

PRODUCT NEWS

PN-U-003

TYPE EXSIX

 **DIJET**®

SHOULDER SIX

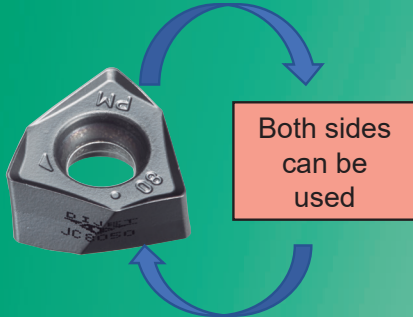
For shoulder milling with double-sided insert.

■ Face mill type \varnothing 2.00" ~6.00"



SHOULDER SIX

FEATURES



- Double-sided insert with 6 cutting edges
- Max. ap: **.400"**
- High rigidity insert with **.295"** thickness
- Corner Radii available: **.031"** and **.062"**
- Low cutting force shape has unique 3D chip breaker

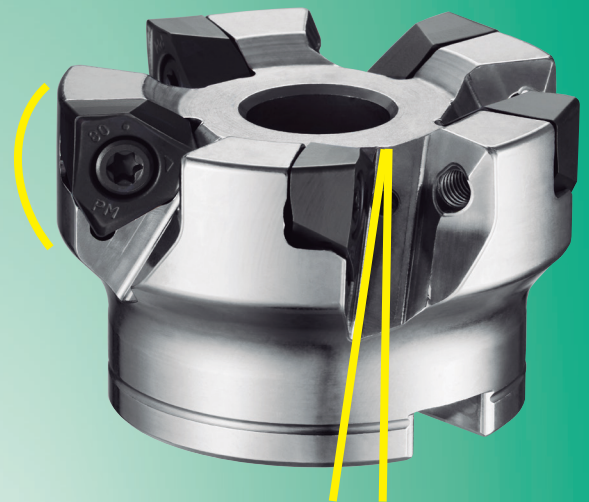
- Tool diameters from **2"** to **6"**

- Due to the arc-geometry on the peripheral cutting edge, the cusp height can be smaller even in case of large ap.

→ Achieves high efficient & high precision machining for side walls

- Body's A.R. is positive due to the unique 3D insert.

→ Achieves low cutting force



Two insert grades available:

PVD coated grade "JC8050" achieves both fracture toughness and wear resistance.

PVD coated grade "JC8118" provides high versatility and can be widely applied to general steel, mold steel and high hardened die steel less than 50HRC.

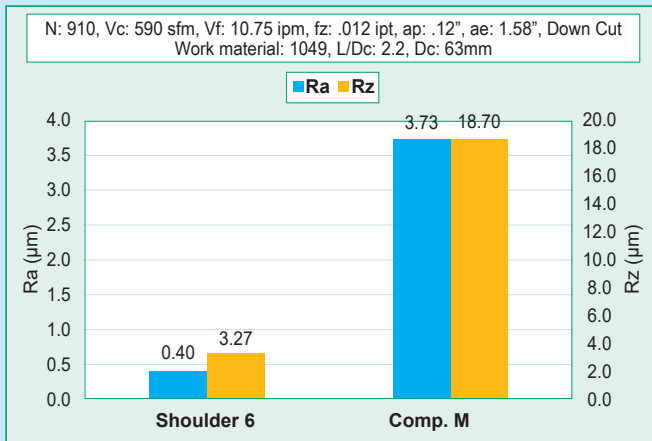
● Application

ISO	P					M					K				H		
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	H01	H10	H20
Applicable Range				JC8050					JC8050								
		JC8118				JC8118					JC8118					JC8118	

