operations.
- Best suited for low to medium powered machines.
- Available in both Face mill and End mill options.
- Suitable for Die and Mold applications with DM range of cutter bodies.

PROGRAM

INSERT	FACE MILL CUTTER RANGE	END MILL RANGE	MAXIMUM DEPTH OF CUT
APKT 080308R APKT 080316R	-	Ø16, Ø20, Ø25, Ø32.	6.5 mm
APKT 160408 PDSR	Ø40, Ø50, Ø63, Ø80, Ø100.	Ø25, Ø32.	13 mm

Inserts available in popular grades of: DP5320, DP7320, DC9300, DC9800, DC9200

D-MOLD

R O U N D

ROUND INSERTS FOR ECONOMICAL MACHINING

- Ideal for copy profile and radius milling.
- Double positive cutters for smooth operation.
- Reliable machining under demanding conditions.
- Suitable for Aerospace, Die & Mold industry.
- Double positive cutters for smooth operation.
- Available in end mill and face mill options

PROGRAM

INSERT	FACE MILL CUTTER RANGE	END MILL RANGE	MAXIMUM DEPTH OF CUT
RDMT 1003-DM RDMT 1003-DR	-	Ø20, Ø25.	5 mm
RDMT 12T3-DM RDMT 12T3-DR	Ø50, Ø52.	Ø32	6 mm

Inserts available in popular grades of: DC9300, DC9800, DP5035

smart milling
AVAILABLE IN BOTH FACE MILL AND END MILL OPTIONS.

D-ENDMILL

S O L I D C A R B I D E

HIGH PERFORMANCE SOLID CARBIDE END MILLS.

- Available for wide range of application and various configurations of shank and lengths.
- Unique geometry for smoother cutting superior surface quality.
- Advanced grades and coating enables for higher feed rates of up to 1.5Xd in slotting.
- Precision tolerated tools for better dimensional control.
- Optimally designed geometry for both rough and finish applications.

DURACARB is to die for! Get it today.

DDrill

It is estimated that drilling/hole-making contributes to over 30% of metal cutting operations in a typical prismatic component.

Duracarb introduces DEC Drills with optimized square inserts with 4 cutting edges. Drill body, gullet design, and coolant channels are optimized for stable performance. Available in L/D ratios of 2&3.

Duracarb

smart tools

FOR DRILLING

DEC DRILL
SQUARE

HIGH PERFORMANCE DRILL WITH UNMATCHED ECONOMY

- Available in 2 & 3 times L/D with internal coolant facility.
- Common insert for center and periphery pockets.
- Optimized cutting geometry guarantees excellent machining stability and precision.
- Wider chip space with helical design ensures smoother chip evacuation.
- Extensive stocking program.

PROGRAM

INSERT	DRILL DIA RANGE	L/D	REMARKS
SPMX 06T204 MG	Ø15.5 TO Ø21.5	2 & 3	Diametrical Increments of 0.5 mm
SPMX 070308 MG	Ø22 TO Ø27.5	2 & 3	
SPMX 09T308 MG	Ø28 TO Ø33	2 & 3	
SPMX 11T308 MG	Ø34 TO Ø41	2 & 3	Diametrical Increments of 1 mm

Inserts available in Grade: DC9800

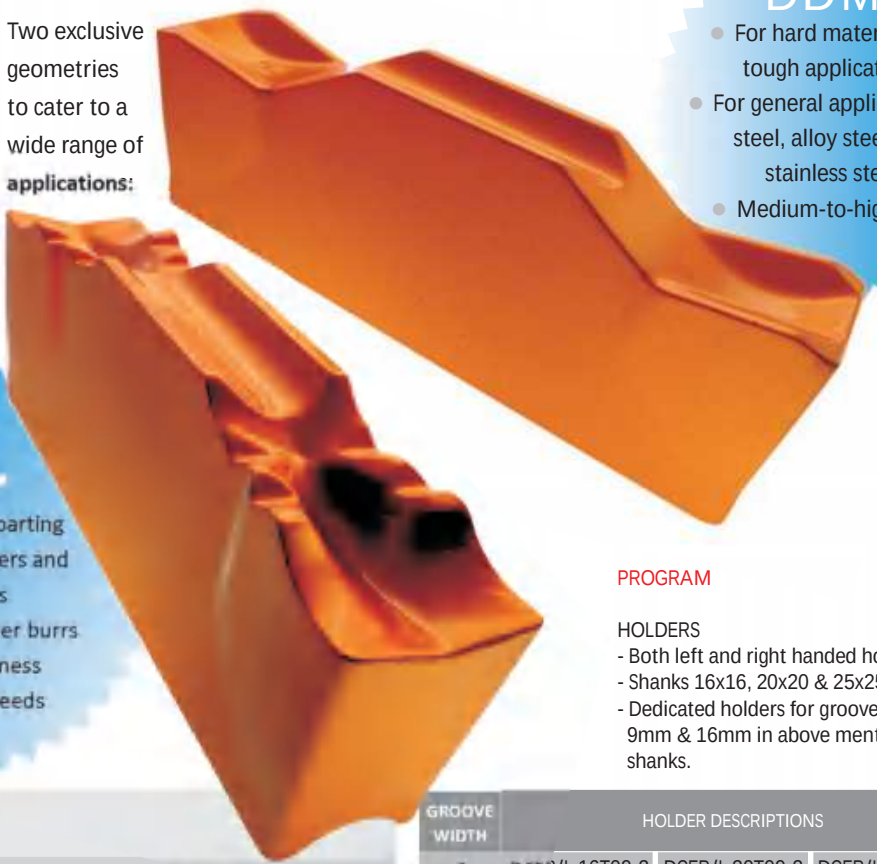
4 CORNERS smart drilling
PRODUCTIVITY AND STABILITY

