



EXTREME SAP

LIMITED TIME PROMO!!



EXSAP

Face Mills & End Mills



MSX



ZNGU170904ZER-PM

ZNGU170908ZER-PM

ZNGU170916ZER-PM

**Purchase 10 inserts per
pocket and receive the
steel FREE!!**

**EFFECTIVE September 3rd thru
October 31st, 2019**

No Returns



NEW



SHOULDER EXTREME
for high efficient shoulder milling.

G-Body

EXSAP/MSX



STEEL SHANK / ENDMILL STYLE

Product Order Number	Diameter	Q	Description
EXSAP-2100-2.0-S100LG	1.00"	2	Extreme SAP end mill, 2" reach
EXSAP-2100-3.0-S100LG	1.00"	2	Extreme SAP end mill, 3" reach
EXSAP-3125-3.0-S125LG	1.25"	3	Extreme SAP end mill, 3" reach
EXSAP-3125-4.75-S125LG	1.25"	3	Extreme SAP end mill, 4.75" reach
EXSAP-4150-3.0-S125LG	1.50"	4	Extreme SAP end mill, 3" reach
EXSAP-4150-4.75-S125LG	1.50"	4	Extreme SAP end mill, 4.75" reach

FACE MILL

Product Order Number	Diameter	Q	Description
EXSAP-4200R-075	2.00"	4	Extreme SAP face mill
EXSAP-5200R-075	2.00"	5	Extreme SAP face mill
EXSAP-5250R-100	2.50"	5	Extreme SAP face mill
EXSAP-7300R-100	3.00"	7	Extreme SAP face mill
EXSAP-8400R-150	4.00"	8	Extreme SAP face mill
EXSAP-9600R-150	6.00"	9	Extreme SAP face mill

MODULAR HEAD

Product Order Number	Diameter	Q	Description
MSX-2100-M12	1.00"	2	Extreme SAP modular head
MSX-2125-M16	1.25"	2	Extreme SAP modular head
MSX-3125-M16	1.25"	3	Extreme SAP modular head
MSX-4150-M16	1.50"	4	Extreme SAP modular head



INSERTS

Product Order Number	Grade	CR.	Description
ZNGU170908ZER-PM	JC8050	0.031	Extreme SAP coated insert
ZNGU170908ZER-PM	JC8118	0.031	Extreme SAP coated insert
ZNGU170916ZER-PM	JC8050	0.062	Extreme SAP coated insert
ZNGU170916ZER-PM	JC8118	0.062	Extreme SAP coated insert

Recommended Cutting Data for EXSAP

Material	Grade	SFM	Parameters	Face Milling		Side Milling	
				Low HP	High HP	Low HP	High HP
Grey Cast Iron	JC8118	700	IPT	.012"	.012"	.010"	.014"
	JC8050		DOC	.150"	.200"	.400"	.600"
	WOC		70%	70%	20%	20%	
Nodular Cast Iron	JC8118	650	IPT	.012"	.012"	.010"	.012"
	JC8050		DOC	.150"	.200"	.400"	.600"
	WOC		70%	70%	20%	20%	
Carbon Steel	JC8118	600	IPT	.012"	.012"	.010"	.012"
	JC8050		DOC	.120"	.150"	.400"	.600"
	WOC		70%	70%	20%	20%	
Low Alloy Steel	JC8118	550	IPT	.012"	.012"	.010"	.012"
	JC8050		DOC	.120"	.150"	.400"	.600"
	WOC		60%	60%	20%	20%	
Mold Steel	JC8050	500	IPT	.010"	.010"	.010"	.012"
	JC8118		DOC	.120"	.150"	.400"	.600"
	WOC		60%	60%	20%	20%	
Tool Steel (40-50 HRC)	JC8118	400	IPT	.010"	.010"	.008"	.010"
	JC8050		DOC	.100"	.120"	.300"	.500"
	WOC		60%	60%	10%	10%	
Hardened Tool Steel (50-60)	JC8118	250	IPT	.005"	.005"	.006"	.006"
	JC8050		DOC	.040"	.060"	.200"	.300"
	WOC		20%	20%	10%	10%	
Stainless Steel	JC8050	300	IPT	.008"	.008"	.008"	.008"
	JC8118		DOC	.120"	.150"	.400"	.600"
	WOC		60%	60%	15%	15%	
Titanium	JC8050	200	IPT	.005"	.005"	.005"	.005"
	JC8118		DOC	.100"	.150"	.300"	.500"
	WOC		60%	60%	15%	15%	

Note: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See below for longer applications.

2. $RPM = 3.82 \times SFM / Dia.$

3. $IPM = RPM \times IPT \times \# \text{ of flutes (or teeth)}$

2 insert grades are available: PVD coated grade "JC8050" achieved both fracture toughness and wear resistance.

PVD coated grade "JC8118" provided high versatility and can be widely applied such as general & mold steel and high hardened die steel less than 50HRC.

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