DIJET CARBIDE TOOLS

Indexable Tools A3.1

Button, Radius, Square Shoulder, & Others

DIJET CARBIDE TOOLS

Meeting the Trust of Customers

The industrial world, which is making remarkable progress, poses various difficult problems toward tooling. Dijet has been meeting the trust of customers with continuous development of new tools and materials using our experience of more than 50 years as a total carbide tool manufacturer.

Extreme SAP A-47

Swing Ball A-23

TDM Blade-Chipper A-13

SIC-EVO A-41

Aero-Chipper A-63

S-Heads A-103

HOW TO USE THE CATALOG

Please note that products in this catalog are continuously under study and are improved.

The products therefore may be changed in the future and thus become different from the catalog.

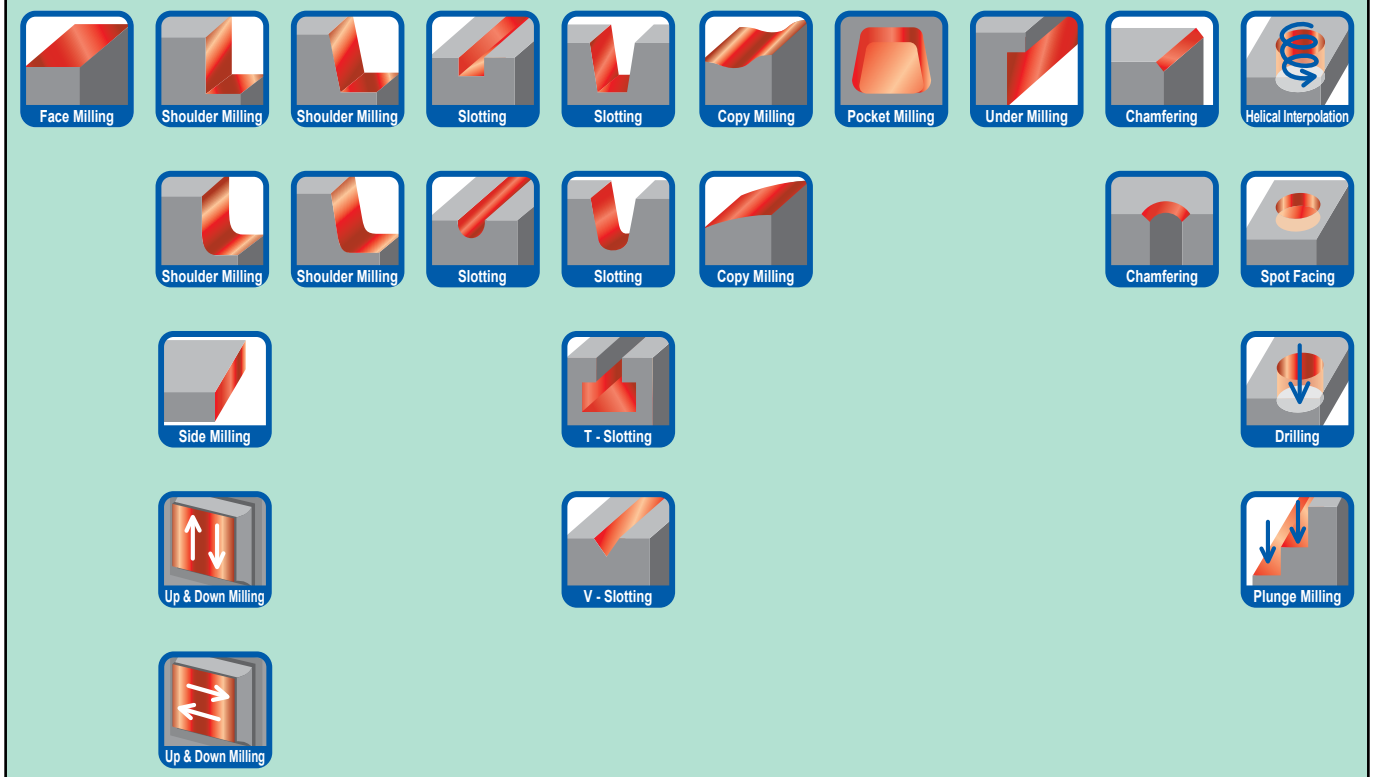
Stock status is mentioned for the products in this catalog. However, please note that the products here may be replaced by the new grades and products in the future.

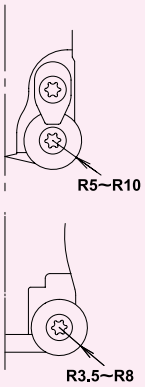
Regarding stock status:

- [•] Stock standard items (NOTE: Some items may be stocked in Japan - delivery approximately 2 weeks.)
- [ ] Non stock standard items (Production after order received)

See Technical Catalog for grade information and spare part information.

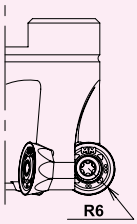
CUTTING STYLES





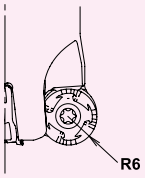
Super Diemaster

	Page
SDH Modular Head type - Inch (Ø .75" - Ø 1.50")	A-2
SDH Modular Head type - Metric (Ø 15mm - Ø 42mm)	A-3
HDM End Mill type - Inch (Ø 1.00" - Ø 1.50")	A-4
HDM Face Mill type - Inch (Ø 2.00" - Ø 4.00")	A-4
HDM Face Mill type - Metric (Ø 50mm - Ø 160mm)	A-5
Inserts	A-7
Running Information	A-9



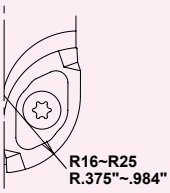
TDM Blade-Chipper

	Page
MTD Modular Head type - Inch (Ø 1.00" - Ø 1.50")	A-14
TDM End Mill type - Inch (Ø 1.00" - Ø 1.50")	A-14
TDM Face Mill type - Inch (Ø 2.00" - Ø 4.00")	A-15
Inserts	A-15
Running Information	A-16



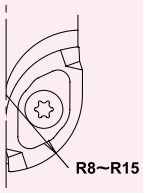
EXTDM Extreme Diemate

	Page
MTX Modular Head type - Metric (Ø 32mm - Ø 40mm)	A-18
EXTDM Face Mill type - Inch (Ø 2.00" - Ø 3.00")	A-18
EXTDM Face Mill type - Metric (Ø 50mm - Ø 66mm)	A-18
Inserts	A-19
Running Information	A-20



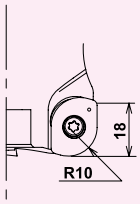
Swing Ball

	Page
MSW Modular Head type - Inch (Ø .75" - Ø 1.25")	A-24
MSW Modular Head type - Metric (Ø 32mm)	A-24
SWB End Mill type - Inch (Ø .75" - Ø 2.00")	A-25
SWB End Mill type - Metric (Ø 32mm - Ø 50mm)	A-26
SWB-EC End Cap type - Inch (Ø 2.00")	A-24
Inserts - Inch	A-27
Inserts - Metric	A-28
Running Information	A-29



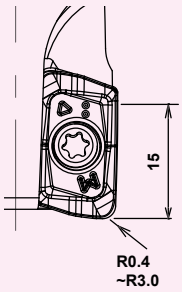
Swing Ball - Neo

	Page
MSWX Modular Head type - Metric (Ø 16mm - Ø 30mm)	A-32
SWBX End Mill type - Metric (Ø 16mm - Ø 30mm)	A-32
SWBX Inserts	A-33
Running Information	A-34



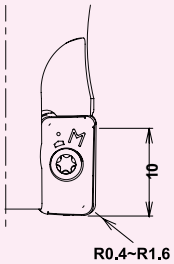
Wild Radius

	Page
WDR Face Mill type - Metric (Ø 50mm - Ø 80mm)	A-38
Inserts	A-38
Running Information	A-39



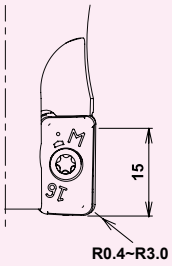
SIC-EVO

	Page
SSV Modular Head type - Inch (Ø 1.00" - 1.50")	A-44
SSV Modular Head type - Metric (Ø 25mm - Ø 40mm)	A-44
SSV End Mill type - Inch (Ø 1.00" - Ø 1.50")	A-43
SSV End Mill type - Metric (Ø 25mm - Ø 50mm)	A-43
SSV Face Mill type - Inch (Ø 2.00" - Ø 4.00")	A-42
SSV Face Mill type - Metric (Ø 50mm - Ø 125mm)	A-42
Inserts	A-44
Running Information	A-45



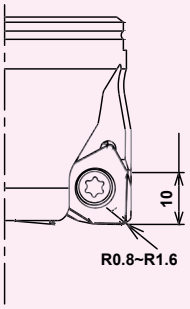
Extreme SAP-11

	Page
MSX Modular Head type - Inch (Ø .625" - Ø 1.50")	A-50
MSX Modular Head type - Metric (Ø 16mm - Ø 40mm)	A-50
EXSAP End Mill type - Inch (Ø .625" - Ø 1.50")	A-49
EXSAP End Mill type - Metric (Ø 16mm - Ø 40mm)	A-49
EXSAP Face Mill type - Inch (Ø 2.00" - Ø 3.00)	A-48
EXSAP Face Mill type - Metric (Ø 40mm - Ø 80mm)	A-48
Inserts	A-50
Running Information	A-51



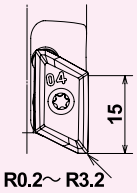
Extreme SAP-17

	Page
MSX Modular Head type - Inch (Ø 1.00” - Ø 1.50”)	A-55
MSX Modular Head type - Metric (Ø 25mm - Ø 40mm)	A-55
EXSAP End Mill type - Inch (Ø 1.00” - Ø 1.50”)	A-54
EXSAP End Mill type - Metric (Ø 25mm - Ø 32mm)	A-54
EXSAP Face Mill type - Inch (Ø 2.00” - Ø 6.00)	A-53
EXSAP Face Mill type - Metric (Ø 50mm - Ø 125mm)	A-53
Inserts	A-55
Running Information	A-56



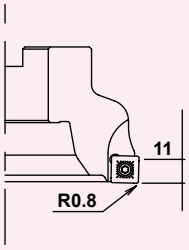
Shoulder Six

	Page
EXSIX Face Mill type - Inch (Ø 2.00” - Ø 6.00”)	A-60
EXSIX Face Mill type - Metric (Ø 50mm - Ø 1650mm)	A-61
Inserts	A-60
Running Information	A-62



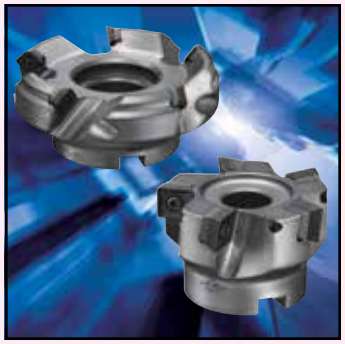
Aero Chipper

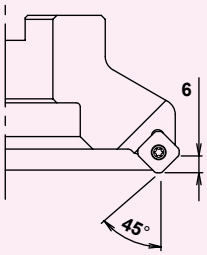
	Page
MAL Modular Head type - Inch (Ø .75” - Ø 1.25”)	A-64
MAL Modular Head type - Metric (Ø 20mm - Ø 40mm)	A-64
ALX End Mill type - Inch (Ø .75” - Ø 1.25”)	A-65
ALX End Mill type - Metric (Ø 20mm - Ø 40mm)	A-65
ALX Face Mill type - Inch (Ø 2.00” - Ø 4.00”)	A-66
ALX Face Mill type - Metric (Ø 50mm - Ø 63mm)	A-66
Inserts	A-67
Running Information	A-68



SSD90

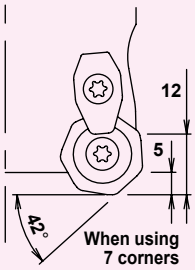
	Page
SSD90 Face Mill type - Metric (Ø 50mm - Ø 160mm)	A-72
Inserts	A-73
Running Information	A-74





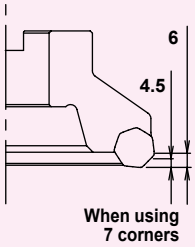
SSE45

	Page
SSE45 Face Mill type - Metric (Ø 50mm - Ø 200mm)	A-76
Inserts	A-77
Running Information	A-78



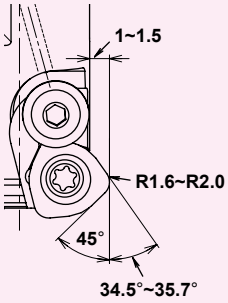
Hepta Mill

	Page
HEP Face Mill type - Metric (Ø 50mm - Ø 200mm)	A-80
HEP End Mill type - Metric (Ø 50mm)	A-80
HEP-FM Face Mill type - Metric (Ø 50mm - Ø 200mm)	A-81
Inserts	A-82
Running Information	A-83



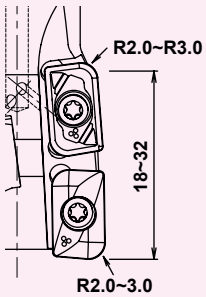
Nega-Hepta Mill

	Page
NHP Face Mill type - Metric (Ø 63mm - Ø 160mm)	A-86
Inserts	A-87
Running Information	A-89



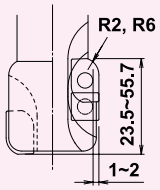
Under Cutter

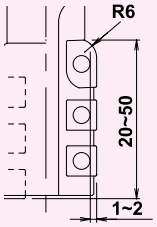
	Page
MSU Modular Head type - Metric (Ø 16mm - Ø 40mm)	A-93
Inserts	A-93
Running	A-95



Under Cutter

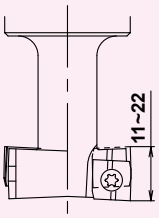
	Page
MUC Modular Head type - Metric (Ø 16mm - Ø 32mm)	A-94
Inserts	A-94
Running	A-95

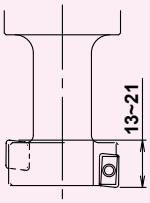




Under Cutter

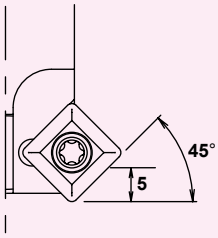
	Page
DUM End Mill type - Metric (Ø 25mm - Ø 40mm)	A-96
Inserts	A-97
Running	A-97





T-Slot Cutters

	Page
TSC End Mill type - Metric (Ø 25mm - Ø 50mm)	A-98
Inserts	A-98
Running Information	A-98
S-TSC4 End Mill type - Metric (Ø 31mm - Ø 47mm)	A-99
Inserts	A-99
Running Information	A-99



Chamfer Cutter

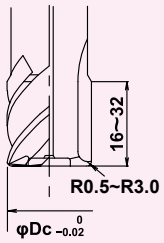
	Page
MCM Modular Head type - Metric (Ø 20.2mm - Ø 44.2mm)	A-100
Inserts	A-100
Running Information	A-101

S-Heads

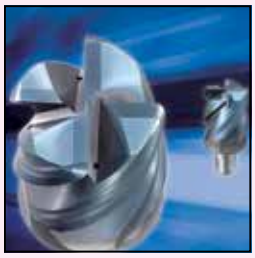
Page

SMSA Modular Head type - Metric (Ø 16mm - Ø 32mm) . . . A-104
Running Information A-104

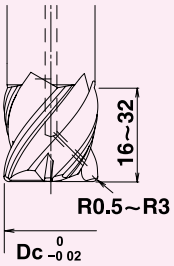
SMSA



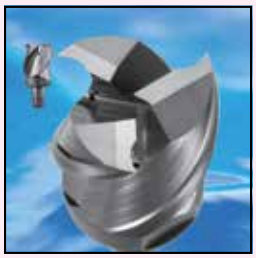
SMSR Modular Head type - Metric (Ø 16mm - Ø 32mm) . . . A-105
Running Information A-105



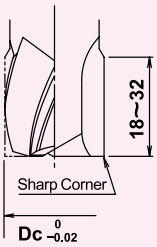
SMSR



SMAL Modular Head type - Metric (Ø 18mm - Ø 32mm) . . . A-106
Running Information A-106

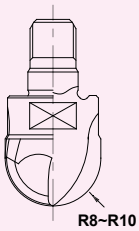


SMAL



SMHB Modular Head type - Metric (Ø 16mm - Ø 30mm) . . . A-107
Running Information A-107

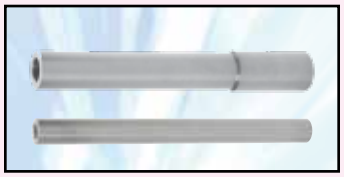
SMHB



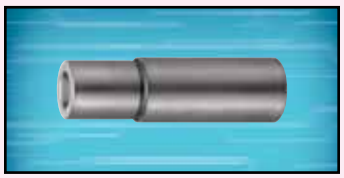
Modular Head Holders

Page

MSN Carbide type - Inch relieved A-109
MSN Carbide type - Metric relieved A-110
MSN Carbide type - Metric straight A-112



MGN G-Body type - Inch relieved A-113
MGN G-Body type - Metric relieved A-113



Notes

Super Diemaster

High Efficient Indexable Radius Tool

- Positive axial rake reduces cutting force.
- Double clamping system for deeper applications.
- DH103 grade available for 60 HRC material.
- Uncoated insert for machining aluminum.
- G-Body improves durability and tool life by 30% or more over conventional style.

DIJET®

Face Milling | Pocket Milling | Copy Milling | Helical Interpolation

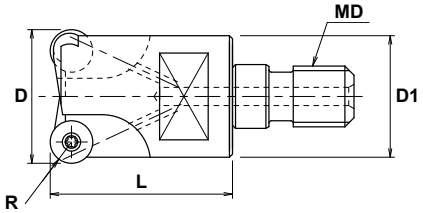
Super Diemaster

INCH

MODULAR HEAD

SDH Type

G-Body



Specifications

CATALOG NUMBER	STK	DIMENSIONS					HEAD TORQUE		INSERT	Q	PARTS	
		D	R	L	D1	MD	lbs./ft	Nm			Screw	Wrench
SDH-3075-R07-M10	•	.750	3.5	1.18	.728	M10	11.8	16	RD**07T2MO*	3	TSW-2556H	T-08SD
SDH-2100-R12-M12	•	1.00	6	1.38	.945	M12	14.7	20	RD**1204MO*	2	DSW-410H	T-15
SDH-3100-R10-M12	•	1.00	5	1.38	.945	M12	14.7	20	RD**1004MO*	3	CSW-408H	T-15
SDH-3125-R12-M16	•	1.25	6	1.69	1.14	M16	18.4	25	RD**1204MO*	3	DSW-410H	T-15
SDH-4125-R10-M16	•	1.25	5	1.69	1.14	M16	18.4	25	RD**1004MO*	4	CSW-408H	T-15
SDH-4150-R12-M16	•	1.50	6	1.69	1.25	M16	18.4	25	RD**1204MO*	4	DSW-410H	T-15
SDH-5150-R10-M16	•	1.50	5	1.69	1.25	M16	18.4	25	RD**1004MO*	5	CSW-408H	T-15

Note: Modular Head Holders on page 109.

Note: All cutters are supplied without inserts, wrench or moly.

METRIC

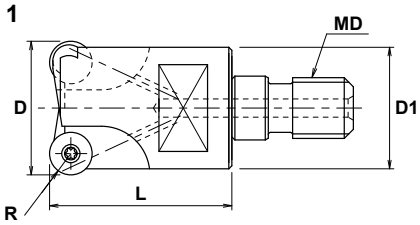
Super Diemaster

MODULAR HEAD

SDH Type

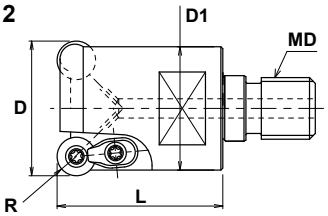
G-Body

Fig. 1



G-Body

Fig. 2



Specifications - Standard

CATALOG NUMBER	STK	DIMENSIONS					FIG.	HEAD TORQUE		INSERT	Q	PARTS		
		D	R	L	D1	MD		lbs./ft	Nm			Screw	Wrench	Other
SDH-2150-R07-M8	•	15	3.5	23	13.8	M8	1	11.8	16	RD**07T2MO*	2	TSW-2556H	T08SD	-
SDH-2160-R07-M8	•	16	3.5	23	15	M8	1	11.8	16	RD**07T2MO*	2	TSW-2556H	T08SD	-
SDH-2200-R07-M10	•	20	3.5	30	18	M10	1	11.8	16	RD**07T2MO*	2	TSW-2556H	T08SD	-
SDH-2220-R07-M10	•	22	3.5	30	20	M10	1	11.8	16	RD**07T2MO*	2	TSW-2556H	T08SD	-
SDH-2250-R10-M12	•	25	5	35	23	M12	2	14.7	20	RD**1004MO*	2	CSW-408H	T-15	DCM-18
SDH-2280-R10-M12	•	28	5	35	25	M12	2	14.7	20	RD**1004MO*	2	CSW-408H	T-15	DCM-18
SDH-2300-R10-M16	•	30	5	43	28	M16	2	18.4	25	RD**1004MO*	2	CSW-408H	T-15	DCM-18
SDH-2320-R12-M16	•	32	6	43	28	M16	2	18.4	25	RD**1204MO*	2	DSW-410H	T-15	DCM-18
SDH-3320-R10-M16	•	32	5	43	28	M16	2	18.4	25	RD**1004MO*	3	CSW-408H	T-15	DCM-18
SDH-2350-R12-M16	•	35	6	43	32	M16	2	18.4	25	RD**1204MO*	2	DSW-410H	T-15	DCM-18
SDH-3350-R10-M16	•	35	5	43	32	M16	2	18.4	25	RD**1004MO*	3	CSW-408H	T-15	DCM-18
SDH-2400-R12-M16	•	40	6	43	32	M16	2	18.4	25	RD**1204MO*	2	DSW-410H	T-15	DCM-18

Note: All cutters are supplied without inserts, wrench or moly.

Specifications - Fine Pitch

CATALOG NUMBER	STK	DIMENSIONS					FIG.	HEAD TORQUE		INSERT	Q	PARTS	
		D	R	L	D1	MD		lbs./ft	Nm			Screw	Wrench
SDH-3200-R07-M10	•	20	3.5	30	18	M10	1	11.8	16	RD**07T2MO*	3	TSW-2556H	T08SD
SDH-3220-R07-M10	•	22	3.5	30	20	M10	1	11.8	16	RD**07T2MO*	3	TSW-2556H	T08SD
SDH-3250-R07-M12	•	25	3.5	35	23	M12	1	14.7	20	RD**07T2MO*	3	TSW-2556H	T08SD
SDH-3250-R10-M12	•	25	5	35	23	M12	1	14.7	20	RD**1004MO*	3	CSW-408H	T-15
SDH-3280-R10-M12	•	28	5	35	25	M12	1	14.7	20	RD**1004MO*	3	CSW-408H	T-15
SDH-3300-R10-M16	•	30	5	43	28	M16	1	18.4	25	RD**1004MO*	3	CSW-408H	T-15
SDH-4300-R10-M16	•	30	5	43	28	M16	1	18.4	25	RD**1004MO*	4	CSW-408H	T-15
SDH-4320-R10-M16	•	32	5	43	28	M16	1	18.4	25	RD**1004MO*	4	CSW-408H	T-15
SDH-3350-R12-M16	•	35	6	43	32	M16	1	18.4	25	RD**1204MO*	3	DSW-410H	T-15
SDH-4350-R10-M16	•	35	5	43	32	M16	1	18.4	25	RD**1004MO*	4	CSW-408H	T-15
SDH-4400-R12-M16	•	40	6	43	32	M16	1	18.4	25	RD**1204MO*	4	DSW-410H	T-15
SDH-5420-R10-M16	•	42	5	43	32	M16	1	18.4	25	RD**1004MO*	5	CSW-408H	T-15

Note: Modular Head Holders on page 109.

Note: All cutters are supplied without inserts, wrench or moly.

DIJET®

Face Milling | Pocket Milling | Copy Milling | Helical Interpolation

Super Diemaster

INCH

FACE MILL
HDM Type

G-Body

Fig. 1 - Standard Pitch

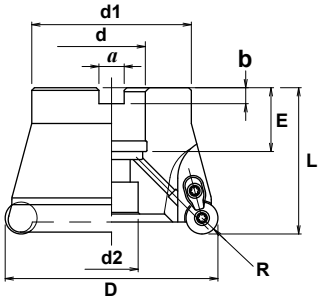
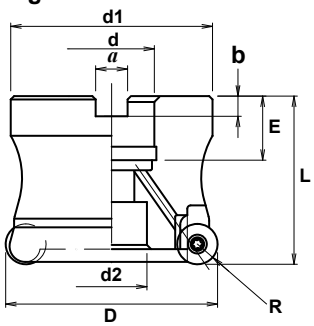


Fig. 2 - Fine Pitch



Specifications

CATALOG NUMBER	STK	DIMENSIONS									FIG.	INSERT	Q	PARTS		
		D	R	L	d	d1	a	b	E	d2				Screw	Wrench	Other
HDM-5200-75R-12	•	2.00	6	2.00	.750	1.85	.319	.197	.750	.63	2	RD**1204MO*	5	DSW-410H	A-15T	-
HDM-4200-75R-16	•	2.00	8	2.00	.750	1.85	.319	.197	.750	.63	2	RD**1606MO*	4	DSW-4512H	A-20	-
HDM-7300-125R-12	•	3.00	6	2.75	1.25	2.85	.500	.315	1.26	1.02	2	RD**1204MO*	7	DSW-410H	A-15T	-
HDM-6300-125R-16	•	3.00	8	2.75	1.25	2.85	.500	.315	1.26	1.02	2	RD**1606MO*	6	DSW-4512H	A-20	-
HDM-5300-125R-20	•	3.00	10	2.75	1.25	2.85	.500	.315	1.26	1.02	1	RD**2006MO*	5	DSW-4512H	A-20	DCM-17
HDM-6400-150R-20	•	4.00	10	2.75	1.50	3.78	.626	.393	1.45	1.26	1	RD**2006MO*	6	DSW-4512H	A-20	DCM-17

Note: All cutters are supplied without inserts, wrench or moly.

ENDMILL
HDM Type

G-Body

Fig. 1

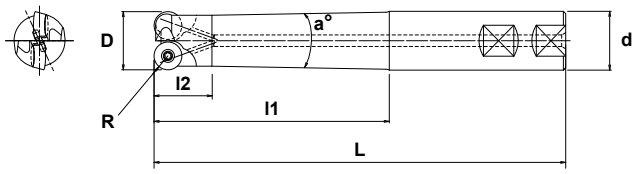
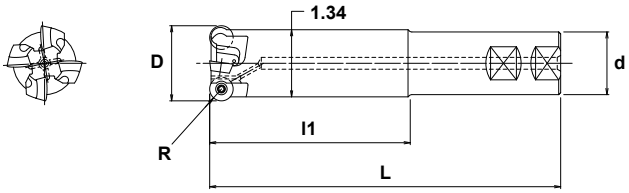


Fig. 2



Specifications

CATALOG NUMBER	STK	DIMENSIONS							FIG.	INSERT	Q	PARTS	
		D	R	L	l1	l2	d	a°				Screw	Wrench
HDM-2100-2.0-S100-12	•	1.00	6	5.00	2.00	.98	1.00	4°	1	RD**1204MO*	2	DSW-410H	T-15
HDM-2100-4.0-S100-12	•	1.00	6	7.00	4.00	.98	1.00	2°	1	RD**1204MO*	2	DSW-410H	T-15
HDM-2100-6.0-S125-12	•	1.00	6	9.00	6.00	.98	1.25	4°	1	RD**1204MO*	2	DSW-410H	T-15
HDM-3125-2.0-S125-12	•	1.25	6	5.00	2.00	1.18	1.25	6°	1	RD**1204MO*	3	DSW-410H	T-15
HDM-3125-4.0-S125-12	•	1.25	6	7.00	4.00	1.18	1.25	2°	1	RD**1204MO*	3	DSW-410H	T-15
HDM-3125-6.0-S125-12	•	1.25	6	9.00	6.00	1.18	1.25	1°	1	RD**1204MO*	3	DSW-410H	T-15
HDM-4150-2.0-S125-12	•	1.50	6	5.00	2.00	-	1.25	-	2	RD**1204MO*	4	DSW-410H	T-15
HDM-4150-4.0-S125-12	•	1.50	6	7.00	4.00	-	1.25	-	2	RD**1204MO*	4	DSW-410H	T-15
HDM-4150-6.0-S125-12	•	1.50	6	9.00	6.00	-	1.25	-	2	RD**1204MO*	4	DSW-410H	T-15

Note: All cutters are supplied without inserts, wrench or moly.

METRIC

Super Diemaster

FACE MILL
HDM Type

G-Body

Fig. 1 - Standard Pitch

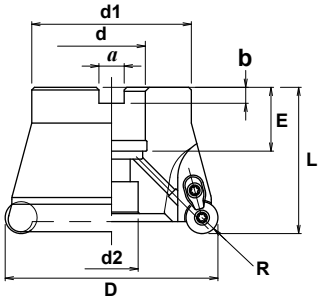
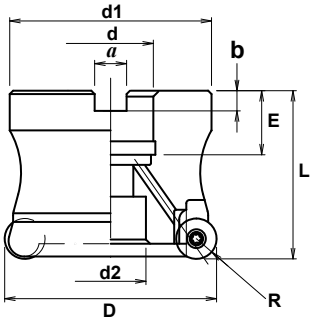


Fig. 2 - Fine Pitch



Specifications

CATALOG NUMBER	STK	DIMENSIONS									FIG.	INSERT	Q	PARTS		
		D	R	L	d	d1	a	b	E	d2				Screw	Wrench	Other
HDM-3050-12R	•	50	6	50	22.225	47	8.4	5	20	16.5	1	RD**1204MO*	3	DSW-410H	A-15T	DCM-18
HDM-3050-12R-22	•	50	6	50	22	47	10.4	6.3	20	16.5	1					
HDM-3050-16R	•	50	8	55	22.225	47	8.4	5	20	16.5	1	RD**1606MO*	3	DSW-4512H	A-20	DCM-17
HDM-3050-16R-22	•	50	8	55	22	47	10.4	6.3	20	16.5	1					
HDM-4050-16R	•	50	8	55	22.225	47	8.4	5	20	16.5	2	RD**1606MO*	4	DSW-4512H	A-20	-
HDM-4050-16R-22	•	50	8	55	22	47	10.4	6.3	20	16.5	2					
HDM-5050-12R	•	50	6	50	22.225	47	8.4	5	20	16.5	2	RD**1204MO*	5	DSW-410H	A-15T	-
HDM-5050-12R-22	•	50	6	50	22	47	10.4	6.3	20	16.5	2					
HDM-5052-12R-22	•	52	6	50	22	47	10.4	6.3	20	16.5	2	RD**1204MO*	5	DSW-410H	A-15T	-
HDM-4063-12R	•	63	6	50	22.225	60	8.4	5	20	16.5	1	RD**1204MO*	4	DSW-410H	A-15T	DCM-18
HDM-4063-12R-22	•	63	6	50	22	60	10.4	6.3	20	16.5	1					
HDM-4063-16R	•	63	8	50	22.225	60	8.4	5	20	16.5	1	RD**1606MO*	4	DSW-4512H	A-20	DCM-17
HDM-4063-16R-22	•	63	8	50	22	60	10.4	6.3	20	16.5	1					
HDM-5063-16R	•	63	8	50	22.225	60	8.4	5	20	16.5	2	RD**1606MO*	5	DSW-4512H	A-20	-
HDM-5063-16R-27	•	63	8	50	27	60	12.4	7	22	20	2					
HDM-6063-12R	•	63	6	50	22.225	60	8.4	5	20	16.5	2	RD**1204MO*	6	DSW-410H	A-15T	-
HDM-6063-12R-27	•	63	6	50	27	60	12.4	7	22	20	2					

Note: All cutters are supplied without inserts, wrench or moly.

