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NPA

New Product Announcement

new

NEW END MILLS FOR DIE & MOULD APPLICATIONS.

Duracarb Introduces the new end mills with WD 060308/16 –DM for Die & Mould applications.

Member IMC Group
Duracarb

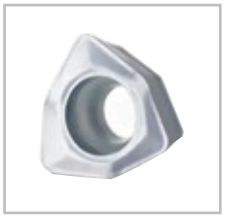
Marketing Approach

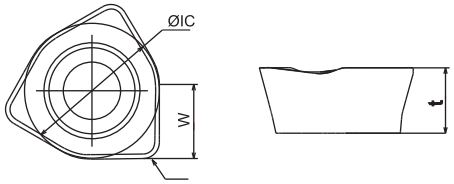
To replace the 2 cutting edge inserts like APMT/ AOMT/ R390/ AXMT etc with 3 cutting edge WD 06 insert in D & M applications.

Features

- WDMT 060308R-DM insert is with 3 cutting edges compared to the regular 2 cutting edge insert.
- WD retains the same features of AXMT cutting edge like higher helix angle & planishing edge.
- The insert is with 0.8R & 1.6R for better tool life.
- The product is most suitable for Semi-finishing to Finishing applications.
- Suitable for Linear/ Helical ramping up to 3 deg.
- Longer end mills to suit the deeper applications in various D&M applications like Mould bases,Wear plates etc.
- Available in standard & long end mill series.
- Nickel coated cutter body for extended cutter body life.
- The cutter body material is of high density steel to give trouble free machining & better cutter body life
  .
- The product can also be used for slot milling/ roughing with smaller ADOC.
- These endmills can be a substitute for the existing AXMT - DM End Mills.

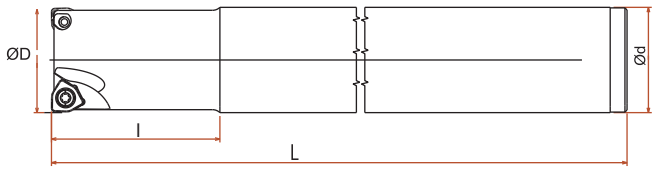
Insert





Insert	Designation	IC	T	W	Grades
	WD 060308R-DM WD 060316R-DM	6.6	3.2	3.5	DC9800

End Mill Program



Designation	Insert	No of Inserts	Cutter Dia	Shank Dia	Flute Length	OAL	Screw	Torx Key
		Z	D	d	l	L		
90E2-1616-WD06-L90	WD 060308R - DM DC9800 WD 060308R - DM DC9800	2	16	16	25	90	DS25055I/HG-TS	DTDW-8
90E2-1616-WD06-L145		2	16	16	30	145		
90E3-2020-WD06-L110		3	20	20	30	110		
90E2-2020-WD06-L170		2	20	20	40	170		
90E3-2525-WD06-L110		3	25	25	30	110		
90E2-2525-WD06-L210		2	25	25	40	210		

Test Reports

Case Story 1	
Component	Roller Stand
Material	Low Carbon Steel En8
Hardness	180 BHN
End mill	90E2-2525-WD06-210
Insert	WD 060308R - DM DC9800
Free length of the end mill in mm	150
GPL in mm	250
Cutting Speed in mts/ Min	175
Spindle Speed RPM	2228
No. of inserts	2
Axial Depth of Cut in mm	0.25
Radial Width of Cut in mm	Approx. 15
Feed in mm/ tooth	0.337
Feed in mm/ min	1500
Coolant	Wet : Water soluble
Cutting time in Mins	2 Hours & 30 Mins
Tool life in Mins	
Remarks	Not concluded 1. Rough Machining 2. Lesser noise 3. Linear interpolation in the corner 4. Negligible chatter & vib. In the corner 5. No insert loosening during machining 6. Holding system : EM25 SLA