SURFACE FINISH COMPARISON

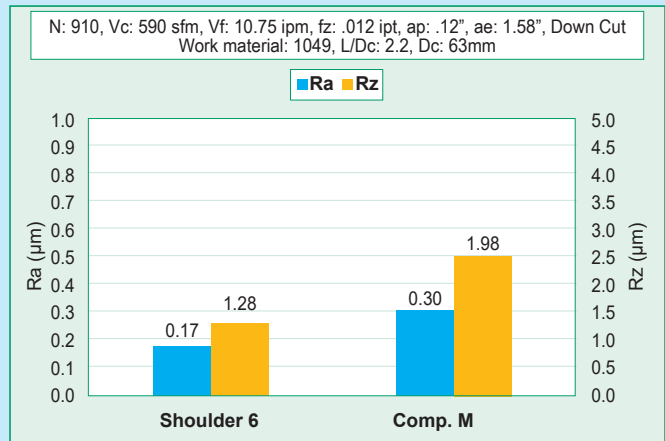
Low depth of cut

Side wall



Good chip evacuation due to
Positive Axial rake

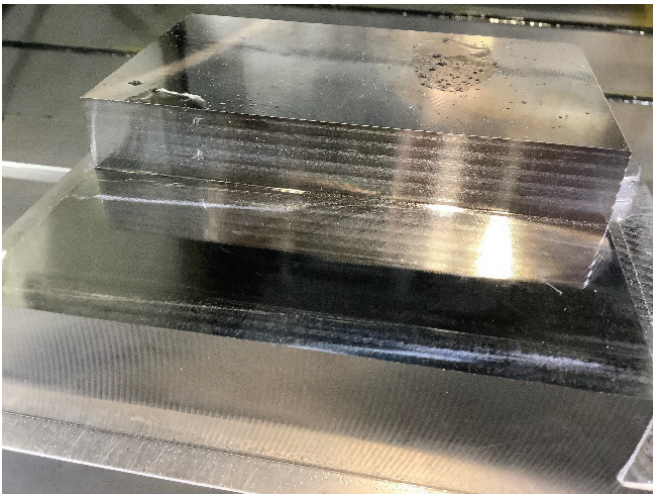
Bottom face



Excellent machined surface
due to the effect of wiper edge

SHOULDER CUTTING MACHINED SURFACES WITH LOW D.O.C.

SHOULDER SIX

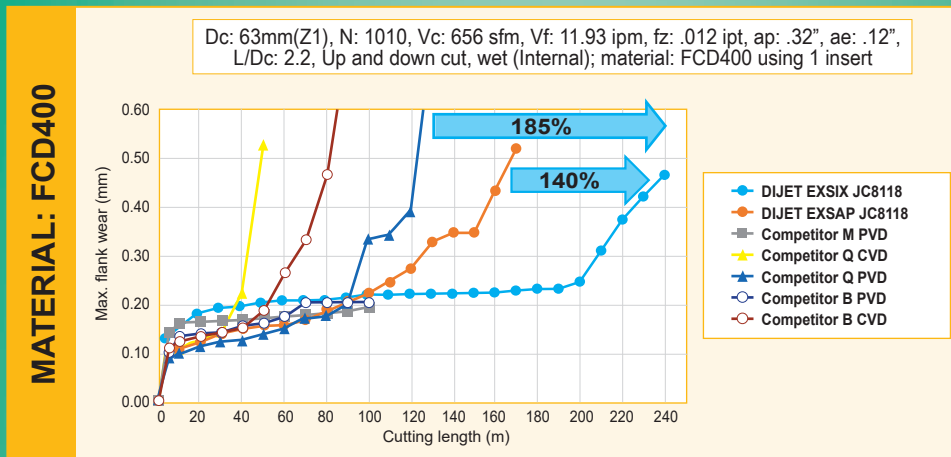
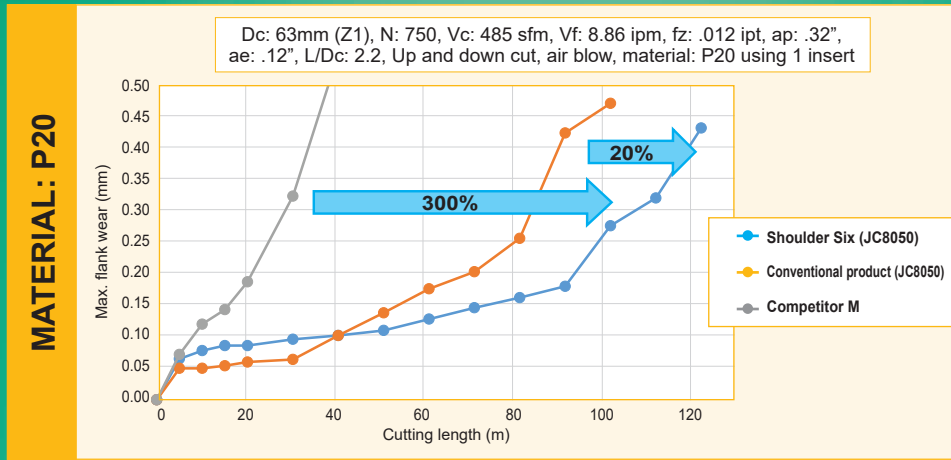