DIJET®

Face Milling | Pocket Milling | Copy Milling | Helical Interpolation

Super Diemaster

METRIC

FACE MILL
HDM Type

G-Body

Fig. 1 - Standard Pitch

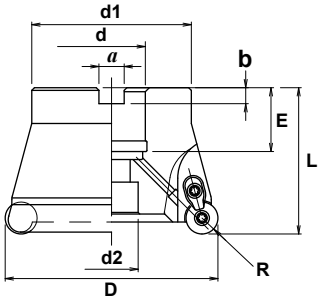
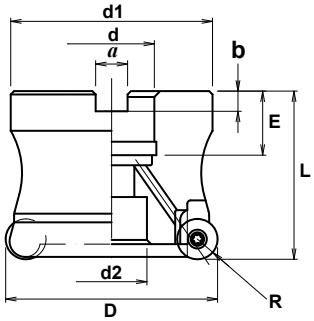


Fig. 2 - Fine Pitch



Specifications

CATALOG NUMBER	STK	DIMENSIONS									FIG.	INSERT	Q	PARTS		
		D	R	L	d	d1	*a*	b	E	d2				Screw	Wrench	Other
HDM-5066-16R-27	•	66	8	50	27	60	12.4	7	22	20	2	RD**1606MO*	5	DSW-4512H	A-20	-
HDM-6066-12R-27	•	66	6	50	27	60	12.4	7	22	20	2	RD**1204MO*	6	DSW-410H	A-15T	-
HDM-4080-12R-25.4	•	80	6	55	25.4	60	9.5	6	24	20	1	RD**1204MO*	4	DSW-410H	A-15T	DCM-18
HDM-4080-12R	•	80	6	70	31.75	74	12.7	8	32	26	1	RD**1204MO*	4	DSW-410H	A-15T	DCM-18
HDM-4080-16R-25.4	•	80	8	55	25.4	60	9.5	6	24	20	1	RD**1606MO*	4	DSW-4512H	A-20	DCM-17
HDM-4080-16R	•	80	8	70	31.75	76	12.7	8	32	26	1	RD**1606MO*	4	DSW-4512H	A-20	DCM-17
HDM-5080-16R-25.4	•	80	8	55	25.4	60	9.5	6	24	20	1	RD**1606MO*	5	DSW-4512H	A-20	DCM-17
HDM-5080-20	•	80	10	70	31.75	63.5	12.7	8	32	26	1	RD**2006MO*	5	DSW-4512H	A-20	DCM-17
HDM-6080-16R-27	•	80	8	55	27	76	12.4	7	22	20	2	RD**1606MO*	6	DSW-4512H	A-20	-
HDM-6080-20R-1.25	•	80	10	70	31.75	63.5	12.7	8	32	26	1	RD**2006MO*	6	DSW-4512H	A-20	DCM-17
HDM-6080-20R-27	•	80	10	55	27	60	12.4	7	22	20	1	RD**2006MO*	6	DSW-4512H	A-20	DCM-17
HDM-7080-12R-27	•	80	6	55	27	76	12.4	7	22	20	2	RD**1204MO*	7	DSW-410H	A-15T	-
HDM-6100-16R	•	100	8	70	31.75	96	12.7	8	32	26	1	RD**1606MO*	6	DSW-4512H	A-20	DCM-17
HDM-8125-16R	•	125	8	70	38.1	100	15.9	10	37	32	1	RD**1606MO*	8	DSW-4512H	A-20	DCM-17
HDM-9160-16R	※	160	8	80	50.8	120	19	11	39	39	1	RD**1606MO*	9	DSW-4512H	A-20	DCM-17

※ **Special Make**

Note: All cutters are supplied without inserts, wrench or moly.

METRIC

Super Diemaster

Inserts

Fig. 1

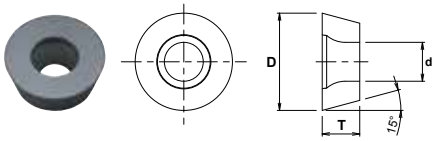


Fig. 2

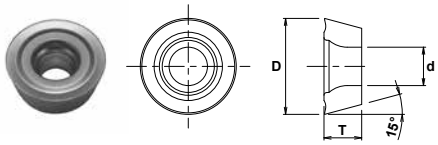


Fig. 3

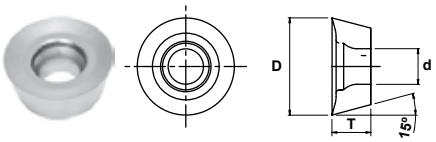
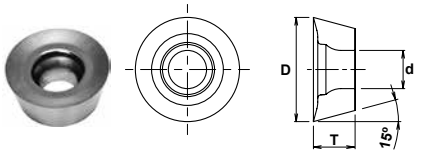


Fig. 4



Specifications

CATALOG NUMBER	IC TOLERANCE	DIMENSIONS			FIG.	COATED GRADE						UNCOATED
		D	T	d		DH103	JC8015	JC5040	JC8050	JC5118	JC8118	FZ05
RDMW07T2MOT	M	7	2.7	2.8	1	•	•	•				
RDMW1004MOT	M	10	4.1	4.4	1	•	•	•				
RDMW1204MOT	M	12	4.8	4.4	1	•	•	•				
RDMW1606MOT	M	16	6	5	1	•	•	•				
RDHX2006MOT	H	20	6	5.5	1					•		
RDGT07T2MOE	G	7	2.7	2.8	2		•		•			
RDGT1004MOE	G	10	4.1	4.4	2		•		•			
RDGT1004MOT	G	10	4.1	4.4	2		•		•			
RDGT1204MOE	G	12	4.8	4.4	2		•		•			
RDGT1204MOT	G	12	4.8	4.4	2		•		•			
RDGT1606MOE	G	16	6	5	2		•		•			
RDGT1606MOT	G	16	6	5	2		•		•			
RDMT07T2MOE	M	7	2.7	2.8	2				•		•	
RDMT1004MOE	M	10	4.1	4.4	2				•		•	
RDMT1004MOT	M	10	4.1	4.4	2				•		•	
RDMT1204MOE	M	12	4.8	4.4	2				•		•	
RDMT1204MOT	M	12	4.8	4.4	2				•		•	
RDMT1606MOE	M	16	6	5	2				•		•	
RDMT1606MOT	M	16	6	5	2				•		•	
RDMT1004MOE-ML	M	10	4.1	4.4	4				•			
RDMT1204MOE-ML	M	12	4.1	4.4	4				•			
RDGT07T2MOF-AL	G	7	2.7	2.8	3							•
RDGT1004MOF-AL	G	10	4.1	4.4	3							•
RDGT1204MOF-AL	G	12	4.8	4.4	3							•
RDGT1606MOF-AL	G	16	6	5	3							•
RDGT2006MOF-AL	G	20	6	5.5	3							•

NOTES: RDMW - flat top for general steels.
RDGT/RDMT - chipbreaker style for low cutting force on stainless, inconel & titanium.
RDGT**-AL - uncoated polished chipbreaker for aluminum.

DIJET®

Super Diemaster

METRIC

Insert Style and Grade Recommendations

Materials	Cast Iron Cast Steel	Carbon Steel Alloy Steel			Mold Steel		High Hardened Steel	Titanium Alloy Inconel		Stainless Steel		Aluminum
Insert Grade / CATALOG NUMBER	JC8015 JC8118	JC5040	JC8118	JC8050	JC8015 JC8118	JC8050	DH103 (above 50HRC) JC8015	JC8015 JC8118	JC8050	JC8015 JC8118	JC8050	FZ05
RDMW07T2MOT	⊙	⊙			⊙		⊙	○		○		
RDGT07T2MOE	★		★	●	○	●		⊙	●	⊙	●	
RDGT07T2MOF-AL												⊙
RDMW1004MOT	⊙	⊙			⊙		⊙	○		○		
RDGT1004MOT	★		★		○					⊙	●	
RDGT1004MOE				●		●		⊙	●			
RDGT1004MOF-AL												⊙
RDMT1004MOT	★		★		○					⊙	●	
RDMT1004MOE				●		●		⊙	●			
RDMW1204MOT	⊙	⊙			⊙		⊙	○		○		
RDGT1204MOT	★		★		○					⊙	●	
RDGT1204MOE				●		●		⊙	●			
RDGT1204MOF-AL												⊙
RDMT1204MOT	★		★		○					⊙	●	
RDMT1204MOE				●		●		⊙	●			
RDMW1606MOT	⊙	⊙			⊙		⊙	○		○		
RDGT1606MOT	★		★		○					⊙	●	
RDGT1606MOE				●		●		⊙	●			
RDGT1606MOF-AL												⊙
RDMT1606MOT	★		★		○					⊙	●	
RDMT1606MOE				●		●		⊙	●			
RDHX2006MOT	⊙				⊙		⊙	○		○		
RDGT2006MOF-AL												⊙

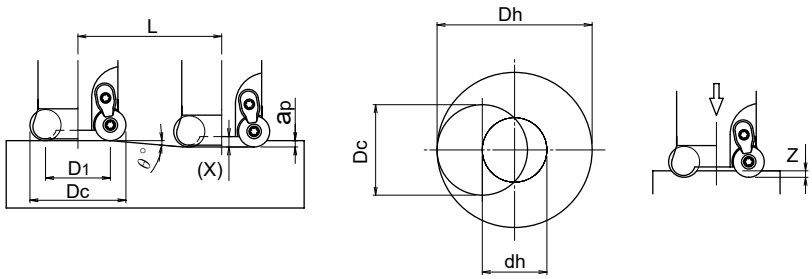
RDMW & RDHX - without chip breaker
RDGT & RDMT - with chip breaker

CUTTING CONDITION: ⊙ - Good ● - Unfavorable ○ - Moderate ★ - Light cutting

INCH

Super Diemaster

HELICAL INTERPOLATION CUTTING DATA



• Calculation of tool pass dia.

ØDc = ØDh - I

Tool pass dia. Bore dia. Tool Dia.

- **Down cutting is recommended, tool pass rotation should be counterclockwise.**
- **Depth of cut per one circuit should not exceed max. depth of cut Ap.**
- **In case of ramping and helical interpolation, apply 70% or less feed (F) from standard cutting condition table.**
- **In case of drilling, apply 50% or less Z axis feed speed from standard cutting condition table.**
- **When drilling, may have long consecutive chips, please use safety cautions.**
- **Do not combine drilling and ramping together.**

TOOL DIAMETER I	INSERT DIA. (mm)	EFFECTIVE CUTTING DIA.: D1	RAMPING		HELICAL INTERPOLATION		MAX. DEPTH OF CUT: AP	MAX. DRILLING DEPTH: Z	DEPTH OF HOLDER FACE: X
			MAX. RAMP ANGLE: 0°	TOTAL CUTTING LENGTH at MAX. AP: L	MIN. BORE DIA.: Dh	MAX. BORE DIA.: Dh			
.750”	7 (R3.5)	.474	6°00’	1.31	1.11	1.42	.138	.059	.098
1.00”	10 (R5)	.606	10°20’	1.08	1.37	1.92	.197	.098	.138
1.00”	12 (R6)	.527	9°30’	1.41	1.21	1.92	.236	.078	.118
1.25”	10 (R5)	.856	6°30’	1.73	1.87	2.42	.197	.098	.138
1.25”	12 (R6)	.778	7°30’	1.79	1.71	2.42	.236	.098	.138
1.50”	10 (R5)	1.11	4°40’	2.41	2.37	2.92	.236	.098	.138
1.50”	12 (R6)	1.03	5°20’	2.53	2.21	2.92	.236	.098	.138
2.00”	12 (R6)	1.53	5°10’	2.61	3.21	3.92	.236	.138	.177
2.00”	16 (R8)	1.37	7°10’	2.50	3.02	3.92	.315	.157	.197
3.00”	12 (R6)	2.53	2°50’	4.77	5.21	5.92	.236	.138	.177
3.00”	16 (R8)	2.37	4°00’	4.50	5.02	5.92	.315	.157	.197
3.00”	20 (R10)	2.21	4°10’	5.41	5.13	5.92	.394	.157	.197
4.00”	20 (R10)	3.21	3°00’	7.51	7.13	7.92	.394	.177	.217

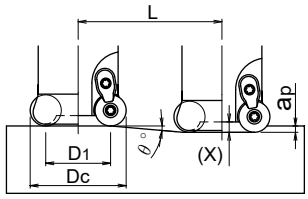
DIJET®

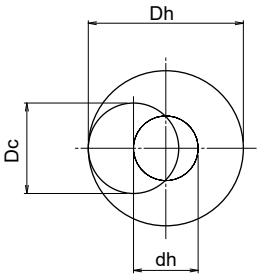
Face Milling | Pocket Milling | Copy Milling | Helical Interpolation

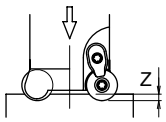
Super Diemaster

METRIC

HELICAL INTERPOLATION CUTTING DATA







• Calculation of tool pass dia.

ØDc = ØDh - I

Tool pass dia. Bore dia. Tool Dia.

- **Down cutting is recommended, tool pass rotation should be counterclockwise.**
- **Depth of cut per one circuit should not exceed max. depth of cut Ap.**
- **In case of ramping and helical interpolation, apply 70% or less feed (F) from standard cutting condition table.**
- **In case of drilling, apply 50% or less Z axis feed speed from standard cutting condition table.**
- **When drilling, may have long consecutive chips, please use safety cautions.**
- **Do not combine drilling and ramping together.**

TOOL DIAMETER I	INSERT DIA. (mm)	EFFECTIVE CUTTING DIA.: D1	RAMPING		HELICAL INTERPOLATION		MAX. DEPTH OF CUT: AP	MAX. DRILLING DEPTH: Z	DEPTH OF HOLDER FACE: X
			MAX. RAMP ANGLE: 0°	TOTAL CUTTING LENGTH at MAX. AP: L	MIN. BORE DIA.: Dh	MAX. BORE DIA.: Dh			
15	7 (R3.5)	8	3°00’	66.8	20	28	3.5	0.4	1.0
16	7 (R3.5)	9	9°00’	22.1	22	30	3.5	1.5	2.5
20	7 (R3.5)	13	5°30’	36.3	30	38	3.5	1.5	2.5
22	7 (R3.5)	15	4°35’	43.6	34	42	3.5	1.5	2.5
25	7 (R3.5)	18	3°40’	54.6	40	48	3.5	1.5	2.5
25	10 (R5)	15	10°45’	26.3	34	48	5.0	2.5	3.5
28	10 (R5)	18	8°20’	34.1	40	54	5.0	2.5	3.5
30	10 (R5)	20	7°15’	39.3	44	58	5.0	2.5	3.5
32	10 (R5)	22	6°25’	44.4	48	62	5.0	2.5	3.5
32	12 (R6)	20	7°35’	45.1	44	62	6.0	2.5	3.5
35	10 (R5)	25	5°30’	51.9	54	68	5.0	2.5	3.5
35	12 (R6)	23	6°15’	54.7	50	68	6.0	2.5	3.5
40	12 (R6)	28	4°55’	69.7	60	78	6.0	2.5	3.5
42	10 (R5)	32	4°05’	70.0	68	82	5.0	2.5	3.5
50	12 (R6)	38	5°15’	65.2	80	98	6.0	3.5	4.5
50	16 (R8)	34	7°25’	61.4	75	98	8.0	4.0	5.0
52	12 (R6)	40	4°55’	69.7	84	102	6.0	3.5	4.5
52	16 (R8)	36	6°55’	65.9	79	102	8.0	4.0	5.0
63	12 (R6)	51	3°45’	91.5	106	124	6.0	3.5	4.5
63	16 (R8)	47	5°00’	91.4	101	124	8.0	4.0	5.0
66	12 (R6)	54	3°30’	98.1	112	130	6.0	3.5	4.5
66	16 (R8)	50	4°40’	98.0	107	130	8.0	4.0	5.0
80	12 (R6)	68	2°45’	124.9	140	158	6.0	3.5	4.5
80	16 (R8)	64	3°30’	130.7	135	158	8.0	4.0	5.0
80	20 (R10)	60	4°25’	129.5	138	158	10.0	4.5	5.5
100	16 (R8)	84	2°35’	177.3	175	198	8.0	4.0	5.0
125	16 (R8)	109	1°55’	239.1	225	248	8.0	4.0	5.0
160	16 (R8)	144	1°25’	223.5	295	318	8.0	4.0	5.0

INCH METRIC

Super Diemaster

Recommended Cutting Data for Super Diemaster

Material	SFM	Parameters	INSERT SIZE				
			7mm	10mm	12mm	16mm	20mm
Gray Cast Iron	700	IPT	.012”	.015”	.016”	.020”	.025”
		DOC	.025”	.040”	.060”	.100”	.140”
		WOC	70%	70%	70%	70%	70%
Nodular Cast Iron	650	IPT	.012”	.015”	.016”	.020”	.025”
		DOC	.025”	.040”	.060”	.100”	.140”
		WOC	70%	70%	70%	70%	70%
Carbon Steel	600	IPT	.012”	.015”	.016”	.020”	.025”
		DOC	.025”	.040”	.060”	.080”	.100”
		WOC	70%	70%	70%	70%	70%
Low Alloy Steel	550	IPT	.012”	.015”	.016”	.020”	.025”
		DOC	.025”	.035”	.040”	.060”	.080”
		WOC	70%	70%	70%	70%	70%
Mold Steel	500	IPT	.010”	.012”	.016”	.020”	.025”
		DOC	.012”	.015”	.020”	.030”	.040”
		WOC	60%	60%	60%	60%	60%
Tool & Die Steel (40-50 HRC)	400	IPT	.010”	.012”	.016”	.020”	.025”
		DOC	.012”	.015”	.020”	.025”	.030”
		WOC	60%	60%	60%	60%	60%
Hardened Die Steel (50-60 HRC)	200	IPT	.005”	.006”	.007”	.008”	.010”
		DOC	.005”	.008”	.010”	.012”	.015”
		WOC	40%	40%	40%	40%	40%
Stainless Steel	300	IPT	.010”	.012”	.015”	.020”	.025”
		DOC	.015”	.020”	.030”	.040”	.060”
		WOC	60%	60%	60%	60%	60%
Titanium	200	IPT	.010”	.012”	.015”	.020”	.025”
		DOC	.010”	.012”	.015”	.020”	.025”
		WOC	60%	60%	60%	60%	60%
Inconel	100	IPT	.005”	.006”	.008”	.010”	.012”
		DOC	.005”	.008”	.010”	.015”	.020”
		WOC	60%	60%	60%	60%	60%
Aluminum	2000	IPT	.015”	.020”	.025”	.030”	.040”
		DOC	.020”	.040”	.060”	.100”	.140”
		WOC	60%	60%	60%	60%	60%
Graphite	600	IPT	.008”	.010”	.012”	.015”	.018”
		DOC	.010”	.012”	.015”	.020”	.025”
		WOC	60%	60%	60%	60%	60%

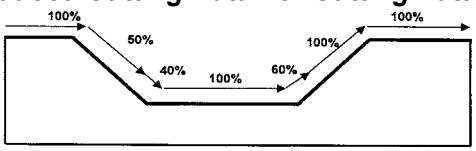
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

Notes

TDM Blade-Chipper

High Efficient Indexable Radius Tool with Faceted Insert

Aerospace Tooling

- Faceted insert seat has either 4 or 8 indexes.
- Insert grade JC7550 is PVD coated, has improved heat-fracture resistance and impact strength.

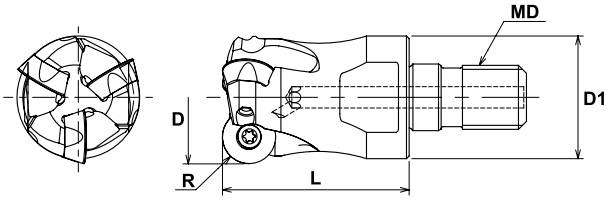
DIJET®

Face Milling | Pocket Milling | Copy Milling

TDM Blade-Chipper

INCH

MODULAR HEAD
MTD Type



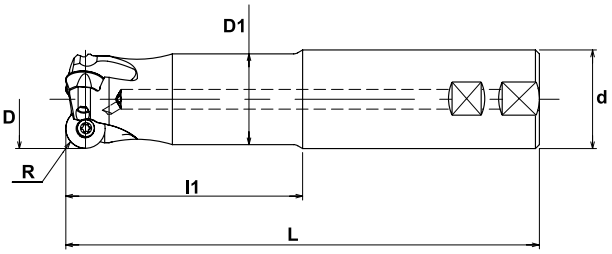
Specifications - Inch with 12mm insert

CATALOG NUMBER	STK	DIMENSIONS					HEAD TORQUE		INSERT	Q	PARTS	
		D	R	L	D1	MD	lbs./ft	Nm			Screw	Wrench
MTD-2100-12-M12	•	1.00	.236	1.38	.94	M12	14.7	20	RPMT1204MOE-**	2	DSW-410H	T-15
MTD-3125-12-M16	•	1.25	.236	1.69	1.14	M16	18.4	25		3		
MTD-4150-12-M16	•	1.50	.236	1.69	1.26	M16	18.4	25		4		

See page 109 for Modular Head Shanks.

Note: All cutters are supplied without inserts, wrench or moly.

END MILLS
TDM Type



Specifications - Inch

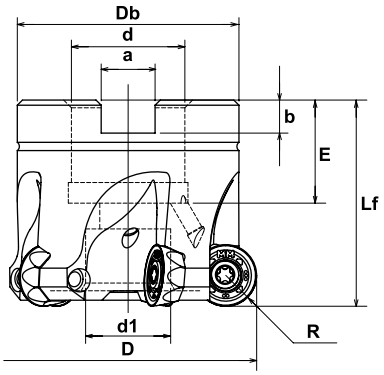
CATALOG NUMBER	STK	DIMENSIONS						INSERT	Q	PARTS	
		D	R	L	l1	d	D1			Screw	Wrench
TDM-2100-2.0-S100-12NP	•	1.00	.236	7.00	2.00	1.00	.945	RPMT1204MOE-**	2	DSW-410H	T-15
TDM-2100-3.0-S100-12NP	•	1.00	.236	8.00	3.00	1.00	.945		2		
TDM-3125-3.0-S125-12NP	•	1.25	.236	5.50	3.00	1.25	1.14		3		
TDM-3125-4.75-S125-12NP	•	1.25	.236	8.00	4.75	1.25	1.14		3		
TDM-4150-3.0-S125-12NP	•	1.50	.236	5.50	3.00	1.25	1.26		4		
TDM-4150-4.75-S125-12NP	•	1.50	.236	8.00	4.75	1.25	1.26		4		

Note: All cutters are supplied without inserts, wrench or moly.

INCH

TDM Blade-Chipper

Face Mill
TDM Type



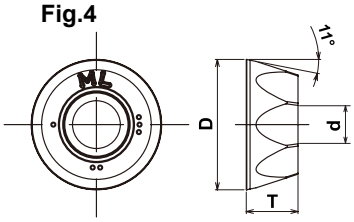
Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS									INSERT	Q	PARTS	
		D	R	Lf	d	Db	a	b	E	d1			Screw	Wrench
TDM-5200R-12-075	•	2.00	.236	2.00	.750	1.85	.319	.197	.750	.630	RPMT1204MOE-**	5	DSW-410H	A-15T
TDM-6250R-12-100	•	2.50	.236	2.00	1.00	2.24	.374	.236	.866	.787		6		
TDM-7300R-12-100	•	3.00	.236	2.00	1.00	2.24	.374	.236	.866	.787		7		
TDM-9400R-12-125	•	4.00	.236	2.00	1.25	2.76	.500	.315	.866	.787		9		

Note: All cutters are supplied without inserts, wrench or moly.

Insert

Fig.4



Specifications - Metric

CATALOG NUMBER	DIMENSIONS				FIG.	Cutting Edges	PVD Coated
	Tolerance	D	T	d			JC7550
RPMT1204MOE-ML4	M	12	4.76	4.4	4	4	•
RPMT1204MOE-ML8	M	12	4.76	4.4	4	8	•

ML - 18º chipbreaker for light cutting

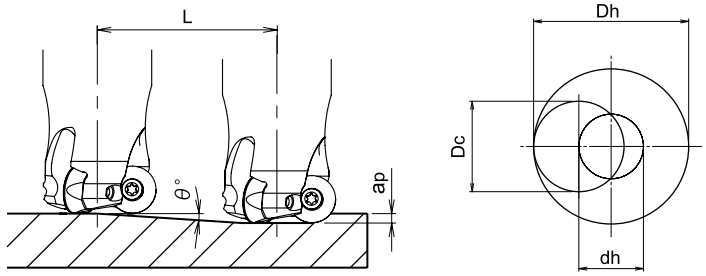
DIJET®

Face Milling | Pocket Milling | Copy Milling

TDM Blade-Chipper

INCH

Recommended Cutting Data for Profile Milling



• Calculation of tool pass dia.

ØDc = ØDh - I

Tool pass dia. Bore dia. Tool Dia.

- **Down cutting is recommended, tool pass rotation should be counterclockwise.**
- **Depth of cut per one circuit should not exceed max. depth of cut Ap.**
- **In case of ramping and helical interpolation, apply 70% or less feed (F) from standard cutting condition table.**

	CATALOG NUMBER	Tool Diameter (I)	Effective Cutting Diameter	Max. Depth of Cut: AP	Ramping		Helical Interpolation	
					Max. Ramp Angle	Total Cutting Length at Max. AP: L	Min. Bore Diameter: Dh min	Max. Bore Diameter: Dh max
INCH	MTD-2100*/TDM-2100*	1”	.528	.079	1.5°	.294	1.61	1.92
	MTD-3125*/TDM-3125*	1-1/4”	.778	.079	1.5°	3.007	2.11	2.42
	MTD-4150*/TDM-4150*	1-1/2”	1.03	.079	4°	1.126	2.61	2.92
	TDM-5200R-12-075	2”	1.53	.126	3°	2.404	3.61	3.92
	TDM-6250R-12-100	2-1/2”	2.03	.126	3°	2.404	4.61	4.92
	TDM-7300R-12-100	3”	2.53	.126	3°	2.404	5.61	5.92
	TDM-9400-12-125	4”	3.53	.126	2°	3.608	7.61	7.92

Recommended Cutting Data for TDM Cutters

Material	SFM	IPT	DOC	WOC
Stainless Steel	500	.020” .008” .008”	.040” .080” .120”	60%
Carbon Steel	700	.030” .015” .008”	.040” .080” .120”	60%
Low Allow Steel	8700	.020” .012” .005”	.040” .080” .120”	60%

Material	SFM	IPT	DOC	WOC
Mold Steel	500	.020” .012” .008”	.040” .080” .120”	60%
Titanium	300	.012” .008” .005”	.040” .080” .120”	60%
Inconel	160	.010” .006” .004”	.040” .080” .120”	40%

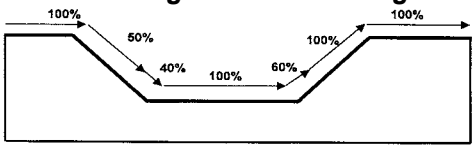
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

Extreme Diemate

Radius Cutter with Double Sided Insert

- Radius insert suitable for machining turbine blades.
- Double sided insert with 8 cutting edges.
- The unique helical cutting edge achieves edge sharpness and strength.
- Irregular insert pitch (except on 3 flute) reduces chatter and vibration.
- Insert grade JC8050 is PVD coated with improved heat-fracture resistance and impact strength for steels. Grade JC7518 is used for Titanium and Inconel.

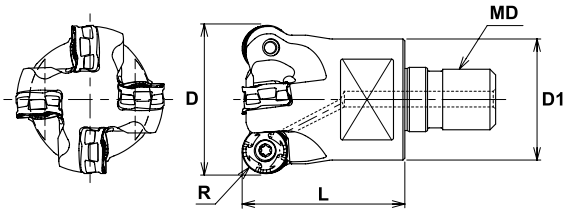
DIJET®

Face Milling | Pocket Milling | Copy Milling | Helical Interpolation

Extreme Diemate

INCH METRIC

MODULAR HEAD
MTX Type



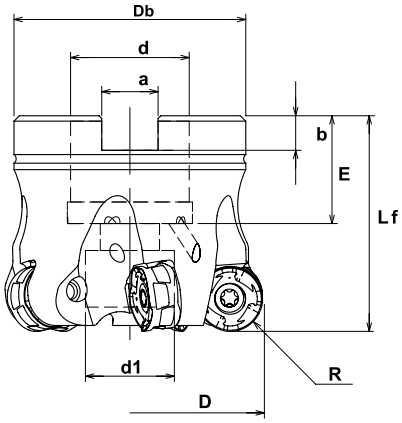
Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS					HEAD TORQUE		INSERT	Q	PARTS	
		D	R	L	D1	MD	lbs./ft	Nm			Screw	Wrench
MTX-3032-12-M16	•	32	6	43	28	M16	18.4	25	RNMU1205MOE-MM	3	TSW-410H	A-15T
MTX-4040-12-M16	•	40	6	43	32	M16	18.4	25		4		

Note: Modular Head Holders on page 109.

Note: All cutters are supplied without inserts, wrench or moly.

FACE MILL
EXTDM Type



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS									INSERT	Q	PARTS	
		D	R	Lf	d	Db	a	b	E	d1			Screw	Wrench
EXTDM-5200-75R-12	•	2.00	6	2.00	.750	1.85	.319	.197	.750	.630	RNMU1205MOE-MM	5	TSW-410H	A-15T
EXTDM-7300-100R-12	•	3.00	6	2.00	1.00	2.85	.374	.236	.886	.787		7		

Note: All cutters are supplied without inserts, wrench or moly.

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS									INSERT	Q	PARTS	
		D	R	Lf	d	Db	a	b	E	d1			Screw	Wrench
EXTDM-5050R-12-22	•	50	6	40	22	43	10.4	6.3	20	16.5	RNMU1205MOE-MM	5	TSW-410H	A-15T
EXTDM-5052R-12-22	○	52	6	40	22	43	10.4	6.3	20	16.5		5		
EXTDM-6063R-12-22	•	63	6	40	22	48	10.4	6.3	20	16.5		6		
EXTDM-6063R-12-27	•	63	6	50	27	58	12.7	7	22	20		6		

○ - longer delivery may apply.

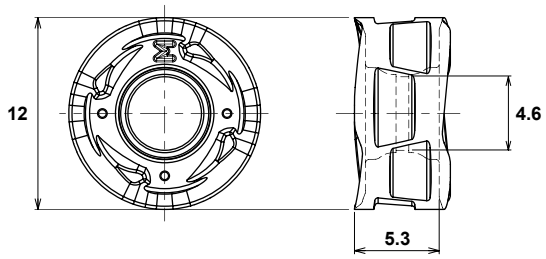
Note: All cutters are supplied without inserts, wrench or moly.