Case Story 2	
Material	90 mm Elbow Door
Hardness	Medium Carbon Steel C45
End mill	225 BHN
Insert	90E2-2525-WD06-210
Free length of the end mill in mm	WD 060308R - DM DC9800
GPL in mm	130
Cutting Speed in mts/ Min	COMPONENT
Spindle Speed RPM	230
No. of inserts	175
Axial Depth of Cut in mm	2230
Radial Width of Cut in mm	0.25
Feed in mm/ tooth	Approx. 14
Feed in mm/ min	0.4
Coolant	1784
Cutting time in Mins	Wet: Water soluble
Tool life in Mins	1 Hour & 45 Mins
Remarks:	Not concluded 1. Rough Machining 2. 4 Grooves on C45 & 2 grooves on P20 3. Holding system: ER40 Collet chuck

Case Story 3	
Component	Fan Cover
Material	Medium Carbon Steel C45
Hardness	225 BHN
End mill	90E2-2525-WD06-210
Free length of the end mill in mm	WD 060308R - DM DC9800
GeE in mm	130
Cutting Speed in mts/ Min	230
Spindle Speed RPM	175
No. or inserts	2230
Axial Depth of Cut in mm	COMPONENT
Radial Width of Cut in mm	0.25
Feed in mm/ tooth	0.15
Feed in mm/ min	0.3
Coolant	1340
Cutting time in Mins	Wet: Water soluble
Tool life in Mins	2 Hours & 10 Mins
Remarks:	Not concluded 1. Finish Machining 2. Good surface finish 3. Down milling 4. Holding system : EM25 SLA

Case Story 4	
Component	Pallet 600
Material	Medium Carbon Steel P20
Hardness	28 - 32 HRC
End mill	90E2-2525-WD06-210
Insert	WD 060308R - DM DC9800
Free length of the end mill in mm	145
GPL in mm	COMPONENT
Cutting Speed in mts/ Min	225
Spindle Speed RPM	175
No. of inserts	2230
Axial Depth of Cut in mm	2
Radial Width of Cut in mm	0.25
Feed in mm tooth	2
Feed in mm min	0.35
Coolant	1550
Cutting time in Mins	Dry: External Air
Tool life in Mins	1 Hour & 30 Mins
Remarks:	Not concluded 1. Rough Machining 2. Better surface finish 3. Lesser noise level 4. Down milling 5. Holding system: ER 40 Collet chuck

Case Story 5	
Component	Housing - Cavity
Material	Medium Carbon Steel P20
Hardness	28 - 32 HRC
End mill	90E2-2525-WD06-210
Insert	WD 060308R - DM DC9800
Free length of the end mill in mm	130
GeLIMm	220
Cutting Speed in mts/ Min	200
Spindle Speed RPM	2550
No. of inserts	2
Axial Depth of Cut in mm	0.25
Radial Width of Cut in mm	5
Feed in mm tooth	0.39
reed in mm min	2000
Coolant	Wet: Water soluble
Cutting time in Mins	2 Hours & 46 Mins
Tool life in Mins	
Remarks:	Not concluded 1. Semi finishing operation 2. Bore enlargement by interpolation 3. Lesser noise 4. Holding system: Milling chuck

Cutting Parameters

Material	Hardness (BHN)	Insert Grade	ADOC 'ap' in mm	Cuting Speed V/c in mts/min	Feed 'fz' in mm/tooth
Low Carbon Steel	85-175	DC 9800	0.50 - 0.75	175 - 250	0.25 - 0.40
High Carbon Steel	175-225		0.50 - 0.75	150 - 225	0.25 - 0.40
Alloyed Steel	275-325		0.50 - 0.75	150 - 200	0.25 - 0.40
Stainless Steel	SS 300 Series		0.50 - 0.75	125 - 175	0.25 - 0.35
Stainless Steel	SS 400 Series		0.50 - 0.75	125 - 175	0.25 - 0.35
Gray Cast Iron	190-220		0.50 - 0.75	175 - 250	0.25 - 0.40
Nodular Cast Iron	140-200		0.50 - 0.75	150 - 200	0.25 - 0.40

Reduce cutting speed by 20% for Slot Milling

Price
Available in GAL

Availability
In stock

Sincerely,
Team Duracarb