COMPETITOR M

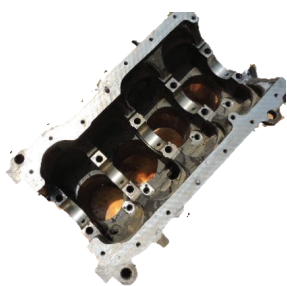

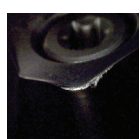


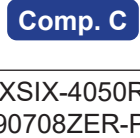



SHOULDER SIX

TOOL LIFE COMPARISON



CUTTING DATA

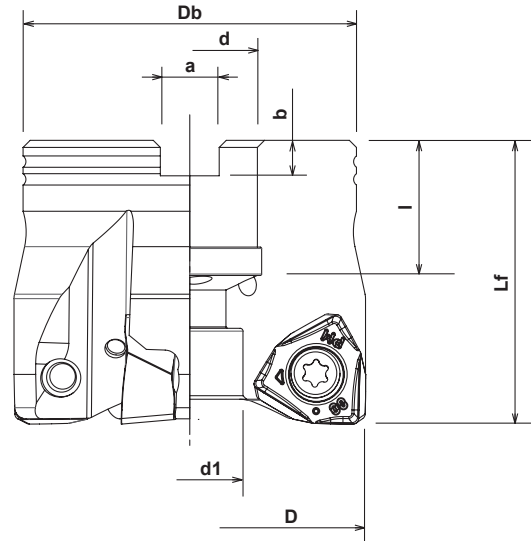
 <p>Rough bottom face</p>		 		Work	Part Name	Stamping die
		 			Material	Cast iron 35
		 			Hardness	-
				Tool	4N- Ø50mm	
Tool No.	EXSIX-4050R-22			Cutting Conditions	Spindle Speed	764 Min ⁻¹
Inserts No.	YCMU090708ZER-PM JC8118				Cutting Speed	394.7 sfm
Competitor	Comp. C Ø50-5N AXMT170508PEER-G ACK3000				Feed Speed	15 ipm
Wear or Chipping	Wear				Chip Load	.005 ipt
Evaluation	Tool life was the same, but the number of inserts was small, so production cost is reduced.				Ap	.2"
		Ae	1.57"	Coolant	Wet (Internal)	



INCH

Shoulder Six

FACE MILL EXSIX Type



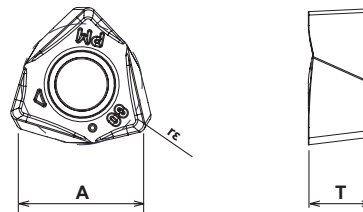
Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS								INSERT	Q	PARTS	
		D	Lf	Db	d	d1	a	b	l			Screw	Wrench
EXSIX-4200R-075	•	2.00	1.575	1.85	.750	.590	.319	.197	.750	YCMU090708ZER-PM YCMU090716ZER-PM	4	CSW-513H	A-20
EXSIX-5250R-075	•	2.50	1.575	1.97	.750	.630	.319	.197	.750		5		
EXSIX-6300R-100	•	3.00	1.75	2.20	1.00	.787	.374	.236	.750		6		
EXSIX-6300R-125	•	3.00	2.00	2.20	1.25	1.02	.500	.315	.866		6		
EXSIX-7400R-150	•	4.00	2.37	3.78	1.50	1.19	.626	.394	1.00		7		
EXSIX-8500R-150	⊙	5.00	2.37	3.78	1.50	1.19	.626	.394	1.00		8		
EXSIX-9600R-150*	⊙	6.00	2.37	3.78	1.50	2.36	.626	.394	1.38		9		

* NOTE: No coolant thru
⊙ - not stocked at this time

Note: All cutters are supplied without inserts or wrench.

INSERTS



Insert Specifications

CATALOG NUMBER	DIMENSIONS				PVD COATED	
	TOLERANCE	A	T	rE	JC8050	JC8118
YCMU090708ZER-PM	M	.551	.295	.031	•	•
YCMU090716ZER-PM		.551	.295	.062	•	•

Shoulder Six

Recommended Cutting Data for Side Milling

Material	Grade	SFM	IPT	DOC	WOC
Gray Cast Iron	JC8118 JC8050	700	.012"	.320"	.060"
Nodular Cast Iron	JC8118 JC8050	650	.012"	.320"	.050"
Carbon Steel	JC8050 JC8118	600	.012"	.320"	.050"
Low Alloy Steel	JC8050 JC8118	550	.012"	.320"	.050"
Mold Steel	JC8118 JC8050	500	.010"	.320"	.040"
Tool & Die Steel (40-50 HRC)	JC8118 JC8050	400	.006"	.320"	.030"
Hardened Die Steel (50-60 HRC)	JC8118 JC8050	300	.006"	.250"	.025"
Stainless Steel (Austenitic)	JC8050 JC8118	450	.010"	.320"	.050"
Stainless Steel (Martensitic)	JC8118 JC8050	500	.012"	.320"	.050"

Recommended Cutting Data for Face Milling

Material	Grade	SFM	IPT	DOC	WOC
Gray Cast Iron	JC8118 JC8050	600	.012"	.240"	80%
Nodular Cast Iron	JC8118 JC8050	550	.012"	.160"	80%
Carbon Steel	JC8050 JC8118	500	.012"	.160"	80%
Low Alloy Steel	JC8050 JC8118	450	.012"	.160"	80%
Mold Steel	JC8118 JC8050	400	.010"	.160"	80%
Tool & Die Steel (40-50 HRC)	JC8118 JC8050	300	.006"	.100"	60%
Hardened Die Steel (50-60 HRC)	JC8118 JC8050	250	.006"	.080"	40%
Stainless Steel (Austenitic)	JC8050 JC8118	300	.010"	.160"	60%
Stainless Steel (Martensitic)	JC8118 JC8050	400	.012"	.160"	60%

WORLDWIDE DISTRIBUTION



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