INCH METRIC

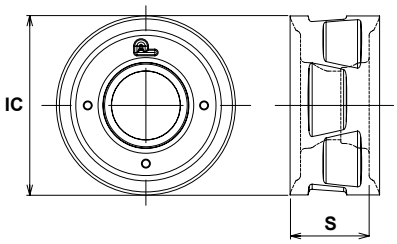
Extreme Diemate

Inserts

-MM

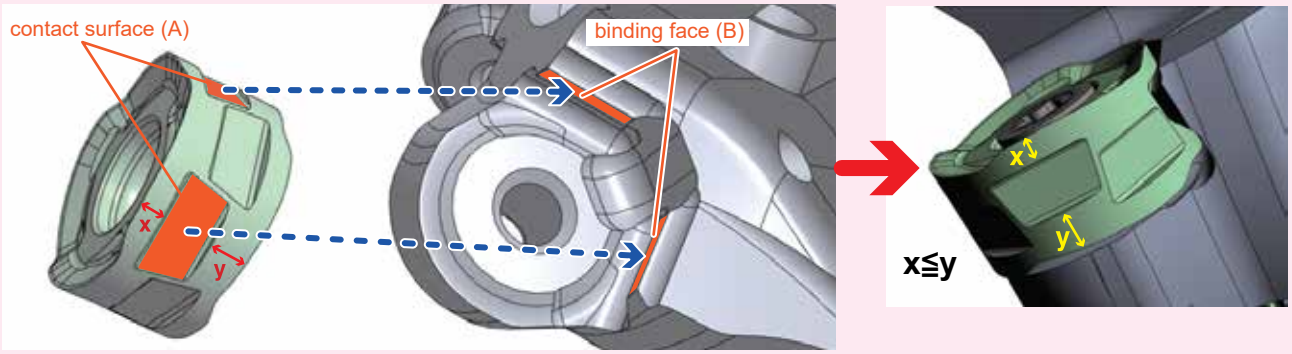


-PM



CATALOG NUMBER	TOLERANCE	TOTAL # OF CORNERS (double sided)	PVD Coated			
			JC7518	JC7550	JC8050	JC8118
RNMU1205MOE-MM	M	8	•	•		
RNMU1205MOE-PM					•	•

Attention to mounting insert



Make sure contact surface of insert (A) comes into contact with wedge-shaped binding face (B).

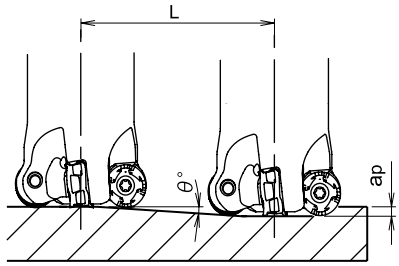
DIJET®

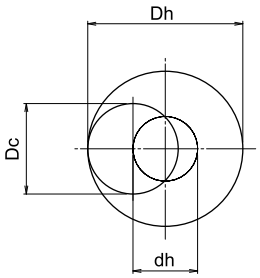
Face Milling | Pocket Milling | Copy Milling | Helical Interpolation

Extreme Diemate

INCH METRIC

Recommended Cutting Data for Profile Milling





• Calculation of tool pass dia.

ØDc = ØDh - I

Tool pass dia. Bore dia. Tool Dia.

- **Down cutting is recommended, tool pass rotation should be counterclockwise.**
- **Depth of cut per one circuit should not exceed max. depth of cut Ap.**
- **In case of ramping and helical interpolation, apply 70% or less feed (F) from standard cutting condition table.**

	CATALOG NUMBER	Tool Diameter (I)	Effective Cutting Diameter	Max. Depth of Cut: AP	Ramping		Helical Interpolation	
					Max. Ramp Angle	Total Cutting Length at Max. AP: L	Min. Bore Diameter: Dh min	Max. Bore Diameter: Dh max
INCH	EXTDM-5200-75R-12	2.00	1.53	.118	1°	6.767	3.61	3.92
INCH	EXTDM-7300-100R-12	3.00	2.53	.118	.8°	8.458	5.61	5.92
METRIC	MTX-3032-12-M16	32	20	3	1.2°	143	55	62
METRIC	MTX-4040-12-M16	40	28	3	1.2°	143	71	78
METRIC	EXTDM-5050R-12-22	50	38	3	1°	172	91	98
METRIC	EXTDM-5052R-12-22	52	40	3	1°	172	95	102
METRIC	EXTDM-6063R-*	63	51	3	1°	172	117	124
METRIC	EXTDM-6066R-12-27	66	54	3	.8°	215	123	130

INCH METRIC

Extreme Diemate

Recommended Cutting Data for EXTDM Cutters

Material	Insert	Insert Grade	SFM	IPT	DOC	WOC
Gray Cast Iron	RNMU1204MOE-PM	JC8118 (JC8050)	700	.020” .014” .008”	.030” .060” .100”	60%
Nodular Cast Iron	RNMU1204MOE-PM	JC8118 (JC8050)	700	.020” .014” .008”	.030” .060” .100”	60%
Carbon Steel	RNMU1204MOE-PM	JC8050 (JC8118)	700	.020” .014” .008”	.030” .060” .100”	60%
Low Alloy Steel	RNMU1204MOE-PM	JC8050 (JC8118)	700	.020” .014” .008”	.030” .060” .100”	60%
Mold Steel	RNMU1204MOE-PM	JC8050 (JC8118)	500	.016” .012” .006”	.030” .060” .100”	60%
Tool & Die Steel (40-50 HRC)	RNMU1204MOE-PM	JC8118 (JC8050)	300	.012” .008” .004”	.020” .050” .080”	40%
Stainless Steel	RNMU1204MOE-MM	JC7550 (JC7518)	500	.020” .014” .008”	.030” .060” .100”	60%
Titanium	RNMU1204MOE-MM	JC7518 (JC7550)	300	.012” .008” .005”	.014” .040” .060”	60%
Inconel	RNMU1204MOE-MM	JC7518 (JC7550)	160	.010” .006” .004”	.014” .040” .060”	40%

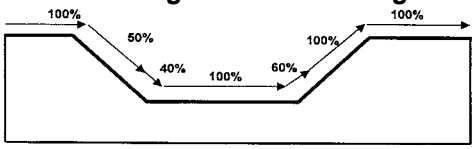
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

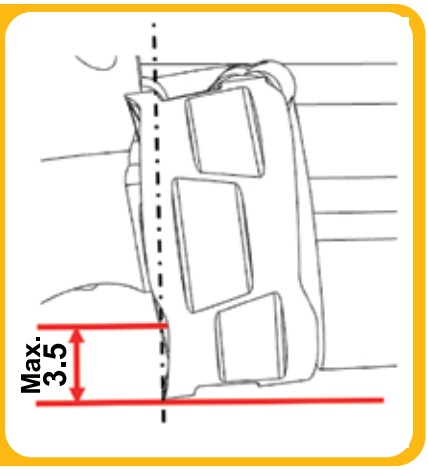
NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

MM breaker insert has helical cutting edge, so recommend to use at ap=3mm or less.



Maximum Ramping Angle

Tool Diam. (mm)	Maximum Ramping Angle
32	0.7º
40	0.8º
50	1º
52	1º
63	0.8º
66	0.8º

Notes

Swing Ball

High Productivity Indexable Ball Nose End Mill

- Double insert ball nose rougher.
- Positive style insert with chip breaker and larger sizes with notched edges allow smoother cutting action.
- Inserts available with negative edge prep are designed to machine hard welds.
- Able to take aggressive cuts and withstand heavy impact.

DIJET®

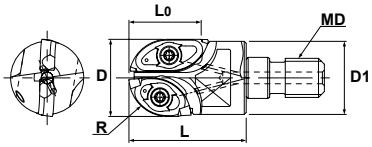
Copy Milling | Shoulder Milling | Slotting

Swing Ball

INCH METRIC

MODULAR HEADS
MSW Type

G-Body



Specifications - Modular Heads - Inch

CATALOG NUMBER	STK	DIMENSIONS						HEAD TORQUE lbs./ft	INSERT	PARTS	
		D	R	L	L0	D1	MD			Screw	Wrench
MSW-2075-M10	•	.750	.375	1.18	.700	.728	M10	11.8	SWB2075HME (1) SWB2075HSE (1)	DSW-307H	T-10SD
MSW-2100-M12	•	1.00	.492	1.38	.860	.940	M12	14.7	SWB2100HME (1) SWB2100HSE (1)	DSW-4085	A-15T
MSW-2125-M16	•	1.25	.625	1.69	1.10	1.14	M16	18.4	SWB2125HME (1) SWB2125HSE (1)	DSW-509	A-20

Note: All cutters are supplied without inserts, wrench or moly.

Specifications - Modular Heads - Metric

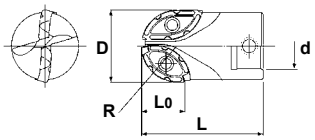
CATALOG NUMBER	STK	DIMENSIONS						HEAD TORQUE Nm	INSERT	PARTS	
		D	R	L	L0	D1	MD			Screw	Wrench
MSW-3225-M16	•	32	16	43	29.5	29.9	M16	25	SWB232HM-G (1) SWB232HS-G (1)	TSW-511	A-20

Note: Modular Head Holders on page 109.

Note: All cutters are supplied without inserts, wrench or moly.

May also use inserts for welds or hardened material.

END CAP
SWB-EC Style



Specifications - End Cap

CATALOG NUMBER	STK	DIMENSIONS								INSERT	PARTS	
		D	R	L	L0	l1	l3	d	θ		Screw	Wrench
SWB-2200-EC	•	2.0”	.984”	3.38”	1.18”	-	-	1.25”	-	SWB2200HMNE (1) SWB2200HSNE (1)	HSW-614H ECS-0030	T-30 A-316

Note: All cutters are supplied without inserts, wrench or moly.

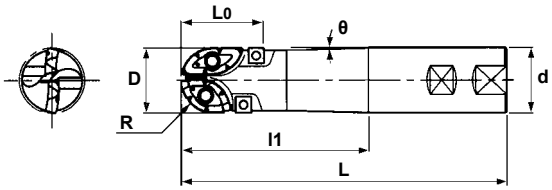
INCH

Swing Ball

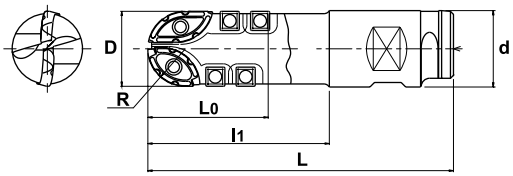
END MILLS
SWB Type

G-Body

Weldon Shank
Fig. 1



Combination Shank
Fig. 2



Specifications - Standard Length of Cut

CATALOG NUMBER	STK	DIMENSIONS						FIG.	θ	INSERT	PARTS	
		D	R	L	L0	l1	d				Screw	Wrench
SWB-2075-4	•	.750	.375	4.03	1.14	2.00	.750	1	-	SWB2075HME (1) SWB2075HSE (1) ZCMT100308R (2)	DSW-307H (2) ESW-206 (2)	T-10SD T-08SD
SWB-2075-6	•	.750	.375	6.03	1.14	3.75	1.00	1	6°			
SWB-2100-100-5	•	1.00	.492	5.00	1.40	2.75	1.00	1	-	SWB2100HME (1) SWB2100HSE (1) ZCMT100308R (2)	DSW-4085 (2) ESW-206 (2)	T-15 T-08SD
SWB-2100-100-8	•	1.00	.492	8.00	1.40	3.00	1.00	1	-			
SWB-2100-125-6.5	•	1.00	.492	6.50	1.40	4.25	1.25	1	-			
SWB-2100-125-8	•	1.00	.492	8.00	1.40	5.50	1.25	1	7° 30’			
SWB-2125-125-6	•	1.25	.625	6.00	1.67	3.72	1.25	1	-	SWB2125HME (1) SWB2125HSE (1) IM-SP32GS (2)	DSW-509 (2) CSW-407 (2)	A-20 T-15
SWB-2150-150-6	•	1.50	.750	6.00	1.97	3.31	1.50	1	-	SWB2150HMNE (1) SWB2150HSNE (1) IM-SP32GS (2)	TSW-511 (2) CSW-407 (2)	A-20 T-15
SWB-2150-200-8	•	1.50	.750	8.00	1.97	4.75	2.00	1	30°			

Note: All cutters are supplied without inserts, wrench or moly.

Specifications - Longer Length of Cut

CATALOG NUMBER	STK	DIMENSIONS						FIG.	θ	INSERT	PARTS	
		D	R	L	L0	l1	d				Screw	Wrench
SWB4-2200-8-PN200	•	2.00	.984	8.00	3.15	4.75	2.00 w/ Putnam Lock	2	-	SWB2200HMNE (1) SWB2200HSNE (1) IM-SP43GS (4)	HSW-614H (2) EXW-510 (4)	T-30 A-20
SWB6-2200-10-PN200	•	2.00	.984	10.00	3.93	6.75	2.00 w/ Putnam Lock	2	-	SWB2200HMNE (1) SWB2200HSNE (1) IM-SP43GS (6)	HSW-614H (2) EXW-510 (6)	T-30 A-20

Note: All cutters are supplied without inserts, wrench or moly.

May also use inserts for welds or hardened material.

DIJET®

Copy Milling | Shoulder Milling | Slotting

Swing Ball

METRIC

END MILLS

SWB Type

Fig. 1

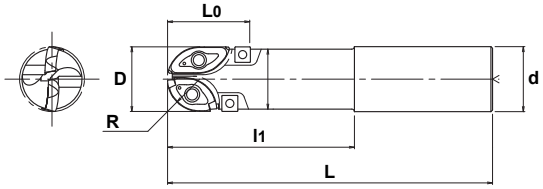


Fig. 2

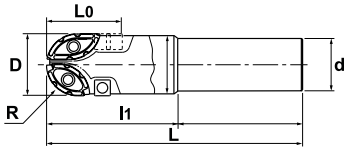


Fig. 3

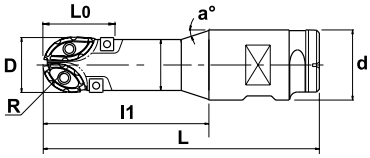


Fig. 4

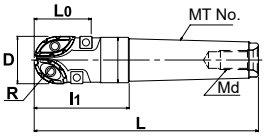
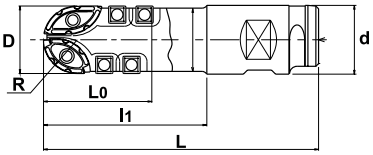


Fig. 5



Specifications - Straight Shank

CATALOG NUMBER	STK	DIMENSIONS								FIG.	INSERT	PARTS	
		D	R	L	L0	l1	l3	d	a°			Screw	Wrench
SWBM3242S32-G*	•	32	16	220	44	60	-	32	-	1	SWB232HM-G (1) SWB232HS-G (1) ZCMT100308R (2)	TSW-511 (2) ESW-206 (2)	A-20 T-08SD
SWBS4050S42*	•	40	20	200	50	120	-	42	-	1	SWB240HMN (1) SWB250HSN (1) SPGA090304 (2)	TSW-614H (2) ESW-406 (2)	T-25 T-15
SWBS4050C508*	•	40	20	200	50	120	100	50.8	18°	3			
SWBS5060S42*	•	50	25	200	60	100	-	42	-	2	SWB250HMN-N (1) SWB250HSN-N (1) IM-SP43GS (2)	HSW-614H (2) EXW-510 (2)	T-30 A-20
SWBM5060S42*	•	50	25	250	60	100	-	42	-	2			
SWBS5060C508	•	50	25	160	60	80	-	50.8	-	3			
SWBS5060C508*	•	50	25	200	60	120	-	50.8	-	3			
SWBMS5060C508*	•	50	25	220	60	140	-	50.8	-	3			
SWBM5060C508*	•	50	25	250	60	170	-	50.8	-	3			
SWBL5060C508	•	50	25	300	60	220	-	50.8	-	3			
SWBE5060C508	•	50	25	350	60	270	-	50.8	-	3			
SWBS5080C508*	•	50	25	200	80	120	-	50.8	-	5			
SWB-51020-MT5	•	50	25	256	60	120	-	MT5	-	4	SWB250HMN-N (1) SWB250HSN-N (1) IM-SP43GS (2)	HSW-614H (2) EXW-510 (2) Md=M20x25	T-30 A-20
SWB-50150-MT5	•	50	25	286	60	150	-	MT5	-	4			

*G-Body

Note: All cutters are supplied without inserts, wrench or moly.

INCH

Swing Ball

INSERTS

Fig. 1

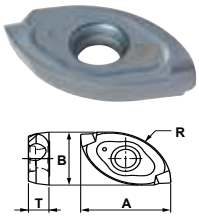


Fig. 2

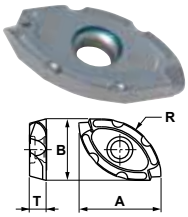


Fig. 3

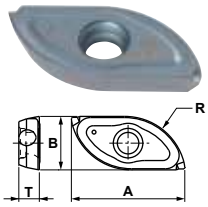


Fig. 4

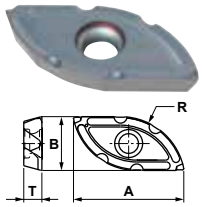


Fig. 5 *(For welds or hardened material)*

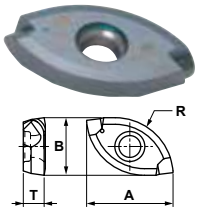


Fig. 6 *(For welds or hardened material)*

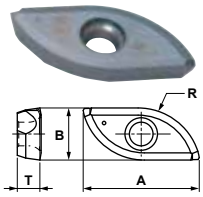


Fig. 7

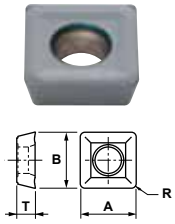


Fig. 8

Specifications

CATALOG NUMBER	DIMENSIONS				FIG.	COATED	
	R	A	B	T		JC8015	JC5040
SWB2075HME	.375	.625	.372	.150	1	•	•
SWB2075HSE	.375	.765	.307	.150	3	•	•
SWB2075MMW	.375	.625	.372	.150	5	•	
SWB2075MSW	.375	.765	.307	.150	6	•	
SWB2100HME	.492	.728	.487	.150	1	•	•
SWB2100HSE	.492	.936	.413	.150	3	•	•
SWB225MMW	.492	.728	.487	.150	5	•	
SWB225MSW	.492	.936	.413	.150	6	•	
SWB2125HME	.625	.937	.630	.217	1	•	•
SWB2125HSE	.625	1.16	.549	.517	3	•	•
SWB2125MMW	.625	.937	.630	.217	5	•	
SWB2125MSW	.625	1.16	.549	.217	6	•	
SWB2150HMNE	.750	1.14	.772	.236	2	•	•
SWB2150HSNE	.750	1.43	.610	.236	4	•	•
SWB2150MMW	.750	1.14	.772	.236	5	•	
SWB2150MSW	.750	1.43	.610	.236	6	•	
SWB2200HMNE	.984	1.35	1.01	.276	2	•	•
SWB2200HSNE	.984	1.68	.819	.275	4	•	•
SWB250MMW	.984	1.35	1.01	.276	5	•	
SWB250MSW	.984	1.68	.819	.275	6	•	
ZCMT100308R	.031	.409	.250	.134	8	• (JC5015)	•
IM-SP32GS	.016	.375	.375	.125	7	• (JC5015)	•
IM-SP43GS	.031	.500	.500	.187	7	• (JC5118)	•

DIJET®

Copy Milling | Shoulder Milling | Slotting

Swing Ball

METRIC

INSERTS

Fig. 1

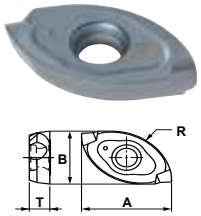


Fig. 2

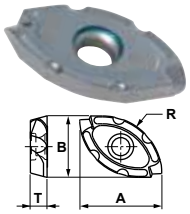


Fig. 3

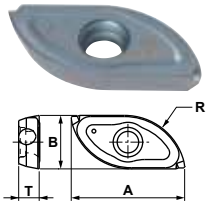


Fig. 4

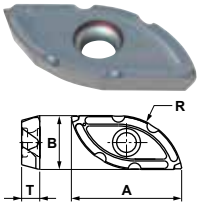


Fig. 5 *(For welds or hardened material)*

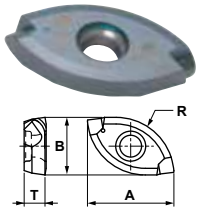


Fig. 6 *(For welds or hardened material)*

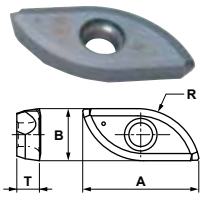


Fig. 7

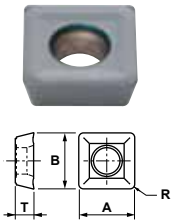
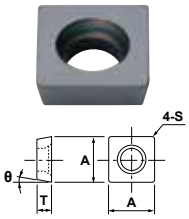


Fig. 8

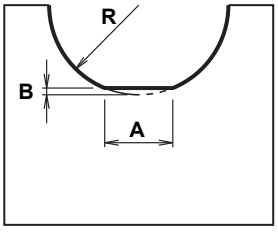
Fig. 9



Specifications

CATALOG NUMBER	DIMENSIONS				FIG.	COATED	
	R	A	B	T		JC8015	JC5040
SWB232HM-G	16	26	16	5.35	1	•	•
SWB232HS-G	16	31.7	13.9	5.35	3	•	•
SWB232MMW-G	16	26	16	5.35	5	•	
SWB232MSW-G	16	31.7	13.9	5.35	6	•	
SWB240HMN	20	30.4	20.8	6.85	2	•	•
SWB240HSN	20	37.5	16.3	6.85	4	•	•
SWB240MMW	20	30.4	20.8	6.85	5	•	
SWB240MSW	20	37.5	16.3	6.85	6	•	
SWB250HMN-N	25	34.4	25.7	7	2	•	•
SWB250HSN-N	25	42.6	20.8	7	4	•	•
SWB250MMW	25	34.4	25.7	7	5	•	
SWB250MSW	25	42.6	20.8	7	6	•	
ZCMT100308R	.8	10.4	6.35	3.4	8	• (JC5015)	•
IM-SP32GS	.4	9.525	9.525	3.18	7	• (JC5015)	•
IM-SP43GS	.8	12.7	12.7	4.76	7	• (JC5118)	•
SPGA090304	.4	9.525	9.525	3.18	9		•

Machined form by Swing Ball



SWB type insert

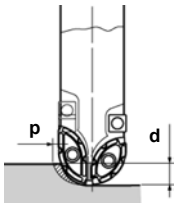
DIMENSIONS		
R	A	B
16	3.4	0.09
20	4.3	0.12
25	5.2	0.14

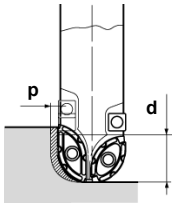
INCH

Swing Ball

Recommended Cutting Data for Swing Ball

No. 1	No. 2
Shoulder Cutting	Shoulder Cutting (Deep)





Material	Insert	Grade	SFM	Parameters	Tool Diameter			
					3/4”		1”	
					Fig. 1	Fig. 2	Fig. 1	Fig. 2
Gray Cast Iron	Chipbreaker	JC8015	700	IPT	.008”	.005”	.008”	.005”
				DOC (d)	.200”	.625”	.240”	.800”
				WOC (p)	.160”	.080”	.200”	.120”
Nodular Cast Iron	Chipbreaker	JC8015	650	IPT	.007”	.005”	.008”	.005”
				DOC (d)	.200”	.625”	.240”	.800”
				WOC (p)	.160”	.080”	.200”	.120”
Carbon Steel	Chipbreaker	JC5040	600	IPT	.006”	.004”	.007”	.004”
				DOC (d)	.200”	.625”	.240”	.800”
				WOC (p)	.160”	.080”	.200”	.120”
Low Alloy Steel	Chipbreaker	JC5040	550	IPT	.006”	.004”	.007”	.004”
				DOC (d)	.200”	.625”	.240”	.800”
				WOC (p)	.160”	.080”	.200”	.120”
Mold Steel	Chipbreaker	JC5040	500	IPT	.006”	.004”	.006”	.004”
				DOC (d)	.160”	.500”	.200”	.600”
				WOC (p)	.100”	.080”	.120”	.100”
Tool & Die Steel (40-50 HRC)	Chipbreaker	JC8015	400	IPT	.005”	.004”	.005”	.004”
				DOC (d)	.080”	.200”	.120”	.250”
				WOC (p)	.120”	.060”	.160”	.060”
Hardened Die Steel & Welds (50-60 HRC)	MMW/MSW	JC8015	200	IPT	.003”	N/A	.003”	N/A
				DOC (d)	.080”	N/A	.120”	N/A
				WOC (p)	.120”	N/A	.120”	N/A
Stainless Steel	Chipbreaker	JC5040	300	IPT	.004”	N/A	.005”	N/A
				DOC (d)	.080”	N/A	.120”	N/A
				WOC (p)	.120”	N/A	.160”	N/A

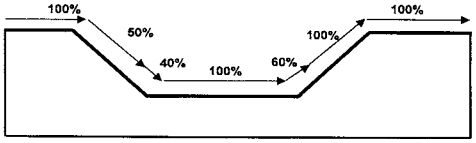
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



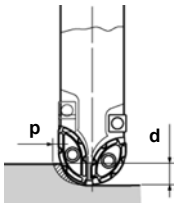
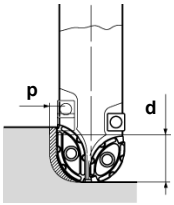
NOTE: Feed should be reduced when cutting the above pattern

DIJET®

Swing Ball

INCH METRIC

Recommended Cutting Data for Swing Ball

No. 1	No. 2
Shoulder Cutting	Shoulder Cutting (Deep)
	

Material	Insert	Grade	SFM	Parameters	Tool Diameter					
					1-1/4" / 32mm		1-1/2" / 40mm		2" / 50mm	
					Fig. 1	Fig. 2	Fig. 1	Fig. 2	Fig. 1	Fig. 2
Gray Cast Iron	Chipbreaker	JC8015	700	IPT	.010"	.006"	.015"	.007"	.020"	.008"
				DOC (d)	.400"	1.10"	.400"	1.40"	.400"	1.60"
				WOC (p)	.240"	.200"	.320"	.320"	.400"	.400"
Nodular Cast Iron	Chipbreaker	JC8015	650	IPT	.010"	.006"	.015"	.007"	.020"	.008"
				DOC (d)	.400"	1.10"	400"	1.40"	.400"	1.60"
				WOC (p)	.240"	.200"	.320"	.320"	.400"	.400"
Carbon Steel	Chipbreaker	JC5040	600	IPT	.008"	.005"	.012"	.006"	.015"	.008"
				DOC (d)	.400"	1.10"	.400"	1.40"	.400"	1.60"
				WOC (p)	.240"	.200"	.300"	.320"	.400"	.400"
Low Alloy Steel	Chipbreaker	JC5040	550	IPT	.008"	.005"	.010"	.006"	.015"	.007"
				DOC (d)	.400"	1.10"	.400"	1.40"	.400"	1.60"
				WOC (p)	.240"	.200"	.320"	.320"	.400"	.400"
Mold Steel	Chipbreaker	JC5040	500	IPT	.008"	.004"	.010"	.005"	.012"	.006"
				DOC (d)	.240"	.750"	.300"	1.00"	.340"	1.20"
				WOC (p)	.140"	.100"	.160"	.100"	.180"	.100"
Tool & Die Steel (40-50 HRC)	Chipbreaker	JC8015	400	IPT	.006"	.004"	.010"	.004"	.010"	.005"
				DOC (d)	.160"	.300"	.160"	.360"	.200"	.400"
				WOC (p)	.200"	.060"	.200"	.060"	.240"	.080"
Hardened Die Steel & Welds (50-60 HRC)	MMW/MSW	JC8015	200	IPT	.004"	N/A	.005"	N/A	.007"	N/A
				DOC (d)	.120"	N/A	.120"	N/A	.120"	N/A
				WOC (p)	.200"	N/A	.200"	N/A	.240"	N/A
Stainless Steel	Chipbreaker	JC5040	300	IPT	.006"	N/A	.006"	N/A	.008"	N/A
				DOC (d)	.160"	N/A	.160"	N/A	.200"	N/A
				WOC (p)	.200"	N/A	.200"	N/A	.240"	N/A

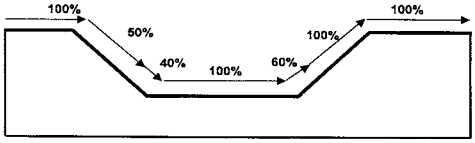
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

Swing Ball Neo

Ball Nose Rougher & Semi Finisher with Key

- High repeatability on insert mounting allows not only roughing but also semi-finishing.
- Unique key on body enables a stable roughing process & machining welded parts for 3D machining.
- New PVD coated grades; JC5240 for steel and JC8118 & JC8015 for cast iron, mold steel, welding & hardened die steel.

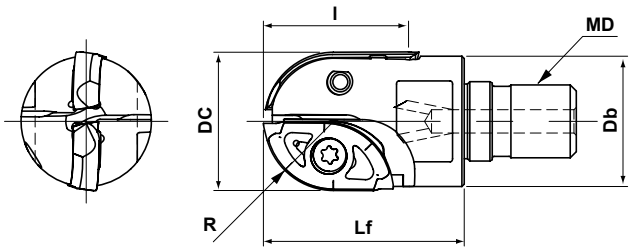
DIJET®

Copy Milling | Shoulder Milling | Slotting

Swing Ball - Neo

METRIC

MODULAR HEAD
MSWX Type



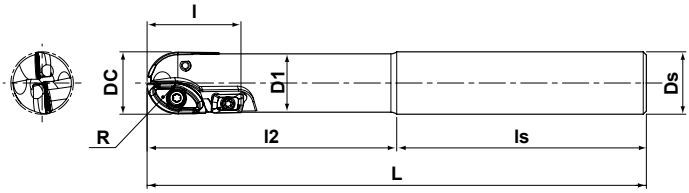
Specifications

CATALOG NUMBER	STK	DIMENSIONS						HEAD TORQUE Nm	INSERTS		PARTS	
		Dc	R	Lf	l	Db	MD		Main (1)	Sub (1)	Screw	Wrench
MSWX-1615-M8	•	16	8	23	15	15	M8	16 Nm	SWBX216HM SWBX216MMW	SWBX216HS SWBX216MSW	DSW-2563H	T-08SD
MSWX-2022-M10	•	20	10	30	22	18.7	M10	16 Nm	SWBX220HM SWBX220MMW	SWBX220HS SWBX220MSW	DSW-307H	T-10
MSWX-2525-M12	•	25	12.5	35	25	23.5	M12	20 Nm	SWBX225HM SWBX225MMW	SWBX225HS SWBX225MSW	TSW-410H	T-15
MSWX-3031-M16	•	30	15	43	31	27.9	M16	25 Nm	SWBX230HM SWBX230MMW	SWBX230HS SWBX230MSW	DSW-511H	A-20

Note: Modular Head Holders on page 109.

Note: All cutters are supplied without inserts, wrench or moly.

END MILLS
SWBX Type



Specifications

CATALOG NUMBER	STK	DIMENSIONS								INSERTS			PARTS	
		Dc	R	L	l	l2	ls	D1	Ds	Main (1)	Sub (1)	Side (1)	Screw	Wrench
SWBX-16050-S16	•	16	8	130	15	50	80	15	16	SWBX216HM SWBX216MMW	SWBX216HS SWBX216MSW	-	DSW-2563H	T-08SD
SWBX-20080-S20	•	20	10	160	29	80	80	18.7	20	SWBX220HM SWBX220MMW	SWBX220HS SWBX220MSW	ZPMT100308ZER-PL	DSW-307H TSW-2556H	T-10 T-08
SWBX-20120-S20	•	20	10	200	29	120	80	18.7	20					
SWBX-25080-S25	•	25	12.5	160	33	80	80	23.5	25	SWBX225HM SWBX225MMW	SWBX225HS SWBX225MSW	ZPMT100308ZER-PL	TSW-410H TSW-2556H	T-15 T-08
SWBX-25120-S25	•	25	12.5	200	33	120	80	23.5	25					
SWBX-30120-S32	•	30	15	200	38	120	80	28.8	32	SWBX230HM SWBX230MMW	SWBX230HS SWBX230MSW	ZPMT100308ZER-PL	DSW-511H DSW-2563H	A-20 T-08SD
SWBX-30170-S32	•	30	15	250	38	170	80	29	32					

Note: All cutters are supplied without inserts, wrench or moly.