DURACARB accurate drills.

SMART SOLUTIONS FOR PARTING AND GROOVING

- Extensive range of grooving and parting system.
- Economical twin-edged inserts with high stability and good repeatability.
- Molded chipbreaker.
- Top and bottom prism on insert hold the insert firmly and aligned accurately.
- Very rigid seating with strong and secure clamping.
- Simple, accurate and rapid indexing.
- Stable support against side forces.
- Integral shank tools with minimum spare parts, in standard shank dimensions.
- Smartest solution for deep grooving, parting, shallow grooving, recessing, undercutting etc.

Two exclusive geometries to cater to a wide range of **applications:**



DDM

- For hard materials and tough applications
- For general applications on steel, alloy steel and stainless steel
- Medium-to-high feeds

DDL

- For soft materials, parting of tubes, small diameters and thin-walled parts
- Low forces and smaller burrs
- Superior straightness
- Low-to-medium feeds

PROGRAM

HOLDERS
- Both left and right handed holders.
- Shanks 16x16, 20x20 & 25x25.
- Dedicated holders for groove depths 9mm & 16mm in above mentioned shanks.

	WORK PIECE MATERIAL				
CUTTING CONDITION	ALLOY STEEL	AUSTENITIC STAINLESS	CAST IRON	NON-FERROUS	HIGH-TEMP ALLOYS
HIGH FEED	DDM	DDM	DDM	DDM BRASS	DDM
LOW FEED	DDL	DDL	DDM	DDL ALUMINIUM	DDL TITANIUM

GRADES
DC154 for medium cutting and semi-roughing of steel and stainless steel.

DP5320 Hard and tough versatile micro-fine grade suitable for general machining of steel, stainless steel and heat resistant alloys.

GROOVE WIDTH	HOLDER DESCRIPTIONS			GROOVE DEPTH
2	DCER/L 16T09-2	DCER/L 20T09-2	DCER/L 25T09-2	9
2	DCER/L 16T16-2	DCER/L 20T16-2	DCER/L 25T16-2	16
3	DCER/L 16T09-3	DCER/L 20T09-3	DCER/L 25T09-3	9
3	DCER/L 16T16-3	DCER/L 20T16-3	DCER/L 25T16-3	16
4	DCER/L 16T09-4	DCER/L 20T09-4	DCER/L 25T09-4	9
4	DCER/L 16T16-4	DCER/L 20T16-4	DCER/L 25T16-4	16
	SHANK 16X16	SHANK 20X20	SHANK 25X25	

INSERTS

DDL 2	DDL 3	DDL 4
DDM 2	DDM 3	DDM 4

DURACARB grooves. DURACARB parts.


D Cut
Introducing
THE PARTING & GROOVING PROGRAM
Parting and grooving are critical operations in a typical cylindrical part production. Duracarb's D-Cut program offers smart solutions for such applications.
All new
Duracarb
smart tools
FOR PARTING & GROOVING
COMPETITIVE ● EFFICIENT ● SMALL ● SMART

Turning forms about 35% of metal cutting applications. Today, CNC turning machines are available with high-rigidity and multi-axis capability for mass and batch production.
A stable turning process requires:

1. Correct tool holder and approach angle.
2. Appropriate shape of insert with optimum geometry.
3. Grade of carbide to meet productivity demands, to ensure stable performance and good tool life.

Duracarb, offers extensive range of turning tool holders, inserts in various geometries in both CVD and PVD coated grades that guarantees stable performance.

Duracarb
smart tools
FOR TURNING

D-CLAMP

THE SMARTEST INSERT CLAMPING MECHANISM FOR ALL TURNING OPERATIONS.

D-Clamp provides the most secure insert clamping with simple structure.D-Clamp holders give longer tool life to insert because it decreases vibrations or movement of insert during cutting, thanks to its very strong clamping.