METRIC

Swing Ball - Neo

Fig. 1
(Main blade for low cutting force)

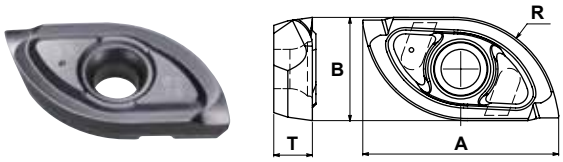


Fig. 2
(Main blade for welding & hardened material)

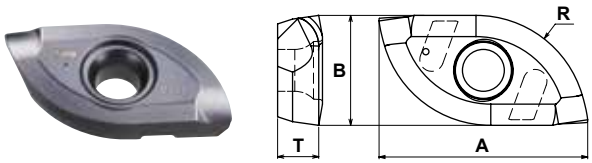


Fig. 3
(Sub blade for low cutting force)

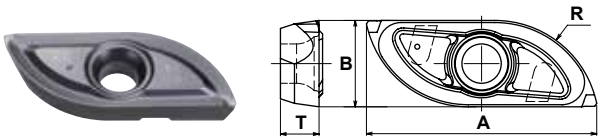


Fig. 4
(Sub blade for welding & hardened material)

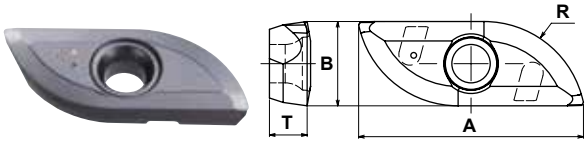
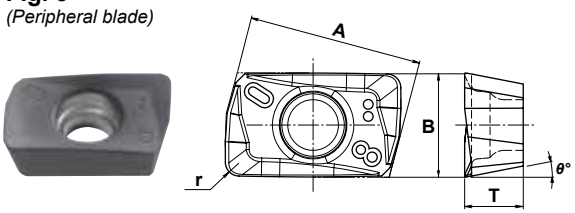


Fig. 5
(Peripheral blade)



Specifications

CATALOG NUMBER	TYPE	DIMENSIONS					FIG.	PVD COATED		
		R	A	B	T	r		JC5240	JC8118	JC8015
SWBX216HM	Main (for low cutting force)	8	15	7.9	3.3	-	1	•	•	
SWBX216MMW	Main (for welding & hardened material)	8	15	7.9	3.3	-	2		•	
SWBX216HS	Sub (for low cutting force)	8	16.1	6.6	3.3	-	3	•	•	
SWBX216MSW	Sub (for welding & hardened material)	8	16.1	6.6	3.3	-	4		•	
SWBX220HM	Main (for low cutting force)	10	18.8	9.9	3.9	-	1	•	•	
SWBX220MMW	Main (for welding & hardened material)	10	18.8	9.9	3.9	-	2		•	
SWBX220HS	Sub (for low cutting force)	10	22.9	8.8	3.9	-	3	•	•	
SWBX220MSW	Sub (for welding & hardened material)	10	22.9	8.8	3.9	-	4		•	
SWBX225HM	Main (for low cutting force)	12.5	22.3	12.4	4.6	-	1	•	•	
SWBX225MMW	Main (for welding & hardened material)	12.5	22.3	12.4	4.6	-	2		•	
SWBX225HS	Sub (for low cutting force)	12.5	26.3	10.5	4.6	-	3	•	•	
SWBX225MSW	Sub (for welding & hardened material)	12.5	26.3	10.5	4.6	-	4		•	
SWBX230HM	Main (for low cutting force)	15	27.9	14.7	6	-	1	•	•	
SWBX230MMW	Main (for welding & hardened material)	15	27.9	14.7	6	-	2			•
SWBX230HS	Sub (for low cutting force)	15	32.8	12.3	6	-	3	•	•	
SWBX230MSW	Sub (for welding & hardened material)	15	32.8	12.3	6	-	4			•
ZPMT100308ZER-PL	Peripheral	-	10	6	3.4	0.8	5		•	

NOTES: Be sure to use the same type & same grade for main & sub blade together.

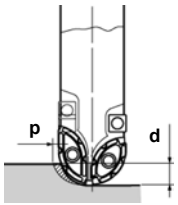
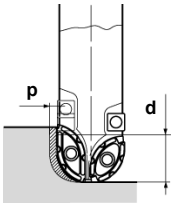
DIJET®

Copy Milling | Shoulder Milling | Slotting

Swing Ball - Neo

METRIC

Recommended Cutting Data for Swing Ball Neo

No. 1	No. 2
Shoulder Cutting	Shoulder Cutting (Deep)
	

Material	Insert	Grade	SFM	Parameters	Tool Diameter			
					16mm		20mm	
					Fig. 1	Fig. 2	Fig. 1	Fig. 2
Gray Cast Iron	HM/HS (MMW/MSW)	JC8118 JC8015	700	IPT	.008”	.005”	.008”	.005”
				DOC (d)	.200”	.500”	.200”	.625”
				WOC (p)	.120”	.060”	.160”	.080”
Nodular Cast Iron	HM/HS	JC5240 (JC8118)	650	IPT	.007”	.005”	.007”	.005”
				DOC (d)	.200”	.500”	.200”	.625”
				WOC (p)	.120”	.060”	.160”	.080”
Carbon Steel	HM/HS	JC5240 (JC8118)	600	IPT	.006”	.004”	.006”	.004”
				DOC (d)	.200”	.500”	.200”	.625”
				WOC (p)	.120”	.060”	.160”	.080”
Low Alloy Steel	HM/HS	JC5240 (JC8118)	550	IPT	.006”	.004”	.006”	.004”
				DOC (d)	.200”	.500”	.200”	.625”
				WOC (p)	.120”	.060”	.160”	.080”
Mold Steel	HM/HS	JC8118	500	IPT	.006”	.004”	.006”	.004”
				DOC (d)	.160”	.400”	.160”	.500”
				WOC (p)	.060”	.080”	.100”	.080”
Tool & Die Steel (40-50 HRC)	MMW/MSW (HM/HS)	JC8118 JC8015	400	IPT	.005”	.004”	.005”	.004”
				DOC (d)	.080”	.150”	.080”	.200”
				WOC (p)	.080”	.040”	.120”	.060”
Hardened Die Steel & Welds (50-60 HRC)	MMW/MSW	JC8118 JC8015	200	IPT	.003”	N/A	.003”	N/A
				DOC (d)	.080”	N/A	.080”	N/A
				WOC (p)	.080”	N/A	.120”	N/A
Stainless Steel	HM/HS	JC8118	300	IPT	.004”	N/A	.004”	N/A
				DOC (d)	.080”	N/A	.080”	N/A
				WOC (p)	.080”	N/A	.160”	N/A

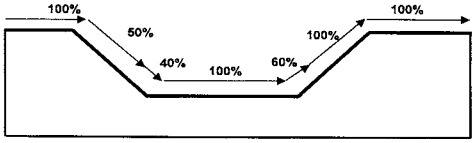
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



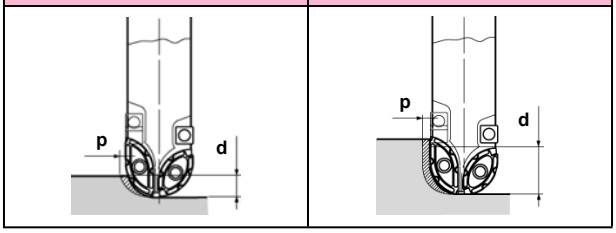
NOTE: Feed should be reduced when cutting the above pattern

METRIC

Swing Ball - Neo

Recommended Cutting Data for Swing Ball Neo

No. 1	No. 2
Shoulder Cutting	Shoulder Cutting (Deep)



Material	Insert	Grade	SFM	Parameters	Tool Diameter			
					25mm		30mm	
					Fig. 1	Fig. 2	Fig. 1	Fig. 2
Gray Cast Iron	HM/HS (MMW/MSW)	JC8118 JC8015	700	IPT	.008”	.005”	.010”	.006”
				DOC (d)	.240”	.800”	.400”	1.10”
				WOC (p)	.200”	.120”	.240”	.200”
Nodular Cast Iron	HM/HS	JC5240 (JC8118)	650	IPT	.008”	.005”	.010”	.006”
				DOC (d)	.240”	.800”	.400”	1.10”
				WOC (p)	.200”	.120”	.240”	.200”
Carbon Steel	HM/HS	JC5240 (JC8118)	600	IPT	.007”	.004”	.008”	.005”
				DOC (d)	.240”	.800”	.400”	1.10”
				WOC (p)	.200”	.120”	.240”	.200”
Low Alloy Steel	HM/HS	JC5240 (JC8118)	550	IPT	.007”	.004”	.008”	.005”
				DOC (d)	.240”	.800”	.400”	1.10”
				WOC (p)	.200”	.120”	.240”	.200”
Mold Steel	HM/HS	JC8118	500	IPT	.006”	.004”	.008”	.004”
				DOC (d)	.200”	.600”	.240”	.750”
				WOC (p)	.120”	.100”	.140”	.100”
Tool & Die Steel (40-50 HRC)	MMW/MSW (HM/HS)	JC8118 JC8015	400	IPT	.005”	.004”	.006”	.004”
				DOC (d)	.120”	.250”	.160”	.300”
				WOC (p)	.160”	.060”	.200”	.060”
Hardened Die Steel & Welds (50-60 HRC)	MMW/MSW	JC8118 JC8015	200	IPT	.003”	N/A	.004”	N/A
				DOC (d)	.120”	N/A	.120”	N/A
				WOC (p)	.120”	N/A	.200”	N/A
Stainless Steel	HM/HS	JC8118	300	IPT	.005”	N/A	.006”	N/A
				DOC (d)	.120”	N/A	.160”	N/A
				WOC (p)	.150”	N/A	.200”	N/A

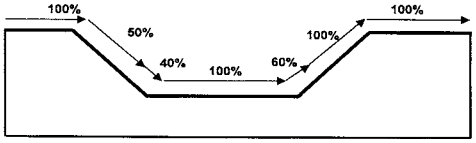
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

Notes

Wild Radius

Radius Cutter for High Efficient Roughing Applications

- High body durability when compared to conventional ball nose preventing chatter.
- Improved machining efficiency with larger step over and 10mm corner radius.
- Key gives added security allowing stable machining and ease of changing insert corner.
- High repeatability on insert mounting.

DIJET®

Face Milling | Shoulder Milling | Pocket Milling | Copy Milling | Helical Interpolation

Wild Radius

METRIC

FACE MILL
WDR Type

Fig. 1

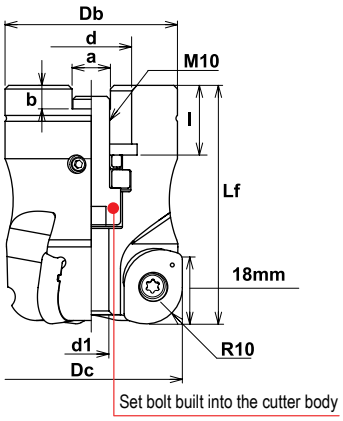
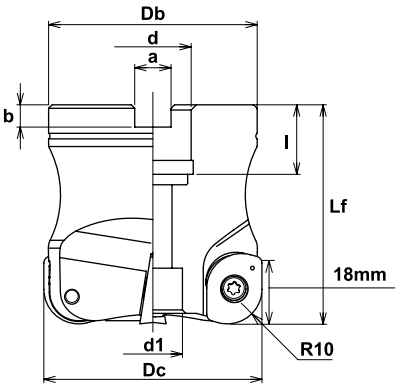


Fig. 2



Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS								FIG.	INSERTS	Q	PARTS	
		Dc	Lf	Db	d	d1	a	b	l				Screw	Wrench
WDR-3050R	•	50	65	47	22.225	9.6	8.4	5	19	1	YDM*1505100Z*R	3	CSW-513H	A-20
WDR-3050R-22	•	50	65	47	22	9.6	10.4	6.3	19	1		3		
WDR-4063R	•	63	63	60	22.225	17	8.4	5	20	2		4		
WDR-4063R-22	•	63	63	60	22	17	10.4	6.3	20	2		4		
WDR-5080R	•	80	63	76	31.75	26	12.7	8	32	2		5		

Note: All cutters are supplied without inserts, wrench or moly.

Inserts
YDMW / YDMT Type

Fig. 1

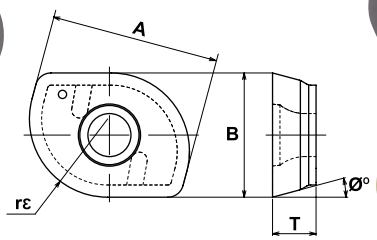
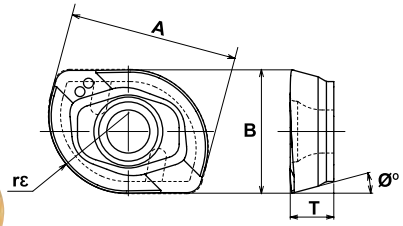


Fig. 2



Specifications

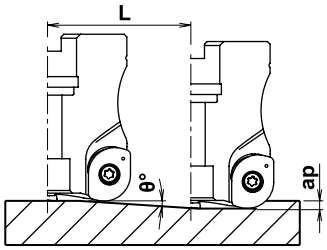
CATALOG NUMBER	Tolerance	DIMENSIONS					FIG.	PVD Coated	
		A	T	B	rε	Ø°		JC8118	JC7560
YDMW1505100ZTR	M	21.5	5.56	15.875	10	15°	1	•	•
YDMT1505100ZER	M	21.5	5.56	15.875	10	15°	2	•	•

METRIC

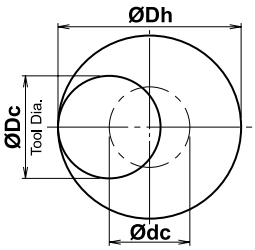
Wild Radius

Recommended Data for Profile Milling

Ramping



Helical Interpolation



- Calculation of tool pass dia.

Ødc = ØDh - ØDc

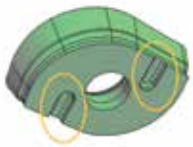
Tool pass dia. Bore dia. Tool Dia.

- Depth of cut per one circuit should not exceed max. depth of cut ap.
- Down cutting is recommended. Tool pass rotation should be counterclockwise.

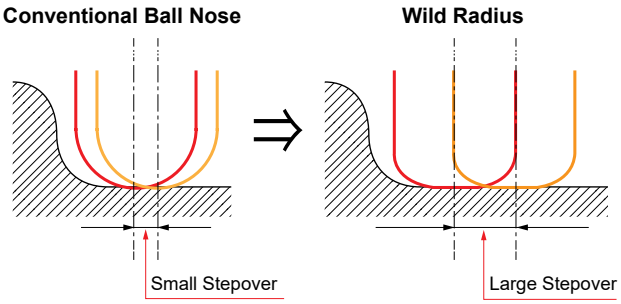
- **In case of ramping and helical interpolation, apply 70% or less feed (F) from standard cutting condition table.**
- **When drilling, apply 50% or less z axis feed from standard cutting condition table.**
- **Long consecutive chips may form when drilling, confirm safety.**

TOOL DIAMETER I		EFFECTIVE CUTTING DIA.	MAX. DEPTH OF CUT: AP	RAMPING		HELICAL INTERPOLATION		MAXIMUM DRILLING DEPTH
				MAX. RAMP ANGLE	TOTAL CUTTING LENGTH AT MAX AP: L	MIN. BORE DIAMETER: Dh min	MAX. BORE DIAMETER: Dh max	
METRIC	40	20.1	3	4°24'	39	56	78	2
	50	30.7	3	2°48'	61.3	76	98	2
	63	43.4	3	1°48'	95.5	102	124	2
	80	60.3	3	1°12'	143.2	136	158	2
	100	80.2	3	0°54'	191.0	176	198	2
	125	104.7	3	0°36'	286.5	226	248	2

Double Key system prevents movement of inserts.



Cutter design allows larger step over than conventional ball nose giving improved machining efficiency.



Metal removal rate

Cutting information: Material - Cast Iron

Wild Radius

Vc = 150m/min (n = 750min^{-1})
Vf = 3,000mm/min (fz = 1mm/t)
Ap = 3mm, Ae = 40mm
Q = 360cm^3/min

Conventional indexable ball nose

Vc = 235m/min (n = 1,500min^{-1})
Vf = 1,200mm/min (fz = 0.4mm/t)
Ap = 10mm, Ae = 10mm
Q = 120cm^3/min

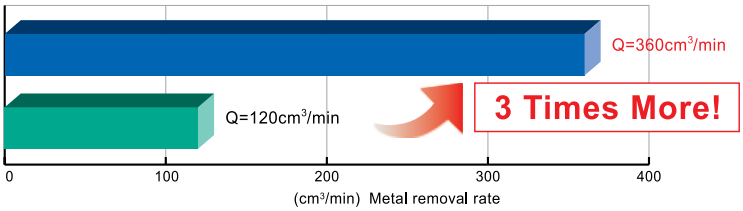
Results:

WILD RADIUS

Ø63x4N (WDR-4063R-22)

Indexable ball end mill (conventional tool)

Ø50x2N



DIJET®

Wild Radius

METRIC

Recommended Cutting Data for Wild Radius

Material	Grade	SFM	IPT	DOC	WOC
Gray Cast Iron	JC8118 JC7560	700	.030”	.120”	60% Dc
Nodular Cast Iron	JC8118 JC7560	650	.030”	.120”	60% Dc
Carbon Steel	JC7560 JC8118	600	.025”	.120”	60% Dc
Low Alloy Steel	JC7560 JC8118	550	.025”	.120”	60% Dc
Mold Steel	JC7560 JC8118	500	.025”	.080”	60% Dc
Tool & Die Steel (40-50 HRC)	JC8118	400	.010”	.060”	60% Dc
Hardened Die Steel (50-60 HRC)	JC8118	250	.008”	.040”	60% Dc
Stainless Steel	JC7560 JC8118	300	.020”	.080”	60% Dc

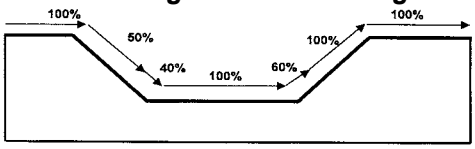
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

Sic-Evo

Multi functional indexable cutter

- Various milling applications such as face milling, slotting, pocket & side milling, ramping and helical machining.
- High positive geometry with low cutting force.
- Arc geometry on periphery cutting edge allows high efficient & high precision machining on vertical walls.

DIJET®

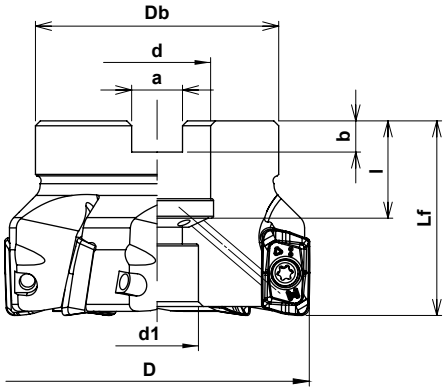
Face Milling | Shoulder Milling | Slotting | Helical Interpolation | Copy Milling | Pocket Milling

SIC-EVO

INCH METRIC

FACE MILL
SSV type

With coolant hole



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS								Q	INSERT	PARTS
		D	Lf	Db	d	d1	a	b	l			Screw & Wrench
SSV-4200R-075	•	2.0	1.57	1.85	.750	.590	.318	.196	.750	4	ZOMT1605**ZER-PM ZOET160508ZFR-NL	DSW-4075H T-15
SSV-5200R-075	•	2.0	1.57	1.85	.750	.590	.318	.196	.750	5		
SSV-6250R-100	•	2.5	1.75	1.96	1.00	.787	.374	.236	.750	6		
SSV-7300R-100	•	3.0	1.75	2.21	1.00	.787	.374	.236	.750	7		
SSV-8400R-150	•	4.0	2.25	3.78	1.50	1.02	.626	.394	1.00	8		

Note: All cutters supplied without inserts, wrench, & moly.

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS								Q	ARBOR BOLT	INSERT	PARTS
		D	Lf	Db	d	d1	a	b	l				Screw & Wrench
SSV-4040R-16	•	40	40	35	16	15	8.4	5.6	18	4	M8	ZOMT1605**ZER-PM ZOET160508ZFR-NL	DSW-4075H T-15
SSV-5050R-22	•	50	40	47	22	16	10.4	6.3	20	5	M10		
SSV-6063R-22	•	63	40	50	22	17	10.4	6.3	20	6	M10		
SSV-6063R-27	•	63	50	60	27	20	12.4	7	22	6	M12x1.75x30*		
SSV-7080R	•	80	50	60	25.4	20	9.5	6	24	7	M12x1.75x30*		
SSV-7080R-27	•	80	50	60	27	20	12.4	7	22	7	M12x1.75x30*		
SSV-8100R	•	100	63	85	31.75	26	12.7	8	32	8	M16x2x40*		
SSV-8100R-32	•	100	50	85	32	26	14.4	8	25	8	M16x2x30*		
SSV-8125R	•	125	70	100	38.1	32	15.9	10	38	8	M20x2.5x40*		
SSV-8125R-40	•	125	63	100	40	32	16.4	9	32	8	M20x2.5x40*		

Note: All cutters supplied without inserts, wrench, & moly.

NOTE: Arbor bolt included on cutters marked with * under arbor bolt column. All other cutters use bolt supplied with arbor.

INCH METRIC

SIC-EVO

END MILL
SSV type

With coolant hole

Fig. 1

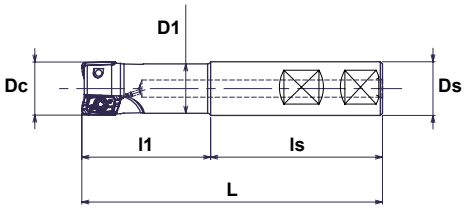


Fig. 2

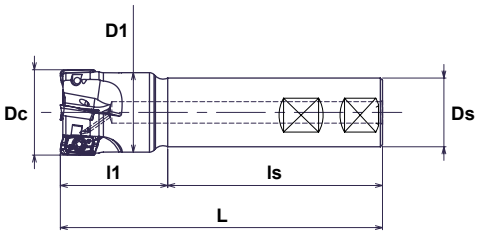


Fig. 3

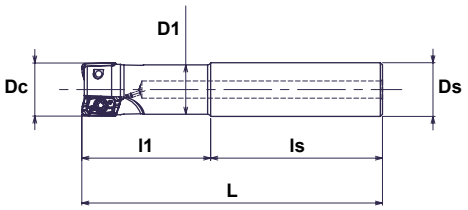
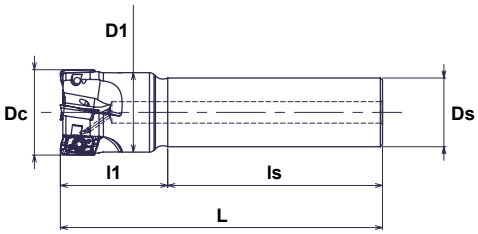


Fig. 4



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS						FIG.	Q	INSERT	PARTS
		D	l1	ls	L	D1	Ds				Screw & Wrench
SSV-2100-2.0-S100NP	•	1.00	2.00	5.00	7.00	.905	1.00	1	2	ZOMT1605**ZER-PM ZOET160508ZFR-NL	DSW-4075H T-15
SSV-2100-3.0-S100NP	•	1.00	3.00	5.00	8.00	.905	1.00	1	2		
SSV-3125-3.0-S125NP	•	1.25	3.00	2.50	5.50	1.14	1.25	1	3		
SSV-3125-4.75-S125NP	•	1.25	4.75	3.25	8.00	1.14	1.25	1	3		
SSV-4150-3.0-S125NP	•	1.50	3.00	2.50	5.50	1.37	1.25	2	4		
SSV-4150-4.75-S125NP	•	1.50	4.75	3.25	8.00	1.37	1.25	2	4		

Note: All cutters supplied without inserts, wrench, & moly.

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS						FIG.	Q	INSERT	PARTS
		D	l1	ls	L	D1	Ds				Screw & Wrench
SSV-2025-60-S25	•	25	60	80	140	23	25	3	2	ZOMT1605**ZER-PM ZOET160508ZFR-NL	DSW-4075H T-15
SSV-2025-100-S25	•	25	100	80	180	23	25	3	2		
SSV-3030-70-S32	•	30	70	80	150	28	32	3	3		
SSV-3030-120-S32	•	30	120	80	200	28	32	3	3		
SSV-3032-70-S32	•	32	70	80	150	29	32	3	3		
SSV-3032-120-S32	•	32	120	80	200	29	32	3	3		
SSV-4040-50-S32	•	40	50	100	150	37	32	4	4		
SSV-4040-50L-S32	•	40	50	150	200	37	32	4	4		
SSV-5050-40-S32	•	50	40	110	150	47	32	4	5		

Note: All cutters supplied without inserts, wrench, & moly.

DIJET®

Face Milling | Shoulder Milling | Slotting | Helical Interpolation | Copy Milling | Pocket Milling

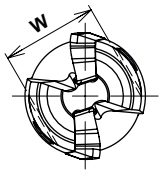
SIC-EVO

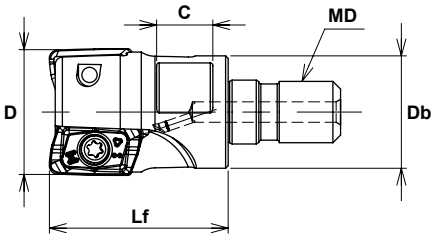
INCH METRIC

MODULAR HEADS

SSV type

With coolant hole





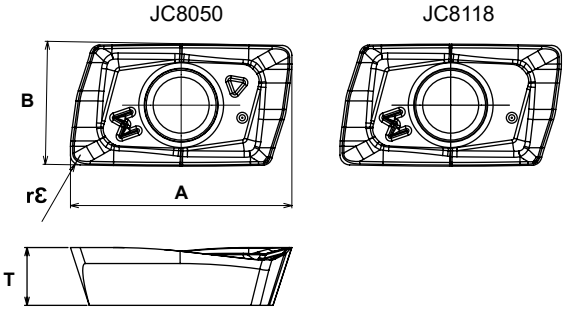
Specifications

	CATALOG NUMBER	STK	DIMENSIONS						Q	HEAD TORQUE	INSERT	PARTS
			D	Lf	Db	MD	C	W				Screw & Wrench
INCH	SSV-2100-M12	•	1.00	1.38	0.95	M12	11	19	2	14.7 lbs/ft	ZOMT1605**ZER-PM ZOET160508ZFR-NL	DSW-4075H T-15
INCH	SSV-3125-M16	•	1.25	1.69	1.10	M16	12	22	3	18.4 lbs/ft		
INCH	SSV-4150-M16	•	1.50	1.69	1.10	M16	12	22	4	18.4 lbs/ft		
METRIC	SSV-2025-M12	•	25	35	22	M12	11	19	2	20 Nm		
METRIC	SSV-2028-M12	•	28	35	22	M12	11	19	2	25 Nm		
METRIC	SSV-3030-M16	•	30	43	29	M16	12	22	3	25 Nm		
METRIC	SSV-3032-M16	•	32	43	29	M16	12	22	3	25Nm		
METRIC	SSV-3035-M16	•	35	43	29	M16	12	22	3	25Nm		
METRIC	SSV-4040-M16	•	40	43	29	M16	12	22	4	25Nm		

Note: Modular Head Holders on page 109.

Note: All cutters supplied without inserts, wrench, & moly.

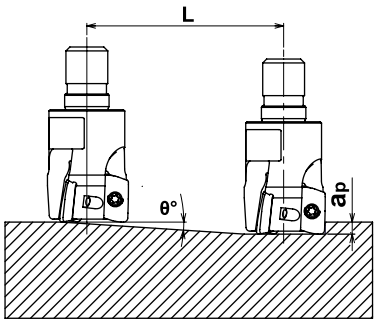
INSERTS



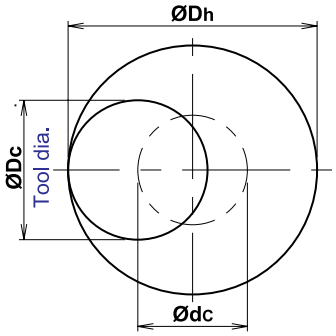
CATALOG NUMBER	TOLERANCE	DIMENSIONS				PVD COATED		UNCOATED
		A	B	T	rε	JC8050	JC8118	FC18
ZOMT160504ZER-PM	M	.709	.394	.185	.015	•	•	
ZOMT160508ZER-PM		.709	.394	.185	.031	•	•	
ZOMT160516ZER-PM		.709	.394	.185	.062	•	•	
ZOMT160520ZER-PM		.709	.394	.185	.078	•	•	
ZOMT160530ZER-PM		.709	.394	.185	.118	•	•	
ZOET160508ZFR-NL	E	.709	.394	.185	.062			•

Recommended Data for Profile Milling

Ramping



Helical Interpolation



- Calculation of tool pass dia.

Ødc = ØDh - ØDc

Tool pass dia. Bore dia. Tool Dia.

- Depth of cut per one circuit should not exceed max. doc ap.
- Down cutting is recommended, tool pass rotation should be counterclockwise.

- **In case of ramping and helical interpolation, apply 80% or less feed speed from standard cutting condition table.**
- **In case of drilling, apply 50% or less Z axis feed speed from standard cutting condition.**
- **In case of helical interpolation, recommend wet cutting by coolant through the tool.**
- **Long consecutive chips may come out in case of drilling, confirm safe operating conditions.**

TOOL DIAMETER (I)		EFFECTIVE CUTTING DIAMETER	RAMPING INFORMATION					HELICAL INTERPOLATION		MAX. DRILLING DEPTH
			MAX. RAMP ANGLE	MAX DEPTH OF CUT AP		TOTAL CUTTING LENGTH AT MAX AP: L		MIN. BORE DIAMETER: Dh min	MAX. BORE DIAMETER: Dh max	
				STEELS	ALUMINUM	STEELS	ALUMINUM			
INCH	1"	.988”-2xR	6.2°	.060"	.270"	.552”	2.485"	1.26”	1.968”-2xR	.055”
	1-1/4"	1.238”-2xR	4.4°			.780”	3.509"	1.76”	2.468”-2xR	
	1-1/2"	1.488”-2xR	3.8°			.903”	4.065"	2.26”	2.968”-2xR	
	2"	1.988”-2xR	2.4°			1.432”	6.442"	3.26”	3.968”-2xR	
	2-1/2"	2.488”-2xR	1.7°			2.022”	9.097"	4.26”	4.968”-2xR	
	3"	2.988”-2xR	1.3°			2.644”	11.898"	5.26”	5.968”-2xR	
	4"	3.988”-2xR	0.85°			4.044”	18.199"	7.26”	7.968”-2xR	
METRIC	25	24.7-2xR	6.2°	1.5	7	13.8	64.5	31	49.2-2xR	1.4
	28	27.7-2xR	5.3°			16.2	75.5	37	55.2-2xR	
	30	29.7-2xR	4.8°			17.9	83.4	41	59.2-2xR	
	32	31.7-2xR	4.4°			19.5	91	45	63.2-2xR	
	35	34.7-2xR	4.3°			19.9	93.1	51	69.2-2xR	
	40	39.7-2xR	3.6°			23.8	111.3	61	79.2-2xR	
	50	49.7-2xR	2.4°			35.8	167.1	81	99.2-2xR	
	63	62.7-2xR	1.7°			50.5	235.9	107	125.2-2xR	
	80	79.7-2xR	1.2°			71.6	334.2	141	159.2-2xR	
	100	99.7-2xR	0.9°			95.5	445.6	181	199.2-2xR	
	125	124.7-2xR	0.65°			132.2	617	231	249.2-2xR	

DIJET®

SIC-EVO

INCH METRIC

Recommended Cutting Data for SIC-EVO

Material	Grade	SFM	Parameters	Face Milling		Side Milling	
				Low HP	High HP	Low HP	High HP
Gray Cast Iron	JC8118 JC8050	830	IPT	.010”	.014”	.010”	.014”
			DOC	.140”	.216”	.400”	.590”
			WOC	70%	70%	up to 6% of D	
Nodular Cast Iron	JC8118 JC8050	500	IPT	.010”	.014”	.010”	.014”
			DOC	.080”	.160”	.400”	.590”
			WOC	70%	70%	up to 6% of D	
Carbon Steel	JC8118 JC8050	660	IPT	.010”	.014”	.010”	.014”
			DOC	.080”	.160”	.400”	.590”
			WOC	70%	70%	up to 6% of D	
Low Alloy Steel	JC8118 JC8050	600	IPT	.010”	.014”	.010”	.014”
			DOC	.080”	.160”	.400”	.590”
			WOC	60%	60%	up to 6% of D	
Mold Steel	JC8118 JC8050	500	IPT	.010”	.014”	.010”	.014”
			DOC	.080”	.160”	.400”	.590”
			WOC	60%	60%	up to 6% of D	
Tool & Die Steel	JC8118	600	IPT	.008”	.012”	.008”	.012”
			DOC	.080”	.120”	.400”	.590”
			WOC	60%	60%	up to 5% of D	
Hardened Die Steel (40-50HRC)	JC8118	330	IPT	.006”	.010”	.006”	.010”
			DOC	.040”	.100”	.400”	.590”
			WOC	60%	60%	up to 3% of D	
Stainless Steel (Austenitic)	JC8050	400	IPT	.007”	.011”	.007”	.011”
			DOC	.080”	.160”	.400”	.590”
			WOC	60%	60%	up to 6% of D	
Stainless Steel (Martensitic)	JC8118	600	IPT	.008”	.012”	.010”	.014”
			DOC	.080”	.160”	.400”	.590”
			WOC	60%	60%	up to 6% of D	
Aluminum	FC18	990	IPT	.012”	.016”	.012”	.016”
			DOC	.080”	.160”	.400”	.590”
			WOC	70%	70%	up to 8% of D	

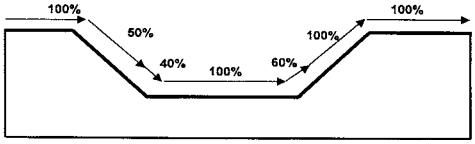
NOTE: 1. Above parameters should be adjusted according to the machine rigidity & work rigidity.
2. If chatter occurs, recommend to reduce DOC or spindle speed and maintain IPT.
3. If machine does not have enough power, recommend reducing DOC or spindle speed & feed.
4. Use air blow.
5. In case of slotting, reduce feed speed to 50%

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

Extreme SAP Series

High Efficient & High Precision Shoulder Milling

- True 90° square shoulder capable of leaving an excellent finish.
- Double sided insert has 4 cutting edges.
- Two insert sizes - ZNGU1105** & ZNGU1709**
- Insert ZNGU1105**, the smaller size insert, allows superior cutting performance with multi-blade tools and the accuracy of the tool diameter gives higher precision on semi-finish processes.
- Insert ZNGU1709**, the larger size insert, has a thickness of 7.5mm making it durable for aggressive roughing with a maximum depth of cut up to 15mm.
- Coolant thru bodies.

DIJET®

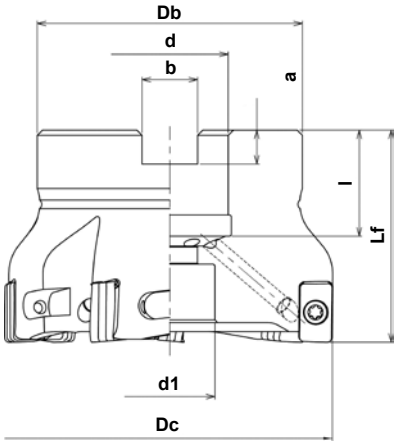
Face Milling | Shoulder Milling | Slotting | Helical Interpolation | Plunge Milling

Extreme SAP

INCH METRIC

Face Mill

EXSAP-11 type



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS								INSERT	Q	PARTS	
		Dc	Lf	Db	d	d1	a	b	l			Screw	Wrench
EXSAP-5200R-11-075	•	2.00	1.575	1.85	.750	.63	.196	.318	.75	ZNGU1105**ZER-**	5	TSW-307H	T-10
EXSAP-7200R-11-075	•	2.00	1.575	1.85	.750	.63	.196	.318	.75		7		
EXSAP-7250R-11-100	•	2.50	1.75	1.96	1.00	.787	.236	.374	.75		7		
EXSAP-8300R-11-100	•	3.00	1.75	2.21	1.00	.787	.236	.374	.75		8		

Note: All cutters supplied without inserts, wrench, & moly.

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS								ARBOR BOLT	Q	INSERT & PARTS
		Dc	Lf	Db	d	d1	a	b	l			
EXSAP-6040R-11-16	•	40	40	35	16	14	5.6	8.4	18	M8	6	ZNGU1105**ZER-** TSW-307H T-10
EXSAP-7050R-11-22	•	50	40	47	22	16.5	6.3	10.4	20	M10	7	
EXSAP-7052R-11-22	⊙	52	40	47	22	16.5	6.3	10.4	20	M10	7	
EXSAP-7063R-11-22	•	63	40	50	22	17	6.3	10.4	20	M10	7	
EXSAP-7063R-11-27	•	63	50	50	27	20	7	12.4	22	M12x1.75x30*	7	
EXSAP-8080R-11-27	⊙	80	50	56	27	20	7	12.4	22	M12x1.75x30*	7	

⊙ - delivery may be longer

Note: All cutters supplied without inserts, wrench, & moly.

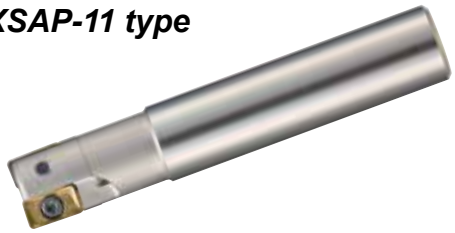
NOTE: Arbor bolt included with cutters marked with * under arbor bolt column.

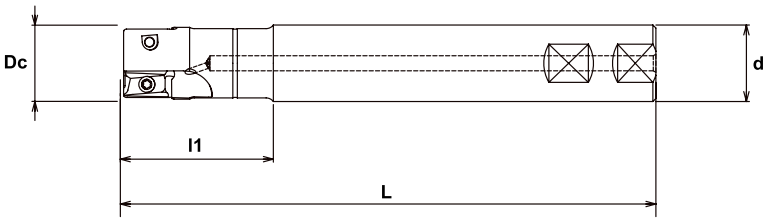
INCH METRIC

Extreme SAP

End Mill

EXSAP-11 type





Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS				FIG.	INSERT	Q	PARTS	
		Dc	L	l1	d				Screw	Wrench
EXSAP-2062-11-2.0-S062NP	•	.625	5.00	2.00	.625	1	ZNGU1105**ZER-**	2	TSW-307H	T-10
EXSAP-2062-11-3.0-S062NP	•	.625	6.25	3.00	.625	1		2		
EXSAP-3075-11-2.0-S075NP	•	.750	5.00	2.00	.750	1		3		
EXSAP-3075-11-3.0-S075NP	•	.750	6.25	3.00	.750	1		3		
EXSAP-3100-11-2.0-S100NP	•	1.00	7.00	2.00	1.00	1		3		
EXSAP-3100-11-3.0-S100NP	•	1.00	8.00	3.00	1.00	1		3		
EXSAP-4125-11-3.0-S125NP	•	1.25	8.00	3.00	1.25	1		4		
EXSAP-5150-11-3.0-S125NP	•	1.50	8.00	3.00	1.25	2		5		

Note: All cutters supplied without inserts, wrench, & moly.

Fig. 1

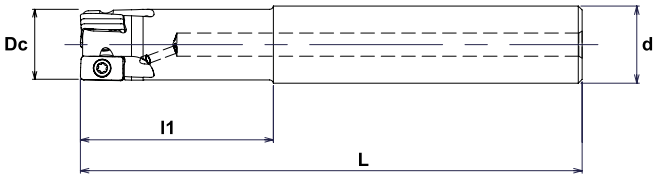
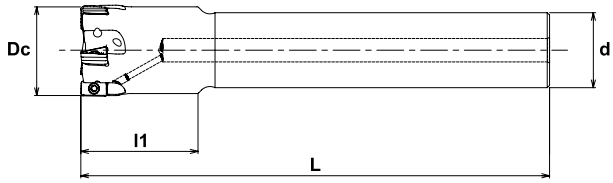


Fig. 2



Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS				FIG.	INSERT	Q	PARTS	
		Dc	L	l1	d				Screw	Wrench
EXSAP-2016-11-30-S16	•	16	90	30	16	1	ZNGU1105**ZER-**	2	TSW-307H	T-10
EXSAP-2016-11-50-S16	•	16	110	50	16	1		2		
EXSAP-3020-11-50-S20	•	20	130	50	20	1		3		
EXSAP-3020-11-80-S20	•	20	160	80	20	1		3		
EXSAP-3025-11-60-S25	•	25	140	60	25	1		3		
EXSAP-3025-11-100-S25	•	25	180	100	25	1		3		
EXSAP-4030-11-70-S32	•	30	150	70	32	1		4		
EXSAP-4030-11-120-S32	•	30	200	120	32	1		4		
EXSAP-4032-11-70-S32	•	32	150	70	32	1		4		
EXSAP-4032-11-120-S32	•	32	200	120	32	1		4		
EXSAP-5040-11-50-S32	•	40	150	50	32	2		5		
EXSAP-5040-11-50L-S32	•	40	200	50	32	2		5		

Note: All cutters supplied without inserts, wrench, & moly.

DIJET®

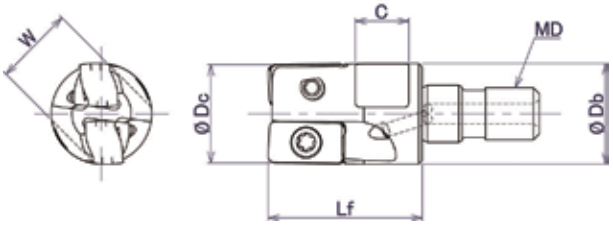
Face Milling | Shoulder Milling | Slotting | Helical Interpolation | Plunge Milling

Extreme SAP

INCH METRIC

Modular Heads / Inserts-11

MSX-11 type



Specifications

	CATALOG NUMBER	STK	DIMENSIONS						HEAD TORQUE LBS/FT	INSERT	Q	PARTS	
			Ø Dc	Lf	Ø Db	MD	C	W				Screw	Wrench
INCH	MSX-2062-11-M8	•	.625	.906	.590	M8	.315	.472	11.8	ZNGU1105**ZER-**	2	TSW-307H	T-10
	MSX-3075-11-M10	•	.750	1.18	.708	M10	.354	.551	11.8		3		
	MSX-3100-11-M12	•	1.00	1.38	.866	M12	.433	.748	14.7		3		
	MSX-4125-11-M16	•	1.25	1.69	1.14	M16	.472	.866	18.4		4		
	MSX-5150-11-M16	•	1.50	1.69	1.14	M16	.472	.866	18.4		5		
METRIC	MSX-2016-11-M8	•	16	23	15	M8	8	12	16Nm	ZNGU1105**ZER-**	2	TSW-307H	T-10
	MSX-2017-11-M8	•	17	23	15	M8	8	12	16Nm		2		
	MSX-2018-11-M8	•	18	23	15	M8	8	12	16Nm		2		
	MSX-3020-11-M10	•	20	30	18	M10	9	14	16Nm		3		
	MSX-3021-11-M10	•	21	30	18	M10	9	14	16Nm		3		
	MSX-3025-11-M12	•	25	35	22	M12	11	19	20Nm		3		
	MSX-3026-11-M12	•	26	35	22	M12	11	19	20Nm		3		
	MSX-3028-11-M12	•	28	35	22	M12	11	19	20Nm		3		
	MSX-4030-11-M16	•	30	43	29	M16	12	22	25Nm		4		
	MSX-4032-11-M16	•	32	43	29	M16	12	22	25Nm		4		
	MSX-4033-11-M16	•	33	43	29	M16	12	22	25Nm		4		
	MSX-4035-11-M16	•	35	43	29	M16	12	22	25Nm		4		
	MSX-5040-11-M16	•	40	43	29	M16	12	22	25Nm		5		

Note: Modular Head Holders on page 109.

Note: All cutters supplied without inserts, wrench, & moly.

INSERTS-11

Fig. 1

Fig. 1

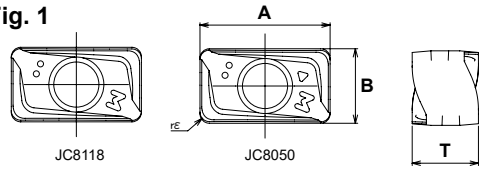
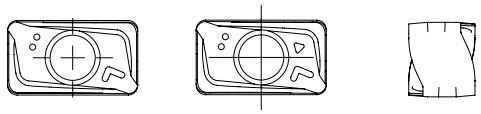


Fig. 2

JC7518, JC7550

DS118, DS150

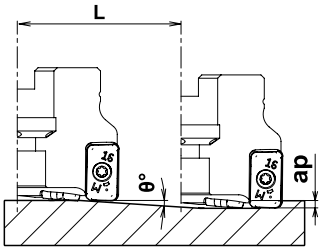
Fig. 2



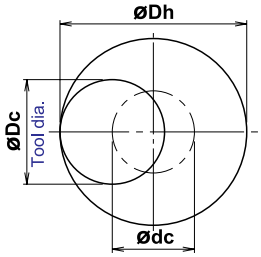
CATALOG NUMBER	TOLERANCE	DIMENSIONS (mm)				FIG.	PVD COATED					
		A	B	T	rε		JC8118	JC8050	JC7518	JC7550	DS118	DS150
ZNGU110504ZER-PM	G	11	6.3	5.6	0.4	1	•	•				
ZNGU110508ZER-PM					0.8	1	•	•				
ZNGU110516ZER-PM					1.6	1	•	•				
ZNGU110504ZER-SL					0.4	2			•	•	•	•
ZNGU110508ZER-SL					0.8	2			•	•	•	•
ZNGU110516ZER-SL					1.6	2			•	•	•	•

Recommended Data for Profile Milling with EXSAP-11

Ramping



Helical Interpolation



- Calculation of tool pass dia.

Ødc = ØDh - ØDc

Tool pass dia. Bore dia. Tool Dia.

- Depth of cut per one circuit should not exceed max. depth of cut ap.
- Down cutting is recommended. Tool pass rotation should be counterclockwise.

- **In case of ramping and helical interpolation, apply 80% or less feed (F) from standard cutting condition table.**
- **In case of helical interpolation, recommend wet cutting by coolant through the tool.**

	Tool Diameter	Max. Depth of Cut: AP	Ramping		Helical Interpolation	
			Max. Ramp Angle	Total Cutting Length at Max. AP: L	Min. Bore Diameter: Dh min	Max. Bore Diameter: Dh max
INCH EXSAP-11	⅝”	.060”	1°	3.43”	.700”	1.15”
	¾”		0.7°	4.91”	.950”	1.40”
	1”		0.4°	8.59”	1.45”	1.90”
	1-¼”		0.3°	11.46”	1.95”	2.40”
	1-½”		0.2°	17.19”	2.45”	2.90”
	2”		0.15°	22.92”	3.45”	3.90”
	2-½”		Not Recommended			
	3”					
METRIC EXSAP-11	16	1.5	1°	86	18	29.6
	20		0.7°	123	26	37.6
	25		0.4°	215	36	47.6
	30		0.3°	286	46	57.6
	32		0.3°	286	50	61.6
	40		0.2°	430	66	77.6
	50		0.15°	573	86	97.6
	52		0.15°	573	90	101.6
	63		Not Recommended			
	80					

DIJET®

Face Milling | Shoulder Milling | Slotting | Helical Interpolation | Plunge Milling

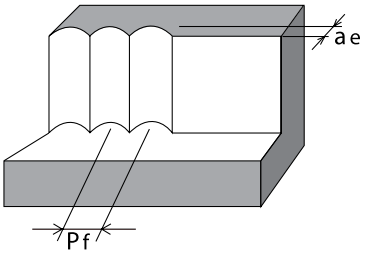
Extreme SAP

INCH METRIC

Recommended Cutting Data for EXSAP-11

Material / Insert	Insert Grade		Face Milling			Side Milling			Plunging (See diagram below)	
			Roughing		FINISH	Roughing		FINISH		
			Low HP	High HP		Low HP	High HP			
Gray Cast Iron ZNGU1105**PM	JC8118 (JC8050)	SFM	700	700	840	700	700	910	SFM	700
		IPT	.007”	.007”	.004”	.006”	.007”	.007”	IPT	.004”
		DOC	.060”	.100”	.006”	.180”	.270”	.100”	Ae	.200”
		WOC	70%	70%	70%	7%	5%	.008”	Pf	60%
Nodular Cast Iron ZNGU1105**PM	JC8118 (JC8050)	SFM	650	650	780	650	650	845	SFM	650
		IPT	.007”	.007%	.004”	.006”	.007”	.007”	IPT	.004”
		DOC	.060”	.100”	.006”	.180”	.270”	.100”	Ae	.200”
		WOC	70%	70%	70%	7%	5%	.008”	Pf	60%
Carbon Steel ZNGU1105**PM	JC8118 (JC8050)	SFM	600	600	720	600	600	780	SFM	600
		IPT	.007”	.007”	.004”	.006”	.007”	.007”	IPT	.004”
		DOC	.060”	.100”	.006”	.180”	.270”	.080”	Ae	.200”
		WOC	60%	60%	60%	7%	5%	.008”	Pf	60%
Low Alloy Steel ZNGU1105**PM	JC8118 (JC8050)	SFM	550	550	660	550	600	715	SFM	550
		IPT	.012”	.012”	.004”	.006”	.007”	.007”	IPT	.004%
		DOC	.060”	.100”	.006”	.180”	.270”	.080”	Ae	.200”
		WOC	60%	60%	60%	7%	5%	.006”	Pf	60%
Mold Steel ZNGU1105**PM	JC8050 (JC8118)	SFM	500	500	600	500	500	650	SFM	500
		IPT	.006”	.006”	.004”	.005”	.006”	.006”	IPT	.004”
		DOC	.050”	.080”	.006”	.180”	.270”	.080”	Ae	.160”
		WOC	60%	60%	60%	7%	5%	.006”	Pf	60%
Tool & Die Steel (40-50HRC) ZNGU1105**PM	JC8118 (JC8050)	SFM	400	400	480	400	400	520	SFM	400
		IPT	.005”	.005”	.003”	.004”	.005”	.005”	IPT	.004”
		DOC	.030”	.050”	.004”	.120”	.180”	.060”	Ae	.120”
		WOC	60%	60%	60%	5%	3%	.005”	Pf	40%
Hardened Die Steel (50-60HRC) ZNGU1105**PM	JC8118 (JC8050)	SFM	250	250	300	250	250	325	SFM	250
		IPT	.004”	.004”	.003”	.003”	.004”	.004”	IPT	.003”
		DOC	.040”	.060”	.004”	.080”	.120”	.040”	Ae	.100”
		WOC	20%	20%	20%	3%	2%	.004”	Pf	30%
Stainless Steel ZNGU1105**SL (ZNGU1105**PM)	JC7550, JC7518 (JC8050, JC8118)	SFM	300	300	360	300	300	390	SFM	300
		IPT	.007”	.007”	.004”	.005”	.006”	.006”	IPT	.004”
		DOC	.060”	.100”	.006”	.180”	.270”	.080”	Ae	.160”
		WOC	60%	60%	60%	7%	5%	.006”	Pf	60%
Titanium Alloy ZNGU1105**SL	DS150, JC7550 (DS118, JC7518)	SFM	200	200	240	200	200	260	SFM	200
		IPT	.005”	.005”	.003”	.004”	.005”	.005”	IPT	.003”
		DOC	.050”	.080”	.004”	.120”	.180”	.060”	Ae	.100”
		WOC	60%	60%	60%	5%	3%	.005”	Pf	30%

NOTE: 1. Above parameters should be adjusted according to machine & work rigidity.
2. If chatter occurs, recommend to reduce DOC or spindle speed and maintain IPT.
3. If machine does not have enough power, reduce DOC or spindle speed and feed.
4. Use air only.

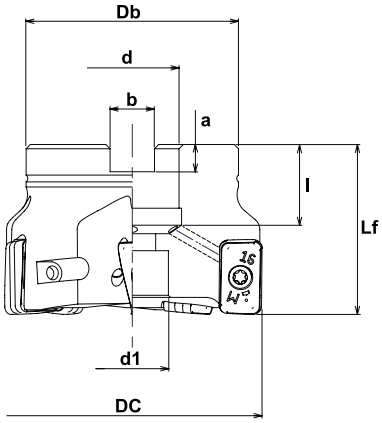


INCH METRIC

Extreme SAP

Face Mill
EXSAP-17 type

G-Body



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS								INSERT	Q	PARTS	
		Dc	Lf	Db	d	d1	a	b	l			Screw	Wrench
EXSAP-4200R-075	•	2.00	1.575	1.85	.750	.63	.196	.319	.750	ZNGU1709**ZER-**	4	TSW-410H	A-15T
EXSAP-5200R-075	•	2.00	1.575	1.85	.750	.63	.196	.319	.750		5		
EXSAP-5250R-100	•	2.50	1.77	1.96	1.00	.787	.236	.374	.750		5		
EXSAP-7300R-100	•	3.00	1.75	2.21	1.00	.787	.236	.374	.750		7		
EXSAP-8400R-150	•	4.00	2.25	3.78	1.50	1.18	.394	.626	1.00		8		
EXSAP-9600R-150*	•	6.00	2.25	3.94	1.50	2.36	.394	.626	1.41		9		

***Not coolant thru**

Note: All cutters supplied without inserts, wrench, & moly.

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS								ARBOR BOLT	Q	INSERT & PARTS
		Dc	Lf	Db	d	d1	a	b	l			
EXSAP-4050R-22	•	50	40	47	22	17	6.3	10.4	20	M10	4	ZNGU1709**ZER-** TSW-410H A-15T
EXSAP-5050R-22	•	50	40	47	22	17	6.3	10.4	20	M10	5	
EXSAP-5052R-22	⊙	52	40	47	22	17	6.3	10.4	20	M10	5	
EXSAP-5063R-22	•	63	40	50	22	17	6.3	10.4	20	M10	5	
EXSAP-7080R	•	80	50	56	25.4	20	6	9.5	24	M12x1.75x30*	7	
EXSAP-7080R-27	•	80	50	56	27	20	7	12.4	22	M12x1.75x30*	7	
EXSAP-7100R	•	100	63	85	31.75	26	8	12.7	32	M16x2x35*	7	
EXSAP-7100R-32	•	100	50	85	32	26	8	14.4	25	M16x2x25*	7	
EXSAP-8125R	•	125	70	100	38.1	32	10	15.9	38	M20x2.5x40*	8	
EXSAP-8125R-40	•	125	63	100	40	32	9	16.4	32	M20x2.5x40*	8	

⊙ - delivery may be longer

Note: All cutters supplied without inserts, wrench, & moly.

NOTE: 1. Arbor bolt included on cutters marked with * under arbor bolt column.
2. Body must be modified to 2mm radius or 1.5mm chamfer when using insert with 3.0mm corner radius.

DIJET®

Face Milling | Shoulder Milling | Slotting | Helical Interpolation | Plunge Milling

Extreme SAP

INCH METRIC

End Mills

EXSAP-17 type

G-Body

Fig. 1

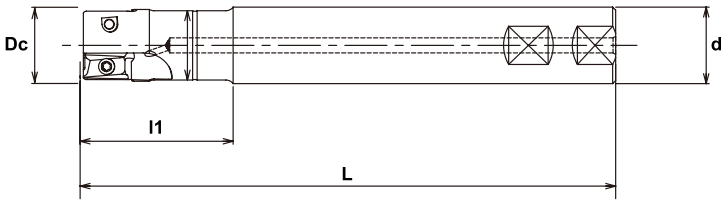
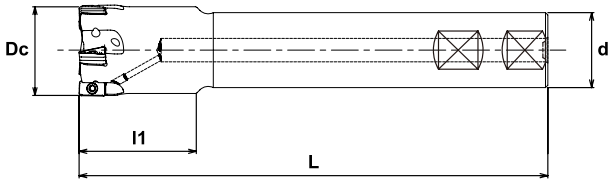


Fig. 2

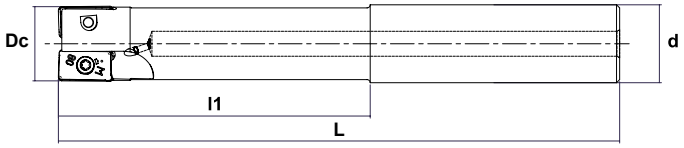


Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS				FIG.	INSERT	Q	PARTS	
		Dc	L	l1	d				Screw	Wrench
EXSAP-2100-2.0-S100LG	•	1.00	7.00	2.00	1.00	1	ZNGU1709**ZER-**	2	TSW-410H	T-15
EXSAP-2100-3.0-S100LG	•	1.00	8.00	3.00	1.00	1		2		
EXSAP-3125-3.0-S125LG	•	1.25	5.50	3.00	1.25	1		3		
EXSAP-3125-4.75-S125LG	•	1.25	8.00	4.75	1.25	1		3		
EXSAP-4150-3.0-S125LG	•	1.50	5.50	3.00	1.25	2		4		
EXSAP-4150-4.75-S125LG	•	1.50	8.00	4.75	1.25	2		4		

Note: Body must be modified to 2mm radius or 1.5mm chamfer when using insert with 3.0mm corner radius.

Note: All cutters supplied without inserts, wrench, & moly.



Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS				INSERT	Q	PARTS	
		Dc	L	l1	d			Screw	Wrench
EXSAP-2025-60-S25	•	25	140	60	25	ZNGU1709**ZER-**	2	TSW-410H	T-15
EXSAP-2025-100-S25	•	25	180	100	25		2		
EXSAP-2032-70-S32	•	32	150	70	32		2		
EXSAP-2032-120-S32	•	32	200	120	32		2		
EXSAP-3032-70-S32	•	32	150	70	32		3		
EXSAP-3032-120-S32	•	32	200	120	32		3		

Note: Body must be modified to 2mm radius or 1.5mm chamfer when using insert with 3.0mm corner radius.

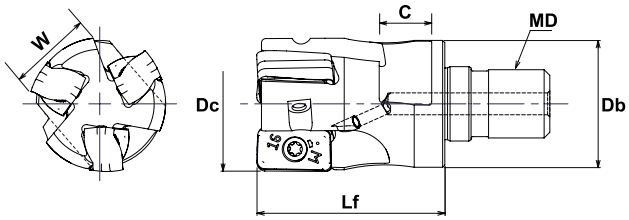
Note: All cutters supplied without inserts, wrench, & moly.

INCH METRIC

Extreme SAP

Modular Heads/Inserts-17
MSX-17 type

G-Body



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS						HEAD TORQUE LBS/FT	INSERT	Q	PARTS	
		ØDc	Lf	ØDb	MD	C	W				Screw	Wrench
MSX-2100-M12	•	1.00	1.38	.905	M12	.433	.748	14.7	ZNGU1709**ZER-**	2	TSW-410H	T-15
MSX-2125-M16	•	1.25	1.69	1.14	M16	.472	.866	18.4		2		
MSX-3125-M16	•	1.25	1.69	1.14	M16	.472	.866	18.4		3		
MSX-4150-M16	•	1.50	1.69	1.14	M16	.472	.866	18.4		4		

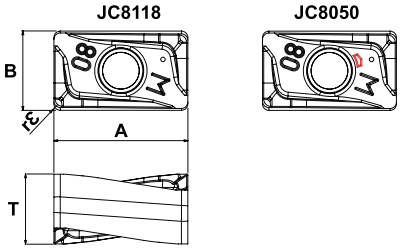
Note: Modular Head Holders on page 109. **Note: All cutters supplied without inserts, wrench, & moly.**

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS						HEAD TORQUE Nm	INSERT	Q	PARTS	
		ØDc	Lf	ØDb	MD	C	W				Screw	Wrench
MSX-2025-M12	•	25	35	22	M12	11	19	20	ZNGU1709**ZER-**	2	TSW-410H	T-15
MSX-2026-M12	•	26	35	22	M12	11	19	20		2		
MSX-2028-M12	•	28	35	22	M12	11	19	20		2		
MSX-2030-M16	•	30	43	29	M16	12	22	25		2		
MSX-2032-M16	•	32	43	29	M16	12	22	25		2		
MSX-3032-M16	•	32	43	29	M16	12	22	25		3		
MSX-3033-M16	•	33	43	29	M16	12	22	25		3		
MSX-3035-M16	•	35	43	29	M16	12	22	25		3		
MSX-4040-M16	•	40	43	29	M16	12	22	25		4		

Note: Modular Head Holders on page 109. **Note: All cutters supplied without inserts, wrench, & moly.**

INSERTS-17



CATALOG NUMBER	TOLERANCE	DIMENSIONS (mm)				PVD COATED	
		A	B	T	rε	JC8118	JC8050
ZNGU170904ZER-PM	G	16.9	10	8.8	0.4	•	•
ZNGU170908ZER-PM					0.8	•	•
ZNGU170916ZER-PM					1.6	•	•
ZNGU170920ZER-PM*					2	•	•
ZNGU170930ZER-PM*					3	•	•

***Note: Body must be modified to 2mm radius or 1.5mm chamfer when using insert with 3.0mm corner radius.**

DIJET®

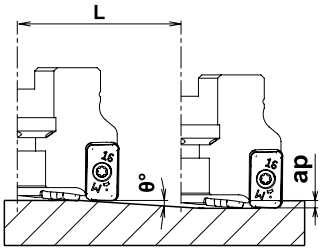
Face Milling | Shoulder Milling | Slotting | Helical Interpolation | Plunge Milling

Extreme SAP

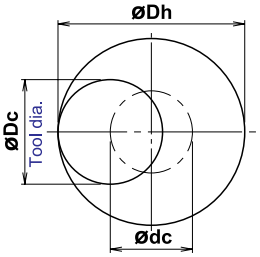
INCH METRIC

Recommended Data for Profile Milling with EXSAP-17

Ramping



Helical Interpolation



- Calculation of tool pass dia.

Ødc = ØDh - ØDc

Tool pass dia. Bore dia. Tool Dia.

- Depth of cut per one circuit should not exceed max. depth of cut ap.
- Down cutting is recommended. Tool pass rotation should be counterclockwise.