- Secure and rigid bi-directional clamping
- Simple clamping action
- Easy and accurate indexing
- Bigger seat for superior stability
- Longer tool life
- First choice for interrupted cuts

D-CLAMP PROGRAM

DCLNR/L 2020 K12	DTJNR/L 2020 K16
DCLNR/L 2525 M12	DTJNR/L 2525 M16
DDJNR/L 2020 K15	DWLNR/L 2020 K06-C
DDJNR/L 2525 M15	DWLNR/L 2525 K06-C
DSDNN 2020 K12	DWLNR/L 2020 K08-C
DSDNN 2525 M12	DWLNR/L 2525 K08-C

SMARTTURN

30% savings GUARANTEED*

SMARTER TURNING SOLUTIONS FOR INCREASED SAVINGS

When depths of cut in turning are predominantly in the range of 2 to 3 mm, why use the conventional ISO turning inserts with 12~15 mm cutting edge lengths? Focus on cost reduction with smaller but durable Smart-Turn inserts. Increase competitiveness with reduced machining costs.

Smart-Turn inserts are available in popular shapes of C and T. Smart-Turn external holders are available in secure D-Clamp style for C shape inserts and a nifty wedge-lock style for T shape inserts.

Smart-Turn internal holders are available in form of versatile screw clamped boring bars in 16 and 20mm shanks.

PROGRAM:

INSERTS:

CNMA 090412	Smart Turn inserts are available in popular grades: DC9015, DC9025, DC9800, DC 9235, DP5010 and DC820.
CNMG 090408*	
CNMG 090412*	
TNMA 130408	
TNMG 130404*	
TNMG 130408*	* available in popular chipbreakers: M3, D3, D5 and R5.
TNMG 130412*	

EXTERNAL HOLDERS:

DCLNR/L 2020 K0904
DCLNR/L 2525 M0904
WTJNR/L 2020 K1304-C
WTJNR/L 2525 K1304-C

INTERNAL HOLDERS:

S16Q/S20Q SCLNR/L 0904-C
S16Q/S20Q STJNR/L 1304-C
S16Q/S20Q STUNR/L 1304-C

Chipbreakers

No more excuses for Birdnesting.

Poor chip breaking produces long, stringy chips, commonly referred to as birdnests. When chips form in birdnests, they get wrapped up around the chuck and the workpiece causing damage and poor surface finish. Long chips take up more room in the hopper, which requires it to be emptied more often. Time is lost in stopping the machine to remove chips, productivity is reduced, cycle time is increased and per-part costs are higher. Birdnesting is also a health and safety issue for the machinist.

Smart chip control is key to successful turning operation. Duracarb presents, the choicest range of chip breakers that can not only improve chip control but also reduce cutting thickness. Duracarb's smart chip breakers cut short the chips to suitable lengths, reduce cutting resistance and load, decrease the temperature at the cutting edge and delays tool wear.

NEGATIVE

41

- For medium and finishing
- Good chip evacuation in low feed and depth of cut
- Excellent chip control

42

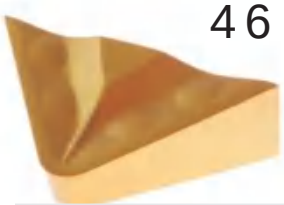
- For medium machining in stainless steel and low carbon steel
- Low cutting force with sharp edge geometry

43

- Balance between strength and sharpness
- For semi finishing to medium machining in steel and alloy steel
- Good chip control in profiling

45

- For medium machining in steel, low carbon steel and low carbon alloy steel
- Semi finishing in cast iron
- Minimum of built-up edge from sharp edge geometry



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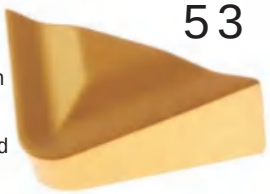
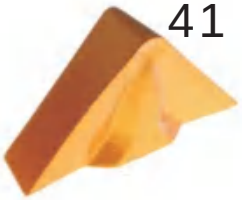
- Medium for carbon steel and alloy steel
- From medium to finishing of cast iron machining
- Suitable for continuous to interrupted
- Geometry of low cutting force



53

- Medium to roughing in steel and cast iron
- Strong cutting edge
- Recommended for unstable conditions

POSITIVE



41

- Finishing on boring applications
- Good chip evacuation in low feed and depth of cut
- Low cutting force and good chip control for steel and stainless steel machining

51

- Medium machining in steel, stainless steel and cast iron
- Applicable to both interrupted and continuous machining

52

- For medium to semi-roughing
- For steel and cast iron

Grades

	WORKPIECE MATERIAL	HARDER ⟷ TOUGHER / FINISH/ LIGHT ⟷ MEDIUM/ ROUGH
P	CARBON STEEL ALLOY STEEL MILD STEEL	DC610, DC8035, DC9235, DC9015, DC9025, DC9800
M	STAINLESS STEEL	DC610, DP5010, DC8035, DC9800
K	CAST IRON	DC610, DC210, DC820, DC9800
N	NON FERROUS	DC210
S	HEAT RESISTANT ALLOY	DP5010, DC8035, DC9235, DC9800

APPLICATION GUIDELINE FOR NEGATIVE INSERTS

WORKPIECE MATERIAL	SHARPER FINISH/ LIGHT	⟷	STRONGER MEDIUM/ ROUGH