- **In case of ramping and helical interpolation, apply 80% or less feed (F) from standard cutting condition table.**
- **In case of helical interpolation, recommend wet cutting by coolant through the tool.**

	Tool Diameter	Max. Depth of Cut: AP	Ramping		Helical Interpolation	
			Max. Ramp Angle	Total Cutting Length at Max. AP: L	Min. Bore Diameter: Dh min	Max. Bore Diameter: Dh max
INCH EXSAP-17	1”	.060”	0.7°	4.83”	1.48”	1.85”
	1-¼”		0.5°	6.77”	1.98”	2.35”
	1-½”		0.4°	8.46”	2.48”	2.85”
	2”		0.3°	11.28”	3.48”	3.85”
	2-½”		0.2°	16.92”	4.48”	4.85”
	3”		0.18°	18.80	5.48”	5.85”
	4”		Not Recommended			
	6”					
METRIC EXSAP-17	25	1.5	0.7°	123	34	46
	26		0.7°	123	36	48
	28		0.6°	143	40	52
	30		0.6°	143	44	56
	32		0.5°	172	48	60
	33		0.5°	172	50	62
	35		0.4°	215	54	66
	40		0.4°	215	64	76
	50		0.3°	286	84	96
	52		0.3°	286	88	100
	63		0.2°	430	110	122
	80		0.15°	573	144	156
	100		Not Recommended			
	125					

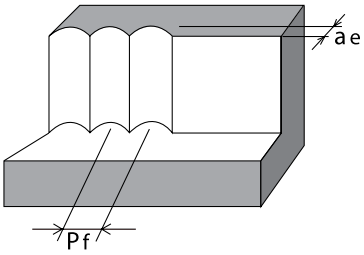
INCH METRIC

Extreme SAP

Recommended Cutting Data for EXSAP-17

Material	Grade		Face Milling			Side Milling			Plunging (See diagram below)	
			Roughing		FINISH	Roughing		FINISH		
			Low HP	High HP		Low HP	High HP			
Gray Cast Iron	JC8118 JC8050	SFM	700	700	840	700	700	910	SFM	700
		IPT	.012”	.012”	.005”	.010”	.012”	.010”	IPT	.004”
		DOC	.150”	.200”	.006”	.400”	.600”	.160”	Ae	.400”
		WOC	70%	70%	70%	7%	5%	.008”	Pf	60%
Nodular Cast Iron	JC8118 JC8050	SFM	650	650	780	650	650	845	SFM	650
		IPT	.012”	.012”	.005”	.010”	.012”	.010”	IPT	.004”
		DOC	.150”	.200”	.006”	.400”	.600”	.160”	Ae	.400”
		WOC	70%	70%	70%	7%	5%	.008”	Pf	60%
Carbon Steel	JC8118 JC8050	SFM	600	600	720	600	600	780	SFM	600
		IPT	.012”	012”	.005”	.010”	.012”	.010”	IPT	.004”
		DOC	.120”	.150”	.006”	.400”	.600”	.120”	Ae	.400”
		WOC	60%	60%	60%	7%	5%	.008”	Pf	60%
Low Alloy Steel	JC8118 JC8050	SFM	550	550	660	550	550	715	SFM	550
		IPT	.012”	.012”	.005”	.008”	.010”	.008”	IPT	.004”
		DOC	.120”	.150”	.006”	.400”	.600”	.120”	Ae	.400”
		WOC	60%	60%	60%	7%	5%	.006”	Pf	60%
Mold Steel	JC8050 JC8118	SFM	500	500	600	500	500	650	SFM	500
		IPT	.010”	.010”	.005”	.010”	.010”	.010”	IPT	.004”
		DOC	.120”	.150”	.006”	.400”	.600”	.120”	Ae	.320”
		WOC	60%	60%	60%	7%	5%	.006”	Pf	60%
Tool & Die Steel (40-50HRC)	JC8118 JC8050	SFM	400	400	480	400	400	520	SFM	400
		IPT	.010”	.010”	.005”	.006”	.008”	.006”	IPT	.004”
		DOC	.100”	.120”	.004”	.300”	.500”	.100”	Ae	.240”
		WOC	60%	60%	60%	5%	3%	.005”	Pf	40%
Hardened Die Steel (50-60HRC)	JC8118 JC8050	SFM	250	250	300	250	250	325	SFM	250
		IPT	.005”	.005”	.004”	.005”	.006”	.005”	IPT	.003”
		DOC	.040”	.060”	.004”	.200”	.300”	.060”	Ae	.200”
		WOC	20%	20%	20%	3%	2%	.004”	Pf	30%
Stainless Steel	JC8050 JC8118	SFM	300	300	360	300	300	390	SFM	300
		IPT	.008”	.008”	.005”	.006”	.008”	.006”	IPT	.004”
		DOC	.120”	.150”	.006”	.400”	.600”	.120”	Ae	.320”
		WOC	60%	60%	60%	7%	5%	.006”	Pf	60%
Titanium Alloy	JC8050 JC8118	SFM	200	200	240	200	200	260	SFM	200
		IPT	.005”	.005”	.004”	.004”	.005”	.004”	IPT	.004”
		DOC	.100”	.150”	.004”	.300”	.500”	.060”	Ae	.200”
		WOC	60%	60%	60%	5%	3%	.005”	Pf	30%

NOTE: 1. Above parameters should be adjusted according to machine & work rigidity.
2. If chatter occurs, recommend to reduce DOC or spindle speed and maintain IPT.
3. If machine does not have enough power, reduce DOC or spindle speed and feed.
4. Use air only.



Notes

Shoulder Six

Shoulder Milling with Double-Sided Insert

- Double-sided insert has 6 cutting edges.
- High rigidity insert with .295" thickness.
- Low cutting force shape with 3D chip breaker.
- Max depth of cut = .400".
- Arc geometry on periphery cutting edge allows high efficient & high precision machining on vertical walls.
- Positive axial rake due to the unique 3D insert.

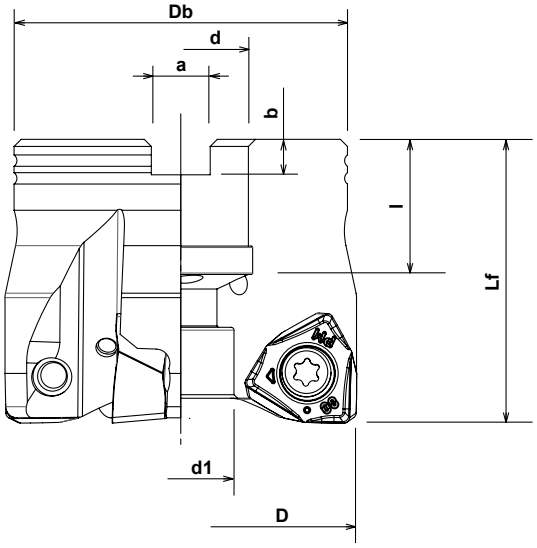
DIJET®

Face Milling | Shoulder Milling | Slotting | Plunge Milling

Shoulder Six

INCH

FACE MILL
EXSIX Type



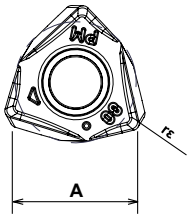
Specifications - Inch

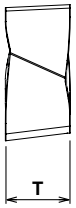
CATALOG NUMBER	STK	DIMENSIONS								INSERT	Q	PARTS	
		D	Lf	Db	d	d1	a	b	l			Screw	Wrench
EXSIX-4200R-075	•	2.00	1.575	1.85	.750	.590	.319	.197	.750	YCMU090708ZER-PM YCMU090716ZER-PM	4	CSW-513H	A-20
EXSIX-5250R-075	•	2.50	1.575	1.97	.750	.630	.319	.197	.750		5		
EXSIX-6300R-100	•	3.00	1.75	2.20	1.00	.787	.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

Note: All cutters supplied without inserts, wrench, & moly.

INSERTS





Insert Specifications

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

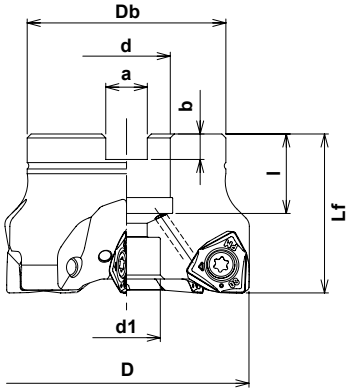
METRIC

Shoulder Six

FACE MILL
EXSIX Type

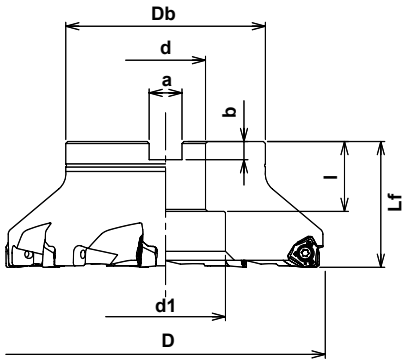
With Coolant Through

Fig. 1



Without Coolant Through

Fig. 2



Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS								ARBOR BOLT	Q	FIG.	INSERT & PARTS
		D	Lf	Db	d	d1	a	b	l				
EXSIX-4050R-22	•	50	40	47	22	14	10.4	6.3	20	M10X1.5X25*	4	1	YCMU090708ZER-PM YCMU090716ZER-PM CSW-513H A-20
EXSIX-4052R-22	⊙	52	40	47	22	14	10.4	6.3	20	M10X1.5X25*	4	1	
EXSIX-5063R-22	•	63	40	50	22	17	10.4	6.3	20	M10	5	1	
EXSIX-5066R-22	⊙	66	40	50	22	17	10.4	6.3	20	M10	5	1	
EXSIX-6080R	•	80	50	56	25.4	20	9.5	6	24	M12X1.75X30*	6	1	
EXSIX-6080R-27	•	80	50	56	27	20	12.4	7	22	M12X1.75X30*	6	1	
EXSIX-7100R	•	100	63	85	31.75	26	12.7	8	32	M16X2X40*	7	1	
EXSIX-7100R-32	•	100	50	85	32	26	14.4	8	25	M16X2X30*	7	1	
EXSIX-8125R	•	125	70	100	38.1	32	15.9	10	38	M20X2.5X40*	8	1	
EXSIX-8125R-40	•	125	63	100	40	32	16.4	9	32	M20X2.5X40*	8	1	
EXSIX-9160R	•	160	63	100	50.8	85	19	11	38	M24	9	2	
EXSIX-9160R-40	•	160	63	100	40	60	16.4	9	35	M20	9	2	

⊙ - delivery may be longer

Note: All cutters are supplied without inserts, wrench or moly.

NOTES:

1. Arbor bolt included on cutters marked with * under arbor bolt colums.
All other cutters use bolt supplied with arbor.

DIJET®

Face Milling | Shoulder Milling | Slotting | Plunge Milling

Shoulder Six

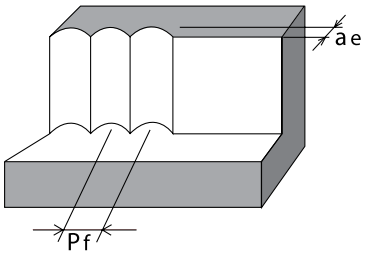
INCH METRIC

Recommended Cutting Data for EXSIX

Material	Grade	Side Milling				Face Milling			
		SFM	IPT	DOC	WOC	SFM	IPT	DOC	WOC
Gray Cast Iron	JC8118 JC8050	700	.012”	.320”	up tp 6% Dc	600	.012”	.240”	80%
Nodular Cast Iron	JC8118 JC8050	650	.012”	.320”	up to 5% Dc	550	.012”	.160”	80%
Carbon Steel	JC8118 JC8050	600	.012”	.320”	up to 5% Dc	500	.012”	.160”	80%
Low Alloy Steel	JC8118 JC8050	550	.012”	.320”	up to 5% Dc	450	.012”	.160”	80%
Mold Steel	JC8118 JC8050	500	.010”	.320”	up to 4% Dc	400	.010”	.160”	80%
Tool & Die Steel (40-50 HRC)	JC8118	400	.006”	.320”	up to 3% Dc	300	.006”	.100”	60%
Hardened Die Steel (50-60 HRC)	JC8118	300	.006”	.250”	up to 2.5% Dc	250	.006”	.080”	40%
Stainless Steel (Austenitic)	JC8050 JC8118	450	.010”	.320”	up to 5% Dc	300	.010”	.160”	60%
Stainless Steel (Martensitic)	JC8118 JC8050	500	.012”	.320”	up to 5% Dc	400	.012”	.160”	60%

Recommended Cutting Data for Plunge Milling

Material	Grade	SFM	IPT	Ae (Radial DOC)	PF (Pick Feed)
Gray Cast Iron	JC8118 JC8050	700	.012”	0 ~ .200”	up to 50% Dc
Nodular Cast Iron	JC8118 JC8050	650	.012”	0 ~ .200”	up to 50% Dc
Carbon Steel	JC8118 JC8050	600	.010”	0 ~ .200”	up to 50% Dc
Low Alloy Steel	JC8118 JC8050	550	.008”	0 ~ .200”	up to 50% Dc
Mold Steel	JC8118 JC8050	500	.006”	0 ~ .200”	up to 50% Dc
Tool & Die Steel (40-50 HRC)	JC8118	400	.004”	0 ~ .200”	up to 50% Dc
Hardened Die Steel (50-60 HRC)	JC8118	250	.004”	0 ~ .200”	up to 20% Dc
Stainless Steel (Austenitic)	JC8050 JC8118	450	.006”	0 ~ .200”	up to 50% Dc
Stainless Steel (Martensitic)	JC8118 JC8050	500	.008”	0 ~ .200”	up to 50% Dc



NOTE: 1. Above parameters should be adjusted according to the machine rigidity & work rigidity.
2. If chatter occurs, recommend to reduce DOC or spindle speed and maintain IPT.
3. If machine does not have enough power, recommend reducing DOC or spindle speed and feed.
4. Use air only.

Aero-Chipper

High Precision & High Efficient Machining on Aerospace Tooling

Aerospace Tooling

- High precision true 90 degree shoulder milling with ground insert capable of roughing and finishing.
- Sharp, uncoated grade FZ05 for aluminum and grade JC5118 for abrasive aluminum.
- Nine different corner radius available.
- Key in inserts gives added security allowing high velocity revolution specifications.
- Coolant thru bodies available in G-Body or NP body.

DIJET®

Shoulder Milling | Slotting | Pocket Milling | Copy Milling | Helical Interpolation

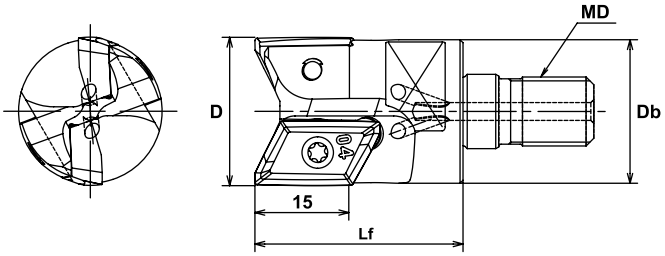
Aero-Chipper

INCH METRIC

MODULAR HEADS

MAL Type

G-Body



Modular Head Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS				HEAD TORQUE		INSERT	Q	PARTS	
		D	Lf	Db	MD	Nm	lbs/ft			Screw	Wrench
MAL-1075-M10LG	•	.750	1.38	.728	M10	16	11.8	XOGT1605**PD*R	1	DSW-4075H	T-15
MAL-2100-M12	•	1.00	1.38	.945	M12	20	14.7		2	DSW-4085	
MAL-2125-M16LG	•	1.25	1.69	1.14	M16	25	18.4		2		
MAL-3150-M16	•	1.50	1.69	1.25	M16	25	18.4		3		

Note: Modular Head Holders on page 109.

Note: All cutters supplied without inserts, wrench, & moly.

Modular Head Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS				HEAD TORQUE		INSERT	Q	PARTS	
		D	Lf	Db	MD	Nm	lbs/ft			Screw	Wrench
MAL-1020-M10	•	20	35	19.5	M10	16	11.8	XOGT1605**PD*R	1	DSW-4075H	T-15
MAL-2025-M12	•	25	35	24	M12	20	14.7		2	DSW-4085	
MAL-2028-M12	•	28	35	24	M12	20	14.7		2		
MAL-2030-M16	•	30	43	28	M16	25	18.4		2		
MAL-2032-M16	•	32	43	29	M16	25	18.4		2		
MAL-2035-M16	•	35	43	29	M16	25	18.4		2		
MAL-3040-M16	•	40	43	32	M16	25	18.4		3		

Note: Modular Head Holders on page 109.

Note: All cutters supplied without inserts, wrench, & moly.

INCH METRIC

Aero-Chipper

END MILLS
ALX Type

G-Body

Fig. 1

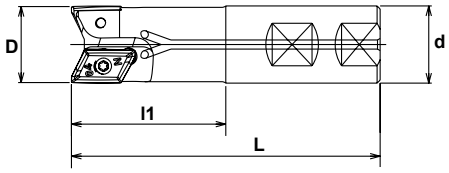
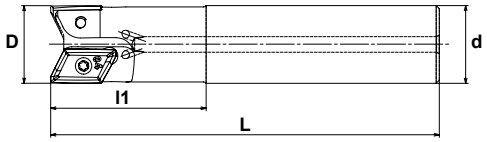


Fig. 2



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS				FIG.	INSERT	Q	PARTS	
		D	l1	L	d				Screw	Wrench
ALX-1075-2.0-S075LG	•	.750	2.0	4.0	.750	1	XOGT1605**PD*R	1	DSW-4075H	T-15
ALX-2100-2.0-S100LG	•	1.00	2.0	4.0	1.00	1		2	DSW-4085	
ALX-2100-4.0-S100LG	•	1.00	4.0	6.0	1.00	1		2		
ALX-2125-2.0-S125LG	•	1.25	2.0	4.0	1.25	1		2		
ALX-2125-4.0-S125LG	•	1.25	4.0	6.0	1.25	1		2		

Note: All cutters supplied without inserts, wrench, & moly.

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS				FIG.	INSERT	Q	PARTS	
		D	l1	L	d				Screw	Wrench
ALXM1020S20	•	20	35	110	20	2	XOGT1605**PD*R	1	DSW-4075H	T-15
ALXM2025S25	•	25	50	125	25	2		2	DSW-4085	
ALXM2028S25	•	28	50	125	25	2		2		
ALXM2032S32	•	32	50	150	32	2		2		
ALXM2035S32	•	35	50	150	32	2		2		
ALXM3040S32	•	40	80	170	32	2		3		

Note: All cutters supplied without inserts, wrench, & moly.

DIJET®

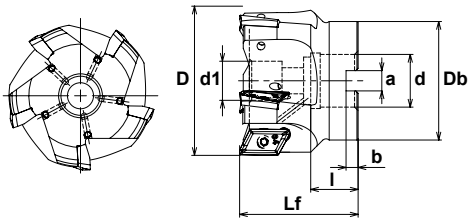
Shoulder Milling | Slotting | Pocket Milling | Copy Milling | Helical Interpolation

Aero-Chipper

INCH METRIC

FACE MILL
ALX type

Fig. 1



G-Body Specifications - Inch

G-Body

CATALOG NUMBER	STK	DIMENSIONS								FIG.	INSERT	Q	PARTS	
		D	Lf	Db	d	d1	a	b	l				Screw	Wrench
ALX-3200-75R-15	•	2.00	2.0	1.85	.750	.63	.319	.197	.75	1	XOGT1605**PD*R	3	DSW-4085	T-15
ALX-4200-75R-16LG	•	2.00	2.0	1.85	.750	.63	.319	.197	.75	1		4		
ALX-5300-100R-16LG	•	3.00	2.0	2.28	1.00	.827	.374	.236	.75	1		5		
ALX-5300-125R-15	•	3.00	2.5	2.85	1.25	1.02	.500	.315	1.25	1		5		

Note: All cutters supplied without inserts, wrench, & moly.

NP Body Specifications - Inch & Metric

	CATALOG NUMBER	STK	DIMENSIONS								FIG.	INSERT	Q	PARTS	
			D	Lf	Db	d	d1	a	b	l				Screw	Wrench
INCH	ALX-3200-75R-16NP-DD	•	2.00	2.0	1.85	.750	.63	.319	.197	.75	1	XOGT1605**PD*R	3	DSW-4085	T-15
	ALX-4200-75R-16NP	•	2.00	2.0	1.85	.750	.63	.319	.197	.75	1		4		
	ALX-3250-100R-16NP	•	2.50	2.0	2.28	1.00	.78	.374	.236	.75	1		3		
	ALX-4300-100R-16NP	•	3.00	2.0	2.28	1.00	.78	.374	.236	.75	1		4		
	ALX-4300-125R-16NP	•	3.00	2.5	2.83	1.25	1.02	.500	.315	1.25	1		4		
	ALX-5400-150R-16NP	•	4.00	2.75	3.78	1.50	1.26	.626	.393	1.41	1		5		
MM	ALX-3052R-22-16NP	•	52	50	47	22	16.5	10.4	6.3	20	1	XOGT1605**PD*R	3	DSW-4085	T-15
	ALX-7160R-200-16NP	•	160	70	100	50.8	72	19	11	43	1		7		

Note: All cutters supplied without inserts, wrench, & moly.

G-Body Specifications - Metric

G-Body

CATALOG NUMBER	STK	DIMENSIONS								FIG.	INSERT	Q	PARTS	
		D	Lf	Db	d	d1	a	b	l				Screw	Wrench
ALX-4050R	•	50	50	45	22.225	16.5	8.4	5	20	1	XOGT1605**PD*R	4	DSW-4085	T15
ALX-4050R-22	•	50	50	45	22	16.5	10.4	6.3	20	1		4		
ALX-5063R	•	63	50	50	22.225	16.5	8.4	5	20	1		5		
ALX-5063R-22	•	63	50	50	22	16.5	10.4	6.3	20	1		5		

Note: All cutters supplied without inserts, wrench, & moly.

INCH METRIC

Aero-Chipper

INSERTS

Fig. 1

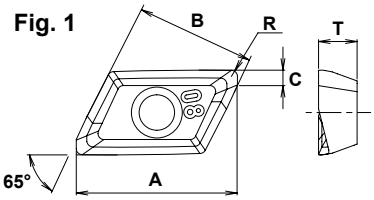
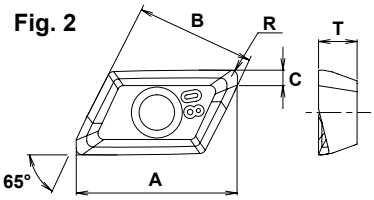


Fig. 2



Insert Specifications

CATALOG NUMBER	TOLERANCE	FIG.	DIMENSIONS					PVD Coated	
			A	B	C	T	R	UNCOATED FZ05	PVD COATED JC5118
XOGT160502PDFR	G	1	20.8	16.35	2.5	5	0.2	•	
XOGT160504PDFR	G	1	21.0	16.35	2.4	5	0.4	•	
XOGT160508PDFR	G	1	20.9	16.35	2.4	5	0.8	•	
XOGT160512PDFR	G	1	20.8	16.35	2.5	5	1.2	•	
XOGT160516PDFR	G	1	20.7	16.35	2.6	5	1.6	•	
XOGT160520PDFR	G	1	20.4	16.35	2.8	5	2.0	•	
XOGT160525PDFR	G	1	20.3	16.35	3.0	5	2.5	•	
XOGT160530PDFR*	G	1	19.8	16.35	3.3	5	3.0	•	
XOGT160532PDFR*	G	1	19.6	16.35	3.5	5	3.2	•	
XOGT160502PDER	G	2	20.8	16.35	2.5	5	0.2		•
XOGT160504PDER	G	2	21.1	16.35	2.4	5	0.4		•
XOGT160508PDER	G	2	20.9	16.35	2.4	5	0.8		•
XOGT160512PDER	G	2	20.8	16.35	2.5	5	1.2		•
XOGT160516PDER	G	2	20.7	16.35	2.6	5	1.6		•
XOGT160520PDER	G	2	20.4	16.35	2.8	5	2.0		•
XOGT160530PDER*	G	2	19.8	16.35	3.3	5	3.0		•
XOGT160532PDER*	G	2	19.6	16.35	3.5	5	3.2		•

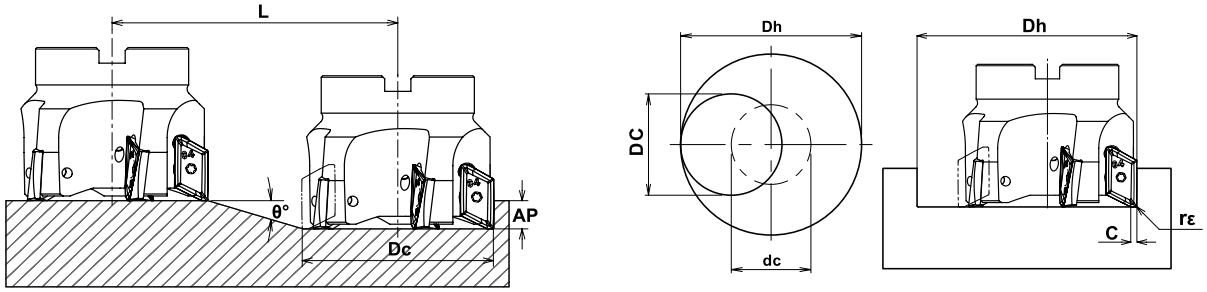
*** Note: Body must be modified to .059" radius or .047" chamfer at corner to use these inserts.**

DIJET®

Aero-Chipper

INCH METRIC

Recommended Cutting Data for Profile Milling



- Down cutting is recommended, tool pass rotation should be counterclockwise.
- Depth of cut per one circuit should not exceed max. depth of cut Ap.
- In case of ramping and helical interpolation, apply 70% or less feed (F) from standard cutting condition table.

	CATALOG NUMBER	Tool Diameter (Dc)	Effective Cutting Diameter	Max. Depth of Cut: AP	Ramping		Helical Interpolation	
					Max. Ramp Angle	Total Cutting Length at Max. AP: L	Min. Bore Diameter: Dh min	Max. Bore Diameter: Dh max
INCH	MAL-1075-M10/ALX-1075*	3/4”	.75” - 2xR	.157”	16°	.547”	1.33"	1.45"
	MAL-2100-M12/ALX-2100*	1”	1” - 2xR	.157”	11°	.808”	1.84"	1.95"
	MAL-2125-M16/ALX-2125*	1-1/4”	1.25” - 2xR	.157”	7°	1.279”	2.34"	2.45"
	MAL-3150-M16	1-1/2”	1.5” - 2xR	.157”	5°	1.794”	2.84"	2.95"
	ALX-*200*	2”	2” - 2xR	.157”	4°	2.245”	3.87"	3.95"
	ALX-3250-100R-16NP	2-1/2”	2.5” - 2xR	.157”	3°	2.996”	4.87"	4.95"
	ALX-*300*	3”	3” - 2xR	.157”	2.5°	3.596”	5.87"	5.95"
	ALX-5400-150R-16NP	4”	4” - 2xR	.157”	2°	4.496”	7.87"	7.95"
METRIC	MAL-1020-M10/ALXM1020*	20	20 - 2xR	4	16°	14	35.8	38.6
	MAL-2025-M12/ALXM2025*	25	25 - 2xR	4	11°	21	45.8	48.6
	MAL-2028-M12/ALX2028*	28	28 - 2xR	4	9°	26	51.8	54.6
	MAL-2030-M16	30	30 - 2XR	4	8°	29	55.8	58.6
	MAL-2032-M16/ALXM2032*	32	32 - 2xR	4	7°	33	59.8	62.6
	MAL-2035-M16/ALXM2035*	35	35 - 2xR	4	6°	38	65.8	68.6
	MAL-3040-M16/ALXM3040*	40	40 - 2xR	4	5°	46	75.8	78.6
	ALX-4050R-*	50	50 - 2xR	4	4°	57	96.8	98.6
	ALX-3052-100R-16NP	52	52 - 2xR	4	3.5°	65	100.8	102.6
	ALX-5063R-*	63	63 - 2xR	4	3°	77	122.8	124.6
	ALX-7160R-200-16NP	160	160 - 2xR	4	1.5°	153	316.8	318.6

INCH METRIC

Aero-Chipper

Recommended Cutting Data for Aero-Chipper

Material	Grade	SFM	IPT	DOC	WOC
Aluminum	FZ05	1500 - 4000	.015” - .025”	.060” - .120”	60%
Kirksite	JC5118	1000 - 1500	.020”	.060” - .120”	60%
Plastics (free machining)	FZ05	500 - 1000	.010” - .020”	.040” - .100”	60%

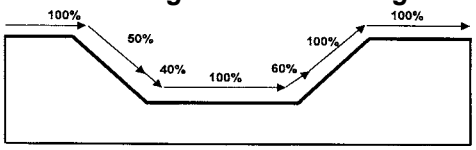
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

Notes

SSD90

Multi-purpose 90º Face Mill

- Economical shoulder milling cutter with true 90 degree.
- M class insert with 4 cutting edges and 3D geometry.
- Carbide shim prevents body damage.
- Wide application for cast iron, general steel and hardened steel.

DIJET®

Face Milling | Shoulder Milling

SSD90 Cutter

METRIC

FACE MILL

SSD90 Type

- *Multi-purpose 90º face mill.*

Entering Angle : 90º	A.R. : +10º
	R.R. : -9º ~ -11º

Fig. 1

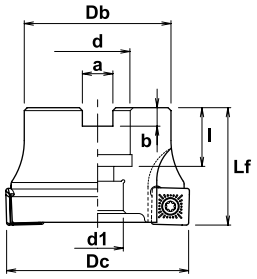
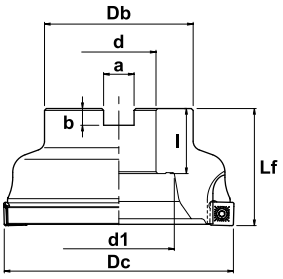


Fig. 2



Specifications

CATALOG NUMBER	STK	DIMENSIONS								FIG.	INSERT	Q	PARTS	
		Dc	Db	Lf	d	d1	a	b	l				Insert Screw / Wrench	Shim Seat / Shim Screw / Wrench
SSD90-4050R	•	50	41	40	22.225	17	8.4	5	20	1	SDMT1204PDER SDHW1204PDTR	4	TSW-3512H A-15T	SM-SD12 SSW-535 LW-035
SSD90-4050R-22	•	50	46	40	22	17	10.4	6.3	20	1		4		
SSD90-5063R	•	63	50	40	22.225	17	8.4	5	20	1		5		
SSD90-5063R-22	•	63	50	40	22	17	10.4	6.3	20	1		5		
SSD90-6080R	•	80	60	50	25.4	37	9.5	6	24	1		6		
SSD90-6080R-27	•	80	60	50	27	37	12.4	7	22	1		6		
SSD90-8100R	•	100	70	50	31.75	43	12.7	8	32	2		8		
SSD90-8100R-32	•	100	70	50	32	43	14.4	8	32	2		8		
SSD90-10125R	•	125	80	63	38.1	57	15.9	10	35	2		10		
SSD90-10125R-40	•	125	80	63	40	57	16.4	9	35	2		10		
SSD90-12160R	•	160	100	63	50.8	68	19	11	38	2		12		

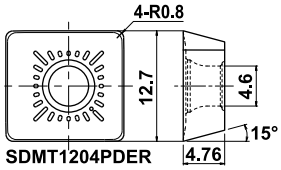
Note: All cutters supplied without inserts, wrench, & moly.

METRIC

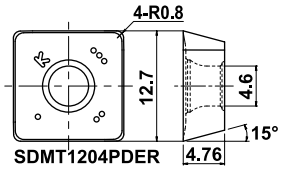
SSD90 Cutter

INSERT

Fig.1

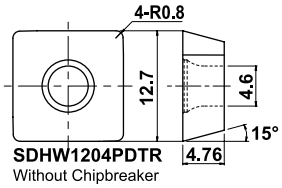


SDMT1204PDER
With Chipbreaker
(Grade: JC8050, JC5040)



SDMT1204PDER
With Chipbreaker
(Grade: JC8015)

Fig.2



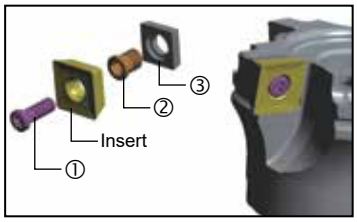
SDHW1204PDTR
Without Chipbreaker
(Grade: JC8015)

Specifications

CATALOG NUMBER	TOLERANCE	FIG.	PVD COATED			
			DH111	JC8015	JC8050	JC5040
SDMT1204PDER	M	1	•	•	•	•
SDHW1204PDTR	H	2		•		

Parts

Clamp Screw	Shim Screw	Shim	Wrench	Wrench for Shim
①	②	③		
TSW-3512H	SSW-535	SM-SD12	A-15T	LW-035



DIJET®

Face Milling | Shoulder Milling

SSD90 Cutter

METRIC

Recommended Cutting Data for SDD90

Material	Grade	Parameters	Face Milling	Side Milling
Gray Cast Iron	DH111 JC8015	SFM	650	650
		IPT	.010”	.015”
		DOC	.060”	.200”
		WOC	70%	20%
Nodular Cast Iron	DH111 JC8015	SFM	600	600
		IPT	.010”	.015”
		DOC	.060”	.200”
		WOC	70%	20%
Carbon Steel	JC5040 JC8050	SFM	550	550
		IPT	.008”	.015”
		DOC	.050”	.200”
		WOC	70%	20%
Low Alloy Steel	JC5040 JC8050	SFM	500	500
		IPT	.008”	.012”
		DOC	.050”	.200”
		WOC	60%	20%
Mold Steel	JC5040 JC8015	SFM	500	500
		IPT	.006”	.012”
		DOC	.040”	.200”
		WOC	60%	20%
Tool & Die Steel (40-50 HRC)	JC8015 JC5040	SFM	400	400
		IPT	.006”	.010”
		DOC	.020”	.200”
		WOC	60%	10%
Stainless Steel	JC8050 JC8015	SFM	300	300
		IPT	.006”	.012”
		DOC	.040”	.160”
		WOC	60%	20%

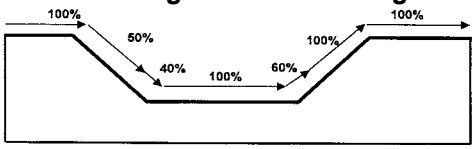
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

SSE45 Cutter

For General Use and Face Milling

- Wide application for cast iron, general steel, hardened steel and aluminum.
- Carbide shim prevents body damage and improves security in case of insert breakage.
- High precision face run out, improved surface finish and tool life.
- Wiper insert available for excellent surface roughness.

DIJET®

Face Milling

SSE45 Cutter

METRIC

FACE MILL
SSE45 Type

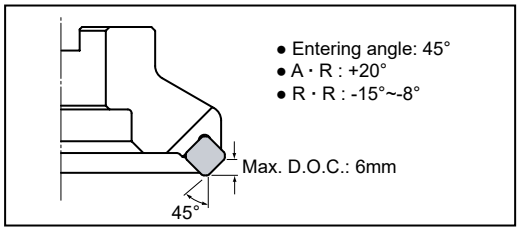


Fig. 1

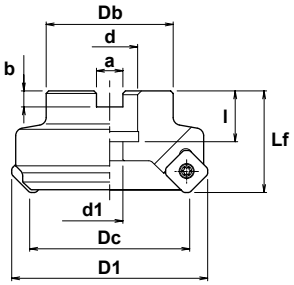


Fig. 2

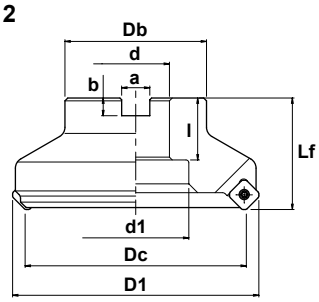
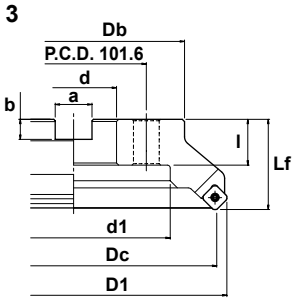


Fig. 3



Specifications

CATALOG NUMBER	STK	DIMENSIONS									FIG.	INSERT	Q	PARTS	
		Dc	D1	Db	Lf	d	d1	a	b	l				Insert Screw/ Wrench	Shim Seat/ Shim Screw/ Wrench
SSE45-4050R-22	•	50	63	45	40	22	10.4	10.4	6.3	20	1	SEMT13T3AGSN-** SEGT13T3AGFN-AL XEHW13T3AFSN-W	4	TSW-3512H A-15T	SM-SE13 SSW-535 LW-035
SSE45-5050R-22	•	50	63	45	40	22	10.4	10.4	6.3	20	1		5		
SSE45-5063R-22	•	63	76.1	50	40	22	10.4	10.4	6.3	20	1		5		
SSE45-6063R-22	•	63	76.1	50	40	22	10.4	10.4	6.3	20	1		6		
SSE45-4080R	•	80	93.1	56	50	25.4	38	9.5	6	26	2		4		
SSE45-6080R-27	•	80	93.1	56	50	27	13.5	12.4	7	22	1		6		
SSE45-8080R-27	•	80	93.1	56	50	27	13.5	12.4	7	22	1		8		
SSE45-5100R	•	100	113.3	70	50	31.75	45	12.7	8	32	2		5		
SSE45-7100R-32	•	100	113.3	70	50	32	17.5	14.4	8	25	1		7		
SSE45-10100R-32	•	100	113.3	70	50	32	17.5	14.4	8	25	1		10		
SSE45-6125R	•	125	138.3	80	63	38.1	60	15.9	10	35	2		6		
SSE45-8125R-40	•	125	139.3	80	63	40	60	16.4	9	32	2		8		
SSE45-12125R-40	•	125	138.3	80	63	40	60	16.4	9	32	2		12		
SSE45-7160R	•	160	173.3	100	63	50.8	90	19	11	38	2		7		
SSE45-8200R	•	200	213.3	175	63	47.625	140	25.4	14.3	35	3		8		

Note: All cutters supplied without inserts, wrench, & moly.

METRIC

SSE45 Cutter

INSERTS

Fig. 1

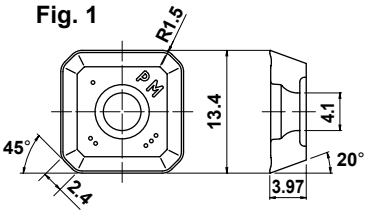


Fig. 1

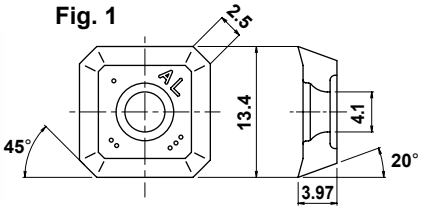
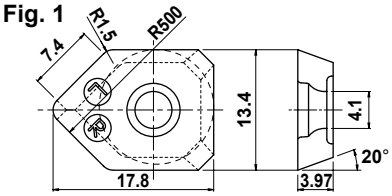


Fig. 1

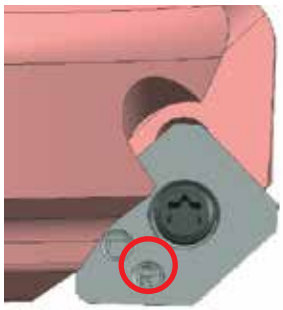


In case of finishing if feed per revolution is over 2mm, recommend using wiper insert, XHEW13T3AGSN-W.

Specifications

CATALOG NUMBER	TOLERANCE	FIG.	PVD COATED					UNCOATED
			JC5040	DH103	JC8015	JC8050	DH111	FZ05
SEMT13T3AGSN-KM	M	1					•	
SEMT13T3AGSN-PM	M	1	•		•	•		
SEGT13T3AGFN-AL	G	2						•
XEHW13T3AGSN-W (Wiper)	H	3		•				

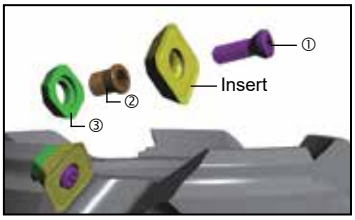
Attention to using wiper insert (XEHW type)



- Wiper insert for SSE45 has single cutting edge.
- In case of right-hand use put insert with "R" as shown in front.

Parts

Insert Screw	Shim Screw	Shim	Wrench	Shim Screw Wrench
①	②	③		
TSW-3512H	SSW-535	SM-SE13	A-15T	LW-035



DIJET®

Face Milling

SSE45 Cutter

METRIC

Recommended Cutting Data for SSE45

Material	Insert	Insert Grade	SFM	IPT	DOC	WOC
Gray Cast Iron	SEMT13T3AGSN-KM (SEMT13T3AGSN-PM)	DH111 (JC8015)	650	.004" - .012"	.080" - .120"	80%
Nodular Cast Iron	SEMT13T3AG5N-KM (SEMT13T3AGSN-PM)	DH111 (JC8015)	500	.004" - .012"	.060" - .100"	80%
Carbon Steel	SEMT13T3AGSN-PM	JC5040	700	.004" - .012"	.060" - .100"	80%
Low Alloy Steel	SEMT13T3AGSN-PM	JC5040	400	.004" - .012"	.040" - .080"	70%
Mold Steel	SEMT13T3AGSN-PM	JC8015	400	.004" - .012"	.040" - .080"	70%
Tool & Die Steel (40-50 HRC)	SEMT13T3AGSN-PM	JC8015	300	.004" - .012"	.020" - .040"	60%
Stainless Steel	SEMT13T3AGSN-PM (SEMT13T3AGSN-PM)	JC8050 (JC8015)	500	.004" - .012"	.060" - .100"	70%
Aluminum Alloys	SEGT13T3AGFN-AL	FZ05	1,000	.004" - .012"	.080" - .120"	80%

NOTE: In case of unfavorable conditions, use insert grade JC8050.

Hepta Mill

- High metal removal is achieved by reducing the cutting force due to both the cutter & inner edge having side and face clearance acheiving high feed, even with a deep depth of cut.
- The heptagon shape gives you 7 cutting edges when doc is 5mm or less.
- Double clamping system fastens the insert securely.
- Inserts are available in flat top, chipbreaker and wiper style with various grades suitable for cast iron, general steel, and high hardened steel.

DIJET®

Face Milling | Pocket Milling | Copy Milling | Helical Interpolation | Plunge Milling

Hepta Mill

METRIC

FACE MILL
HEP Type

G-Body

Fig. 1

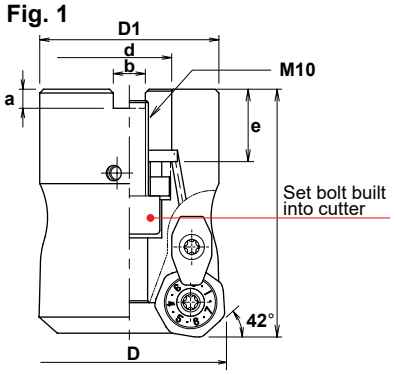


Fig. 2

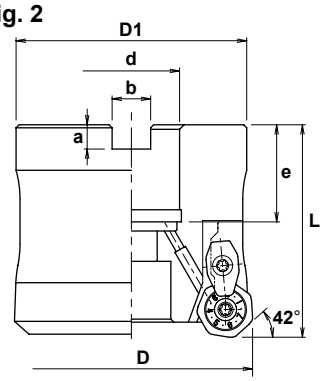
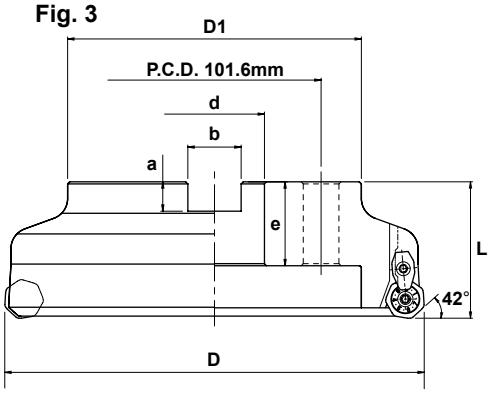


Fig. 3

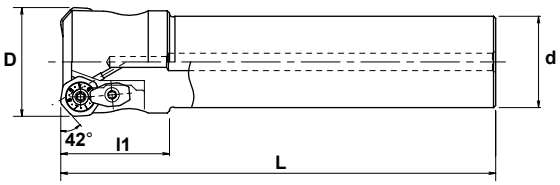


Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS							FIG.	INSERT	Q	PARTS		
		D	L	d	D1	a	b	e				Screw	Wrench	Clamp
HEP-3050R-08-22	•	50	65	22	47	6.3	10.4	19	1	XDMW08** XDMT08**	3	DSW-4512H	A-20	DCM-17
HEP-4063R-08-22	•	63	50	22	60	6.3	10.4	20	2		4			
HEP-4063R-08-27	•	63	50	27	60	7	12.4	22	2		4			
HEP-5080R-08-27	•	80	55	27	76	7	12.4	22	2		5			
HEP-6100R-08-32	•	100	70	32	96	8	14.4	32	2		6			
HEP-7125R-08-40	•	125	70	40	100	9	16.4	35	2		7			
HEP-8160R-08-40	•	160	70	40	100	9	16.4	35	2		8			
HEP-9200R-08-60	•	200	65	60	140	14.3	25.4	40	3		9			

Note: All cutters supplied without inserts, wrench, & moly.

END MILL



Specifications

CATALOG NUMBER	STK	DIMENSIONS				INSERT	Q	PARTS		
		D	L	l1	d			Screw	Wrench	Clamp
HEP-3050-200-S42	•	50	200	50	42	XDMW08** XDMT08**	3	DSW-4512H	A-20	DCM-17
HEP-3050-250-S42	•	50	250	50	42		3			

Note: All cutters supplied without inserts, wrench, & moly.

METRIC

Hepta Mill

FACE MILL
HEP-FM Type

Fig. 1

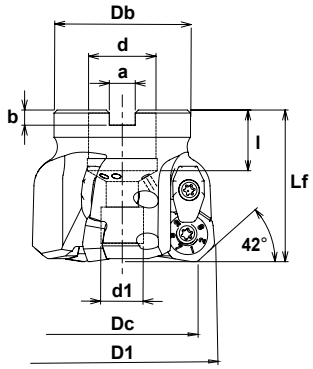
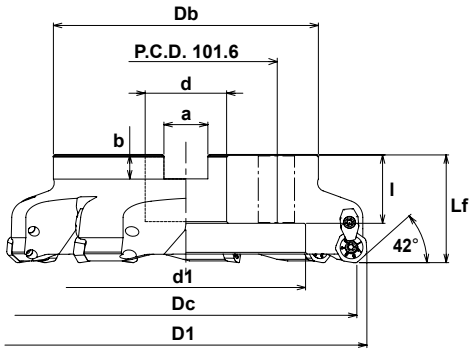


Fig. 2



Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS									FIG.	INSERT	Q	PARTS		
		Dc	D1	Lf	Db	d	d1	a	b	l				Screw	Wrench	Clamp
HEP-3050R-FM	•	50	61.764	50	45	22.225	14	8.4	5	20	1	XDMW08** XDMT08**	3	DSW-4512H	A-20	DCM-17
HEP-4063R-FM	•	63	71.759	50	50	22.225	17	8.4	5	20	1		4			
HEP-5080R-FM	•	80	91.753	50	56	25.4	20	9.5	6	24	1		5			
HEP-6100R-FM	•	100	111.75	63	70	31.75	26	12.7	8	32	1		6			
HEP-7125R-FM	•	125	136.74	70	80	38.1	32	15.9	10	36	1		7			
HEP-8160R-FM	•	160	171.74	75	100	50.8	38	19	11	37	1		8			
HEP-9200R-FM	•	200	211.74	63	155	47.625	140	25.4	14	40	2		9			

Note: All cutters supplied without inserts, wrench, & moly.

Following cutters include a specific bolt. (Cutters not listed - use bolt equipped with arbor)

BOLT	CATALOG NUMBER
M10x1.5Xx35	HEP-3050R-FM, HEP-3050R-08, HEP-3050-05-32 (built into cutters)
M12x1.75x25	HEP-5080R-FM
M12x1.75x30	HEP-4063R-08-27
M12x1.75x40	HEP-5080R-08-27
M16x2x35	HEP-6100R-FM
M16x2x45	HEP-6100R-08-32
M20x2.5x40	HEP-7125R-FM
M20x2.5x45	HEP-7125R-08-40, HEP-8160R-08-40
M24x3.0x45	HEP-8160R-FM

Parts

Insert Screw	Clamp Set	Wrench
6.0N.m Recommended torgue		
DSW-4512H	DCM-17	A-20

DIJET®

Face Milling | Pocket Milling | Copy Milling | Helical Interpolation | Plunge Milling

Hepta Mill

METRIC

INSERTS

Fig. 1 XDMW080620ZTR
Without chipbreaker

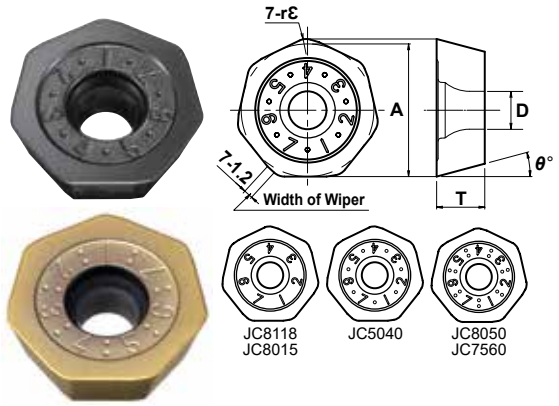


Fig. 2 XDMT080620ZER
With chipbreaker

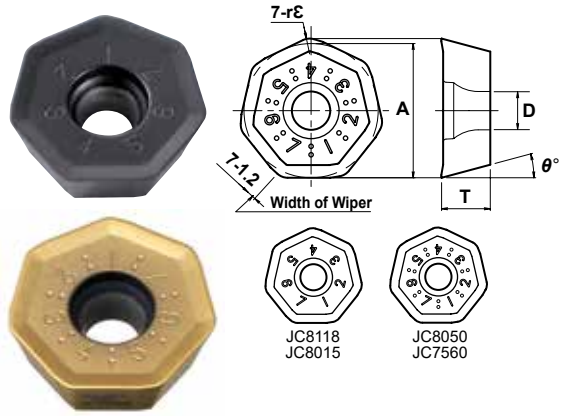


Fig. 3 XDMT080620ZER-ML
With chipbreaker
(low cutting force)

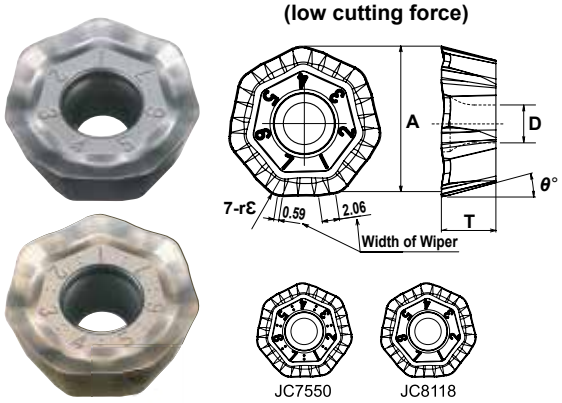


Fig. 4 XDMW080635ZTR-S
Without chipbreaker

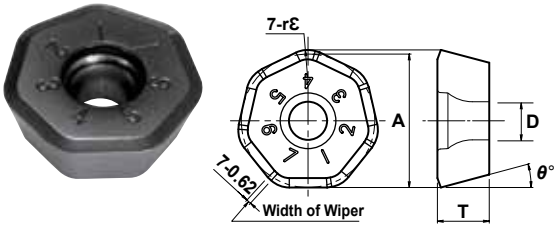
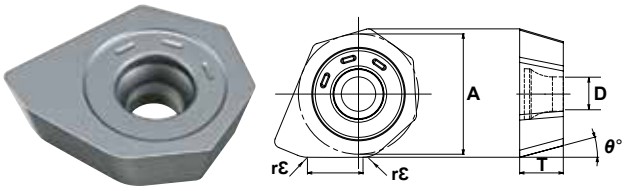


Fig. 5 XDHW080610ZER-W
Wiper Insert



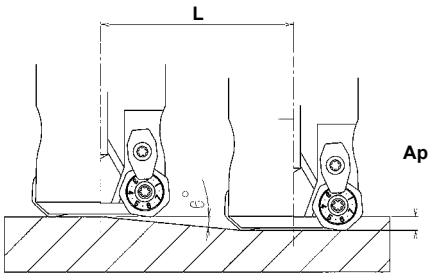
CATALOG NUMBER	TOLERANCE	FIG.	DIMENSIONS					PVD COATED						
			A	T	D	rε	θ°	JC8015	JC5040	JC8118	JC8011	JC7550	JC7560	JC8050
XDMW080620ZTR	M	1	17.5	6.35	5	2	15	•	•	•			•	•
XDMW080635ZTR-S	M	4	17.5	6.35	5	3.5	15	•						
XDMT080620ZER	M	2	17.5	6.35	5	2	15	•		•			•	•
XDMT080620ZER-ML	M	3	17.341	6.5	5	2	15			•		•		
XDHW080610ZER-W (Wiper)	H	5	17.5	6.35	5	4	15				•			

METRIC

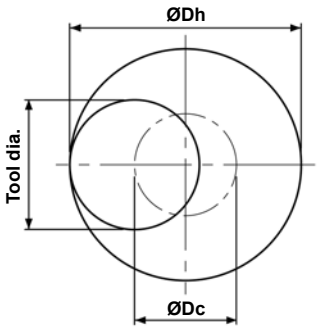
Hepta Mill

Recommended Data for Profile Milling with HEP

- Ramping



- Helical interpolation



- Calculation of tool pass dia.

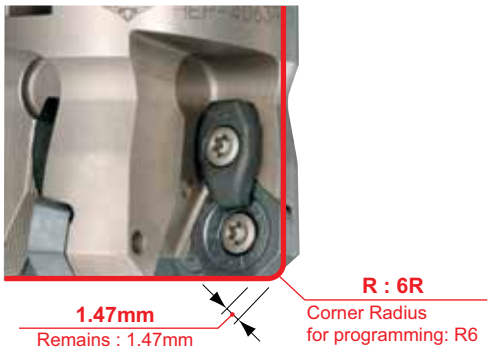
ØDc = ØDh - l

Tool pass dia. Bore dia. Tool Dia.

- Down cutting is recommended, so tool pass rotation should be counterclockwise.
- Depth of cut per one circuit should not exceed max. depth of cut Ap.
- In case of ramping and helical interpolation, apply 70% or less feed (F) from standard cutting condition table.
- In case of drilling, apply 50% or less Z axis feed (F) from standard cutting condition table.
- Long consecutive chips may result in case of drilling, confirm safe operating conditions.

CATALOG NUMBER	TOOL DIA.	EFFECTIVE CUTTING DIA.	MAXIMUM RAMPING ANGLE		RAMPING: TOTAL CUTTING LENGTH AT MAX. Ap of 5mm:L	HELICAL INTERPOLATION	
			WITHIN INNER EDGE	UNTIL BODY INTERFERENCE		MIN BORE DIA.	MAX BORE DIA.
HEP-3050..	50mm	36.8	1° 50’	9°	156	76	96
HEP-4063..	63mm	51.1	1° 25’	7°	202	103	122
HEP-5080..	80mm	68.1	1°	5°	286	135	156
HEP-6100..	100mm	86.6	0° 45’	3° 30’	382	175	196
HEP-7125..	125mm	111.6	0° 35’	2° 30’	491	225	246
HEP-8160..	160mm	146.6	0° 25’	2°	687	295	316
HEP-9200..	200mm	186.6	0° 20’	1° 30’	860	374	396

Definition of corner shape for programming:



Recommended Insert Corner change information:

Rotational direction for corner change

Rotate the insert counter-clockwise when changing corner.

DIJET®

Hepta Mill

METRIC

Recommended Cutting Data for HEPTA Mill

				LOW HORSEPOWER		HIGH HORSEPOWER		
Material	**Inserts**	**Insert Grade**	**SFM**	**IPT**	**DOC**	**IPT**	**DOC**	**WOC**
Gray Cast Iron	XDMW080620ZTR (XDMW080620ZTR) [XDMW080620ZTR-S]	JC8015 (JC8118) [JC8015]	700	.032"	.080"-.120"	.040"	.160"-.200"	80%
Nodular Cast Iron	XDMW080620ZTR (XDMW080620ZTR) [XDMW080620ZTR-S]	JC8015 (JC8118) [JC8015]	650	.027"	.060"- .100"	.033"	.120"-.160"	80%
Carbon Steel	XDMT080620ZER (XDMW080620ZTR) [XDMW080620ZTR]	JC7560 (JC5040) [JC7560]	600	.025"	.060"-.100"	.031"	.120"-.160"	80%
Low Alloy Steel	XDMT080620ZER (XDMW080620ZTR) [XDMW080620ZTR]	JC7560 (JC5040) [JC7560]	550	.023"	.040"-.080"	.028"	.080"-.120"	70%
Mold Steel	XDMT080620ZER (XDMT080620ZER) [XDMW080620ZTR]	JC8118 (JC7560) [JC5040]	500	.023"	.040"-.080"	.028"	.080"-.120"	70%
Tool & Die Steel (40-50 HRC)	XDMT080620ZER (XDMT080620ZER) [XDMW080620ZTR]	JC8118 (JC8015) [JC8118]	400	.012"	.020"-.040"	.015"	.060"-.080"	60%
Stainless Steel	XDMT080620ZER (XDMT080620ZER) [XDMT080620ZER-ML]	JC8050 (JC7560) [JC7550]	300	.015"	.060"-.100"	.015"	.120"-.160"	70%
Titanium	XDMT080620ZER-ML (XDMT080620ZER) [XDMT080620ZER]	JC7550 (JC5040) [JC8118]	200	.007"	.040"-.080"	.009"	.080"-.120"	60%
Inconel	XDMT080620ZER-ML (XDMT080620ZER) [XDMT080620ZER]	JC8118 (JC8118) [JC8015]	100	.006"	.020"-.040"	.008"	.060-.080"	60%

Wiper Insert Set up Points

1. Number of wiper inserts is determined according to f (mm/rev).

f (mm/rev) = Vf (mm/min) ÷ n (min^{-1})

f (mm/rev)	Number of wiper inserts
1.2mm < f (mm/rev) ≤ 3mm	1
3mm < f (mm/rev) ≤ 6mm	2
6mm < f (mm/rev) ≤ 9mm	3
9mm < f (mm/rev) ≤ 12mm	4

Install wiper inserts which mark ⇨ is used as wiper edge in body, divide equally.

2. Same recommended cutting condition can be used with wiper inserts.

Note: In case of f(mm/rev) > 1.2mm and Rz 12.5 ≦ µm, recommend to use wiper.

Nega-Hepta Mill

Economy cutter with 14-corner inserts

- The heptagon shaped double-sided insert has 14 cutting corners.
- Lower cutting forces using 3D geometry.
- Available in regular pitch for lower power consumption and ultra fine pitch for high efficient machining.
- Inserts available for applications from cast iron to general steels to stainless steels.

DIJET®

Face Milling | Pocket Milling

Nega-Hepta Mill

METRIC

FACE MILL
NHP Type

Entering Angle : -	A.R. : -6º
	R.R. : -4º
D.O.C.	7 corners: 4.5mm max
	max: 6mm

Fig. 1

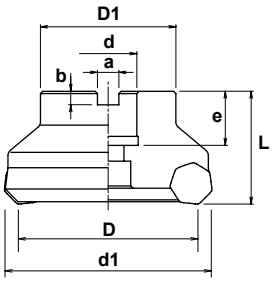


Fig. 2

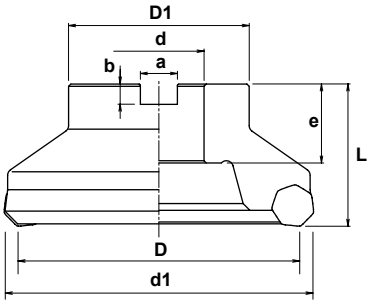
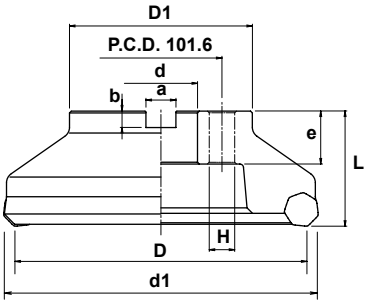


Fig. 3 - H=17
Fig. 4 - H=14



Specifications - Ultra Fine Pitch

CATALOG NUMBER	STK	DIMENSIONS								FIG.	INSERT	Q	PARTS		
		D	L	d	D1	d1	a	b	e				Wedge	Wedge Screw	Wrench
NHP-14100R-08-32	•	100	50	32	70	112.4	14.4	8	32	2	XNMU080610** XNHU0806AEN-W	14	70710	LS-110	A-15T
NHP-18125R-08-40	•	125	63	40	80	137.4	16.4	9	35	2		18			
NHP-22160R-08-40	•	160	63	40	100	172.4	16.4	9	29	4		22			
NHP-28200R-08-60		200	63	60	140	212.4	25.4	14.3	40	3		28			
NHP-36250R-08-60	•	250	63	60	160	262.4	25.4	14.3	40	3		36			

Note: All cutters supplied without inserts, wrench, & moly.

Specifications - Regular Pitch

CATALOG NUMBER	STK	DIMENSIONS								FIG.	INSERT	Q	PARTS		
		D	L	d	D1	d1	a	b	e				Wedge	Wedge Screw	Wrench
NHP-5063R-08	•	63	50	22.225	60	75.4	8.4	5	20	1	XNMU080610** XNHU0806AEN-W	5	70710	LS-110	A-15T
NHP-5063R-08-22	•	63	50	22	60	75.4	10.4	6.3	20	1		5			
NHP-6080R-08	•	80	50	25.4	60	92.4	9.5	6	20	1		6			
NHP-6080R-08-27	•	80	50	27	60	92.4	12.4	7	22	1		6			
NHP-8100R-08	•	100	50	31.75	70	112.4	12.7	8	32	2		8			
NHP-8100R-08-32	•	100	50	32	70	112.4	14.4	8	32	2		8			
NHP-8125R-08	•	125	63	38.1	80	137.4	15.9	10	35	2		8			
NHP-8125R-08-40	•	125	63	40	80	137.4	16.4	9	35	2		8			
NHP-10160R-08	•	160	63	50.8	100	172.4	19	11	37	2		10			
NHP-10160R-08-40	•	160	63	40	100	172.4	16.4	9	29	4		10			

Note: All cutters supplied without inserts, wrench, & moly.

METRIC

Nega-Hepta Mill

INSERTS

Fig. 1 XNMU080610AEN

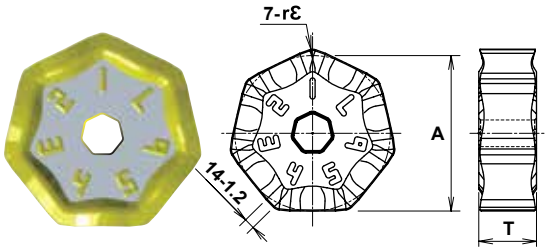


Fig. 2 XNMU080610AEN-KL

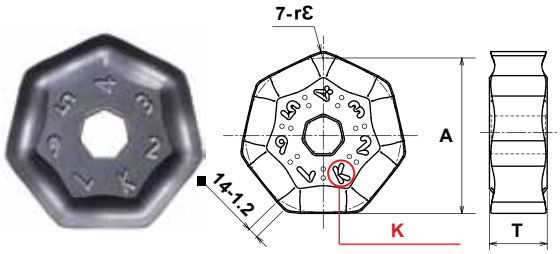


Fig. 3 XNMU080610AER-PM

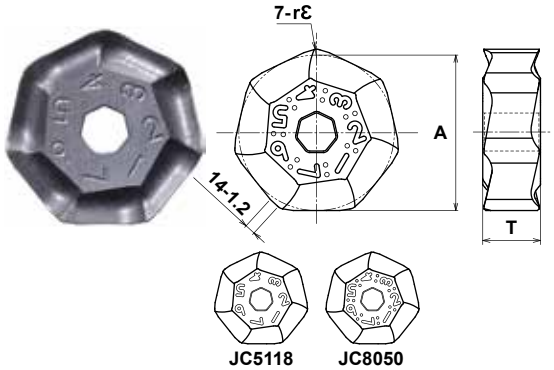
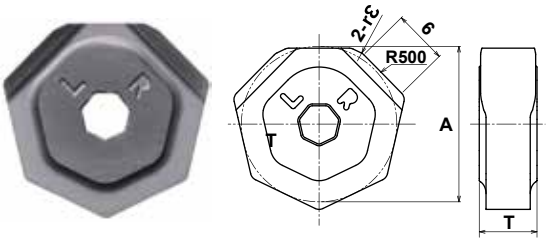


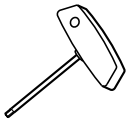
Fig. 4 XNMU080610AER-W (Wiper)



Insert Specifications

CATALOG NUMBER	TOLERANCE	FIG.	DIMENSIONS			PVD Coated			
			A	T	rε	DH111	JC5118	JC8050	DH103
XNMU080610AEN	M	1	17.5	6.5	1	•			
XNMU080610AEN-KL	M	2	175	6.5	1		•		
XNMU080610AER-PM	M	3	17.5	6.5	1		•	•	
XNHU0806AEN-W (Wiper)	H	4	17.5	6.5	1				•

PARTS

WEDGE	WEDGE SCREW	WRENCH
		
70710	LS-110	A-15T

DIJET®

Face Milling | Pocket Milling

Nega-Hepta Mill

METRIC

Fig.1

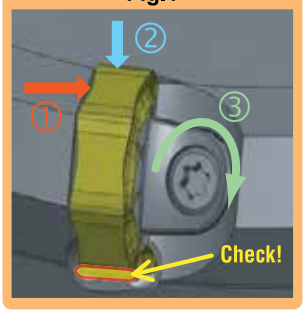
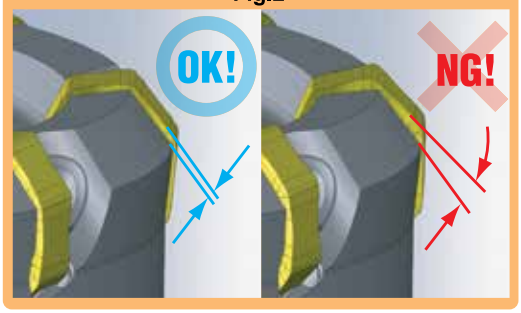


Fig.2



1. Clean the insert pocket including the seat.
2. Press and slide to firmly seat the insert. (See Fig. 1)
3. Confirm there is no gap between the insert and insert seat. (See Fig. 1)
4. Confirm the insert edge and insert pocket edge are parallel. (See Fig. 2)

RECOMMENDED INSERT CORNER CHANGE INFORMATION

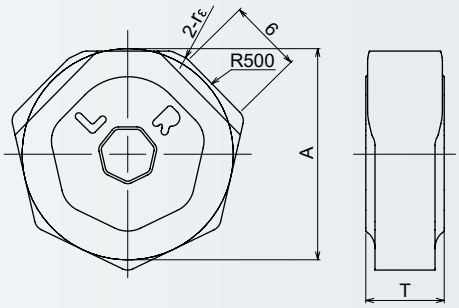
Rotational direction for corner change

Recommend to rotate the insert counter-clockwise for corner change.

(Note: Recommend to rotate the insert clockwise for corner change in case of left hand cutter.)

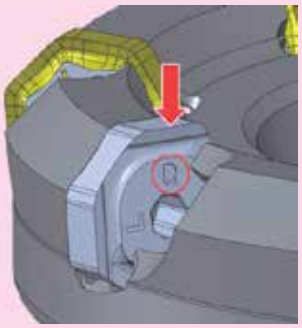
Wiper Insert

In case of f (mm/rev)>1.2mm and Rz=5μm, recommend to use wiper insert (XNHU0806AEN-W)



⚠ Wiper insert set up installation points and attention for use.

1. Wiper insert XNHU type for NHP has double cutting edge. In case of right-hand use, put insert so that "R" may be shown in front.
2. Feed per revolution *f* (mm/rev) should not exceed width of wiper (6mm).



METRIC

Nega-Hepta Mill

Recommended Cutting Data for Nega-Hepta

Material	Inserts	DOC	SFM	IPT	Grade
Gray Cast Iron	XNMU080610AEN XNMU080610AEN-KL	Below .012"	500-800	.004"-.040"	SFM≥600 : DH111 (XNMU080610AEN) *SFM≤600 : JC5118 (XNMU080610AEN-KL)
		.120"-.240"		.004"-.020"	
Nodular Cast Iron	XNMU080610AEN XNMU080610AEN-KL	Below .012"	400-600	.004"-.032"	SFM≥500 : DH111 (XNMU080610AEN) *SFM≤500 : JC5118 (XNMU080610AEN-KL)
		.120"-.240"		.004"-.016"	
Carbon Steel	XNMU080610AEN-KL	Below .010"	500-700	.004"-.020"	JC5118 (JC8050) (Interupted cutting)
	XNMU080610AER-PM	.080"-.140"			
Low Alloy Steel	XNMU080610AEN-KL	Below .010"	400-650	.004"-.020"	JC5118 (JC8050) (Interupted cutting)
	XNMU080610AER-PM	.080'-.140"			
Mold Steel	XNMU080610AEN-KL	Below .010"	200-300	.004"-.012"	JC5118 (JC8050) (Interupted cutting)
Stainless Steel	XNMU080610AEN-KL	Below .010"	300-500	.004"-.016"	JC8050
	XNMU080610AER-PM	.080"-.120"			

* In case of using low power machine

DIJET®

Face Milling | Pocket Milling

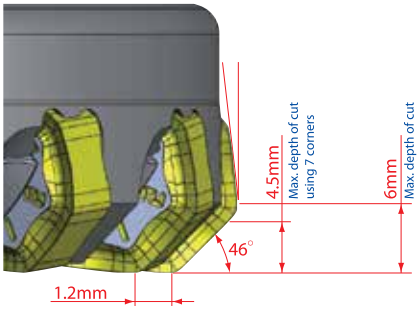
Nega-Hepta Mill

METRIC

Power Consumption

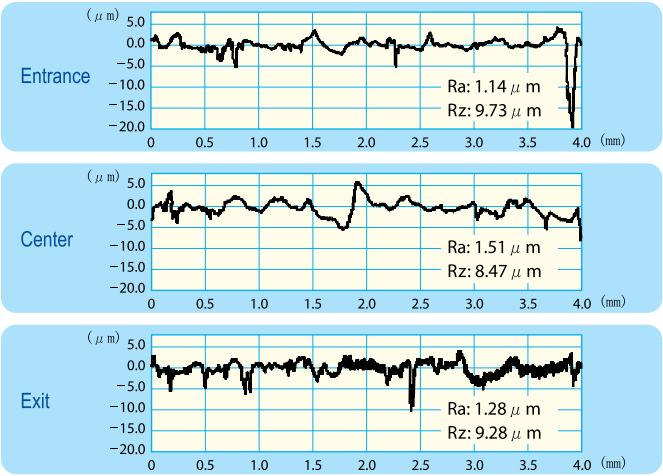
Diameter	Ultra Fine Pitch		Regular Pitch	
	No. of inserts	Power Consumption	No. of inserts	Power Consumption
D	Q	Pc (kw)	Q	Pc (kw)
63	-	-	5	6.8
80	-	-	6	8.1
100	14	18.9	8	10.8
125	18	24.3	8	10.8
160	22	29.7	10	13.5
200	28	37.8	-	-
250	36	48.6	-	-

***Pc (kw) = (Ae x Ap x Vf) / (1000 x (Q/Pc')**

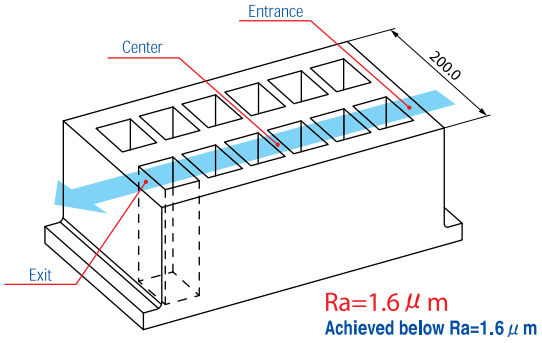


- **Lower cutting forces are achieved with 3D positive geometry even though insert is negative and both sides are used.**
- **Pocket milling is also possible due to the side clearance.**

Surface finish



Material: GG30
Cutting conditions: Vc=300m/min, n=764m/min
fz=0.3mm/t, ap=3mm, ae=100mm
Overhung length: l=138m, Dry



Under Cutter

Sizes:

Ø16mm

to

Ø50mm

T-Slot Cutter

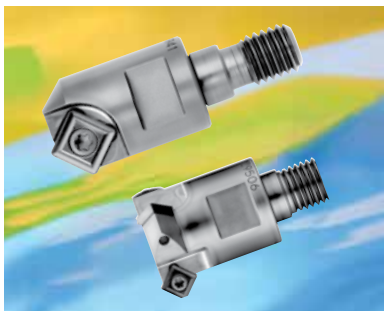
Sizes:

Ø25mm

to

Ø50mm

Chamfer Heads



Sizes:

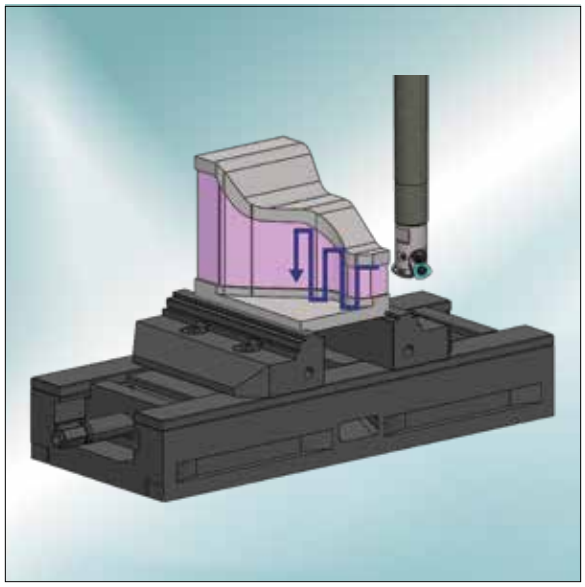
Ø8.5mm

to

Ø32.5mm

Under Cutter

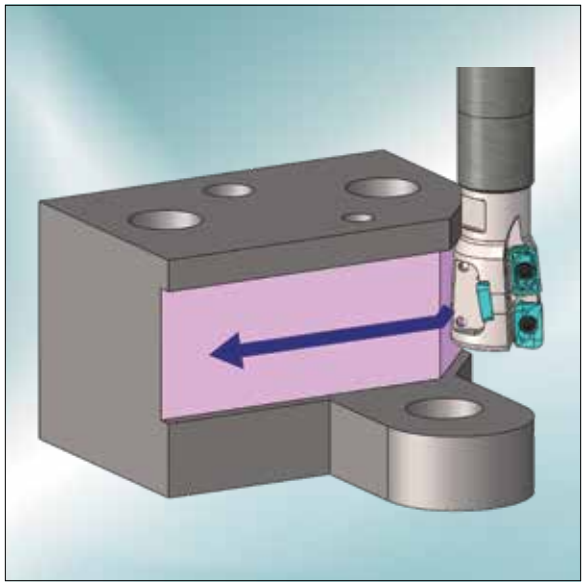
MSU type for plunging



FEATURES

- By plunging or up and down cutting, chattering is greatly suppressed and highly efficient machining is achieved.
- Unmanned machining is possible on a machining center. This improves productivity and accomplishes safer machining.

MUC type for profiling



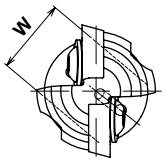
FEATURES

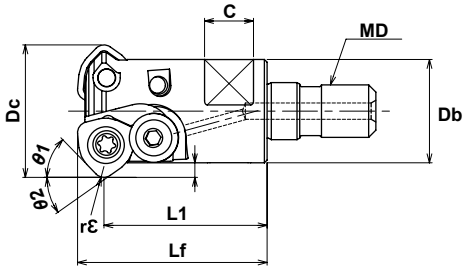
- Machining time can be reduced by contour machining using the side cutting edge.
- This tool has a cutting edge geometry that reduces the cutting force and can handle a large depth of cut.

METRIC

Under Cutter

MSU type





Specifications

CATALOG NUMBER	STK	DIMENSIONS										HEAD TORQUE Nm	INSERT	Q
		Dc	rε	Lf	L1	Db	MD	C	W	θ1	θ2			
MSU-1016-M6	•	16	1.6	23.9	20	11.5	6	6.5	8	45	35.7	8	WDMW050316ZTR	1
MSU-1020-M8	•	20	2	27.9	23	15	8	8	12	45	34.4	16	WDMW06T320ZTR	1
MSU-2025-M10	•	25	2	34.9	30	19	10	9	14	45	34.5	16	WDMW06T320ZTR	2
MSU-2032-M12	•	32	2	41.3	35	22.5	12	11	19	45	34.4	20	WDMW080520ZTR	2
MSU-3040-M16	•	40	2	49.3	43	29	16	12	22	45	34.5	25	WDMW080520ZTR	3

Note: All cutters supplied without inserts, wrench, & moly.

Parts

CATALOG NUMBER	FLANGE BUTTON, CLAMP ASSEMBLY	BUTTON/CLAMP WRENCH	INSERT SCREW	INSERT SCREW WRENCH
MSU-1016-M6	FB3-6	LW-020	DSW-306H	T-10
MSU-1020-M8	FB4-6	LW-025	CSW-408H	T-15
MSU-2025-M10	FB4-6	LW-025	CSW-408H	T-15
MSU-2032-M12	DCM-17	A-20	DSW-4510H	A-20
MSU-3040-M16	DCM-17	A-20	DSW-4510H	A-20

Insert

Fig. 1

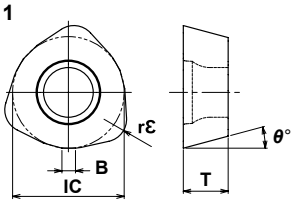
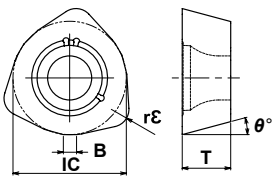


Fig. 2



Specifications

CATALOG NUMBER	Tolerance	DIMENSIONS					FIG.	PVD Coated	
		IC	T	B	rε	θ°		JC8050	JC8118
WDMW050316ZTR	M	8	3.2	1	1.6	15°	1	•	•
WDMW06T320ZTR	M	10	3.97	1.2	2	15°	1	•	•
WDMW080520ZTR	M	13	5.5	1.5	2	15°	2	•	•

DIJET®

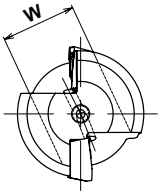
Under Milling

Under Cutter

METRIC

MUC type

Fig. 1



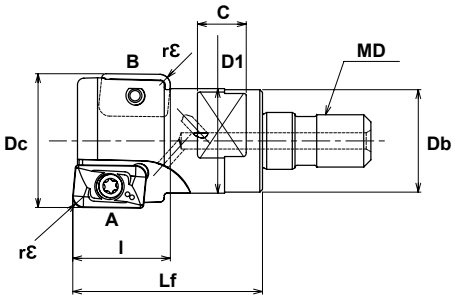
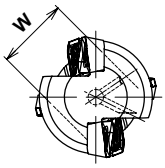
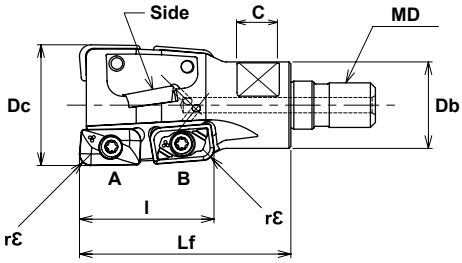


Fig. 2





Specifications

CATALOG NUMBER	STK	INSERTS			DIMENSIONS									HEAD TORQUE Nm	FIG.
		A (R)	B (L)	Side	Dc	rε	l	Lf	D1	Db	MD	C	W		
MUC-1615-M6	•	1	1	-	16	0.8	15	23	-	11.5	6	6.5	8	8	1
MUC-2518-M10	•	1	1	-	25	2	18	35	19.3	19	10	9	14	16	1
MUC-3235-M12	•	2	2	2	32	3	35	55	-	22.5	12	11	19	20	2

Note: All cutters supplied without inserts, wrench, & moly.

Inserts

Fig. 1

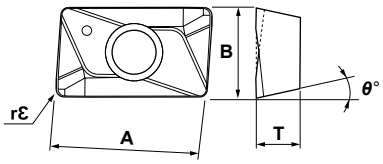
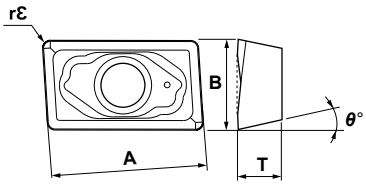


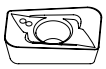
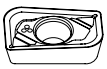
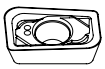
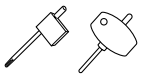
Fig. 2



Specifications

CATALOG NUMBER	Tolerance	DIMENSIONS					FIG.	PVD Coated	
		A	B	T	rε	θ°		JC5015	JC5040
ZCMT10030BR	M	10.4	6.35	3.4	0.8	7°	1	•	•
ZDMT100308L	M	10.4	6.35	3.4	0.8	15°	2	•	•
ZPMT13T320R	M	13.3	7.938	3.97	2	11°	1	•	•
ZDMT13T320L	M	12.9	7.938	3.97	2	15°	2	•	•
ZPMT160430R	M	16	9.525	4.75	3	11°	1	•	•
ZPMT160430L	M	16.45	9.525	4.76	3	11°	2	•	•

Insert Position and Parts

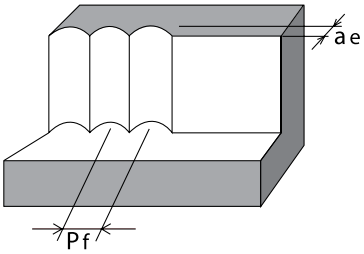
CATALOG NUMBER	INSERTS			WRENCHES		SCREWS	
	A	B	Side	A & B	Side	A & B	Side
							
MUC-1615-M6	ZCMT100308R	ZDMT100308L	-	T-08		ESW-206	
MUC-2518-M10	ZCMT13T320R	ZDMT13T320L	-	T-10		DSW-307H	
MUC-3235-M12	ZCMT160430R	ZPMT160430L	ZDMT13T320L	T-15	T-10	DSW-410H	DSW-307H

METRIC

Under Cutter

Recommended Cutting Data for MSU

Material	Insert Grade		Plunging (see diagram)				
			φ16 1N	φ20 2N	φ25 2N	φ32 2N	φ40 3N
Gray Cast Iron	JC8118 (JC8050)	SFM	660	660	660	660	660
		IPT	.012"	.008"	.016"	.020"	.020"
		Ae	.040"	.050"	.050"	.060"	.060"
		PF	.120"	.160"	.200"	.200"	.240"
Nodular Cast Iron	JC8118 (JC8050)	SFM	660	660	660	660	660
		IPT	.012"	.008"	.016"	.020"	.020"
		Ae	.040"	050"	.050"	.060"	.060"
		PF	.120"	.160"	.200"	.200"	.240"
Carbon Steel	JC8050 (JC8118)	SFM	660	660	660	660	660
		IPT	.012"	.008"	.016"	.020"	.020"
		Ae	.040"	.050"	.050"	.060"	.060"
		PF	.120"	.160"	.200"	.200"	.240"
Cast Steel	JC8050 (JC8118)	SFM	590	590	590	590	590
		IPT	.012"	.008"	.016"	.020"	.020"
		Ae	.040"	.050"	.050"	.060"	.060"
		PF	.120"	.160"	.200"	.200"	.240"
Low Alloy Steel	JC8050 (JC8118)	SFM	500	500	500	500	500
		IPT	.012"	.008"	.016"	.020"	.020"
		Ae	.040"	.050"	.050"	.060"	.060"
		PF	.120"	.160"	.200"	.200'	.240"



NOTE: 1. Above parameters should be adjusted according to the machine rigity and work rigity.
2. If chatter occurs, recommend to reduce the DOC or spindle speed and maintain IPT.
3. If machine does not have enough power, recommend reducing DOC or spindle speed & feed.
4. Use air blow.

Recommended Cutting Data for MUC

Material	Insert Grade		Side Cutting	
			φ25 1N	φ32 2N
Gray Cast Iron	JC5015	SFM	460	460
		IPT	.012"	.012"
		Ap	.700"	1.25"
		Ae	.050"	.060"
Nodular Cast Iron	JC5015	SFM	460	460
		IPT	.012"	.012"
		Ap	.700"	1.25"
		Ae	.050"	.060"
Carbon Steel	JC5040	SFM	460	460
		IPT	.012"	.012"
		Ap	.700"	1.25"
		Ae	.050"	.060"
Cast Steel	JC5040	SFM	400	400
		IPT	.010"	.010"
		Ap	.700"	1.25"
		Ae	.050"	.060"
Low Alloy Steel	JC5040	SFM	330	330
		IPT	.010"	.010"
		Ap	.700"	1.25"
		Ae	.050"	.060"

NOTE: 1. Above parameters should be adjusted according to the machine rigity and work rigity.
2. If chatter occurs, recommend to reduce the DOC or spindle speed and maintain IPT.
3. If machine does not have enough power, recommend reducing DOC or spindle speed & feed.
4. Use air blow.

DIJET®

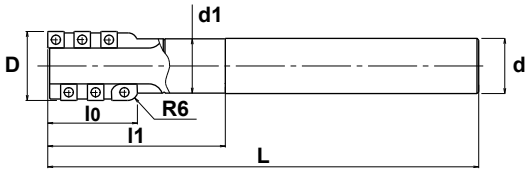
Under Milling

Under Cutter

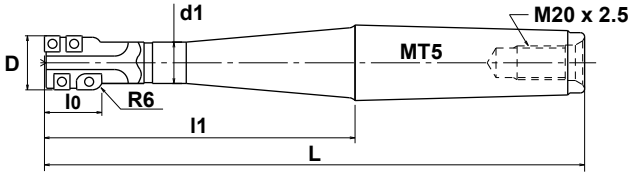
METRIC

DUM Type

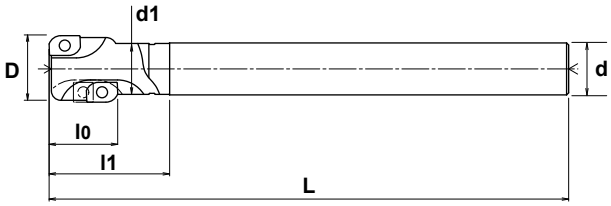
DUM-6R



DUM-MT



DUM-W2R / DUM-W6R



Specifications

CATALOG NUMBER	STK	DIMENSIONS						INSERTS			PARTS	
		D	L	d1	l0	l1	d	Top	Bottom	Side	Screw	Wrench
DUM-25023S20-W2R	•	25	250	19.3	23.5	53.5	20	ZPMT13T320R (1)	ZDMT13T320L (1)	-	DSW-307H	T-10SD
DUM-32034S25-6R	•	32	250	24.5	34	83	25	APGW150360L (1)	-	SPGA090304 (3)	DSW-4085	A-15T
DUM-32050S25-6R*	•	32	250	-	50	-	25	APGW150360L (1)	-	SPGA090304 (5)	DSW-4085	A-15T
DUM-320184T-MT5	•	32	320	24.5	34	184	MT5	APGW150360L (1)	-	SPGA090304 (3)	DSW-4085	A-15T
DUM-32033S25-W6R	•	32	250	24.5	33	58	25	APGW150360R (1)	APGW150360L (1)	SPGA090304 (1)	DSW-4085	A-15T
DUM-36038S32-6R	•	36	250	31	38	89	32	APGW150360L (1)	-	SPGA090304 (3)	DSW-4085	A-15T
DUM-36050S32-6R	•	36	250	31	50	101	32	APGW150360L (1)	-	SPGA090304 (5)	DSW-4085	A-15T
DUM-40040S32-6R	•	40	250	31.5	40	91	32	APGW150360L (2)	-	SPGA090304 (8)	DSW-4085	A-15T
DUM-40052S32-6R	•	40	250	31.5	52	103	32	APGW150360L (2)	-	SPGA090304 (10)	DSW-4085	A-15T
DUM-50020S42-6R	•	50	250	41	20	70	42	APGW150360L (2)	-	SPGA090304 (2)	DSW-4085	A-15T
DUM-50036S42-6R	•	50	250	40	36	87	42	APGW150360L (2)	-	SPGA090304 (6)	DSW-4085	A-15T
DUM-50050S42-6R	•	50	250	40	50	107	42	APGW150360L (2)	-	SPGA090304 (10)	DSW-4085	A-15T
DUM-50055S42-W6R	•	50	250	41	55.7	90	42	APGW150360R (2)	APGW150360L (2)	SPGA090304 (8)	DSW-4085	A-15T

*Carbide Shank

Note: All cutters supplied without inserts, wrench, & moly.

METRIC

Under Cutter

Inserts

Fig. 1

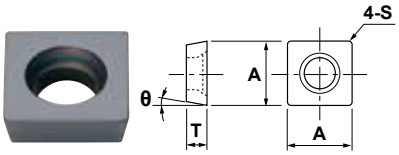


Fig. 2

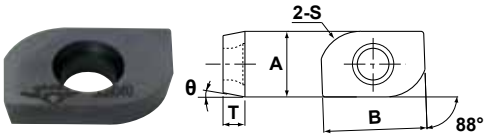


Fig. 3

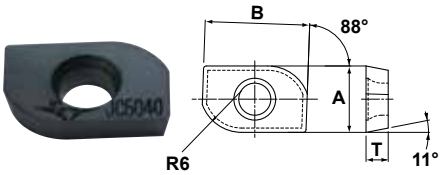


Fig. 4

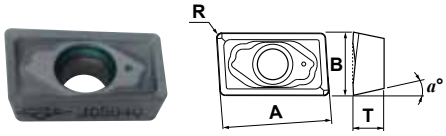
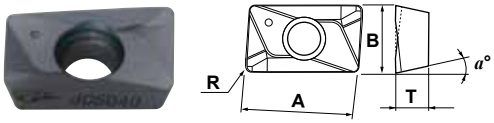


Fig. 5



Specifications

CATALOG NUMBER	DIMENSIONS					FIG.	COATED		
	A	B	T	R	*a*		JC5015	JC8015	JC5040
SPGA090304	9.525	9.525	3.18	.4	11°	1			•
SPMA090304	9.525	9.525	3.19	.4	11°	1		•	
APGW150360L	9.525	15	3.18	6	11°	2	•		•
APGW150360R	9.525	15	3.18	6	11°	3			•
ZDMT13T320L	12.9	7.938	3.97	2	15°	4	•		•
ZPMT13T320R	12.9	7.938	3.97	2	11°	5	•		•

Recommended Cutting Conditions for Under Cutter

TOOL DIAMETER øD (mm)	WORK MATERIAL (Material No.)	CAST IRON (GG, GGG)		TOOL & DIE STEEL (1.2379)	
	D.O.C. / Cutting Condition	Ap=1D, Ae=1mm	Ap=1D, Ae=2mm	Ap=1D, Ae=1mm	Ap=1D, Ae=2mm
25	N (min^{-1})	1,000	-	900	-
	Vf (mm/min)	350	-	270	-
32	N (min^{-1})	800	650	600	-
	Vf (mm/min)	300	170	170	-
36	N (min^{-1})	700	570	620	530
	Vf (mm/min)	280	150	190	110
40	N (min^{-1})	800	640	720	560
	Vf (mm/min)	450	290	350	200
50	N (min^{-1})	700	570	640	510
	Vf (mm/min)	420	280	350	220

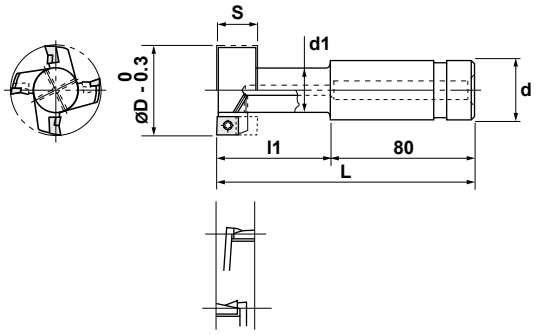
DIJET

T - Slotting

T-Slot Cutter

METRIC

TSC Type

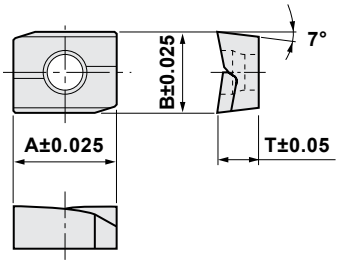


Specifications

CATALOG NUMBER	STK	Nominal T-Slot Dimension JIS B0952	DIMENSIONS						INSERTS	Q	PARTS	
			D	L	S	l1	d	d1			Screw	Wrench
TSC2-2511S25	•	14	25	114	11	34	25	12	TSB25R (1) TSB25L (1)	2	ESW-307	T-08
TSC2-3214S32	•	18	32	122	14	42	32	15	TSB32R (1) TSB32L (1)	2	ESW-408	T-15
TSC2-4018S32	•	22	40	132	18	52	32	19	TSB40R (1) TSB40L (1)	2	ESW-410	T-15
TSC4-5022S32	•	28	50	144	22	64	32	25	TSB50R (2) TSB50L (2)	4	ESW-410	T-15

Note: All cutters supplied without inserts, wrench, & moly.

INSERTS



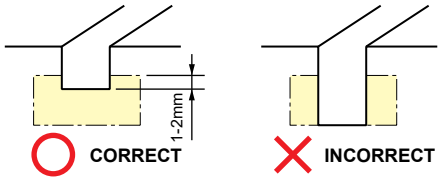
Specifications

CATALOG NUMBER		DIMENSIONS			COATED	UNCOATED
R.H.	L.H.	A	B	T	JC5040	KT9
TSB25R	TSB25L	8	8	3.97		•
TSB32R	TSB32L	10	10	4.76		•
TSB40R	TSB40L	12	10	6.35	•	•
TSB50R	TSB50L	12	10	6.35	•	•

Recommended Cutting Data

WORK MATERIAL	INSERT GRADE	Cutting Speed (m/min)	Feed Rate (mm/th)
Steel	JC5040	40 - 70	0.05 - 0.2
Cast Iron	KT9	40 - 80	0.05 - 0.3

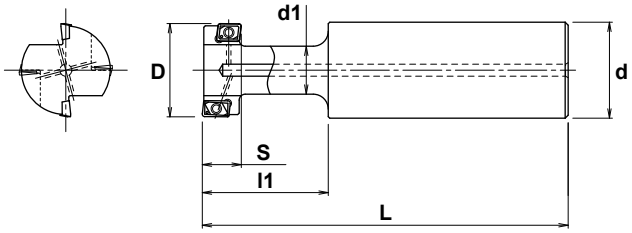
Note:



METRIC

T-Slot Cutter

S-TSC Type



Specifications

CATALOG NUMBER	STK	Nominal T-Slot Dimension JIS B0952	DIMENSIONS						INSERTS	Q	PARTS	
			D	L	S	l1	d	d1			Screw	Wrench
S-TSC4-3113S32	•	18	31	122	13	42	32	16	ZPMT09T208R (2) ZDMT08T208L (2)	4	TSW-2250	T-07SD
S-TSC4-3817S32	•	22	38	132	17	52	32	20	ZCMT100308R (2) ZDMT100308L (2)	4	ESW-206	T-08SD
S-TSC4-4318S42	•	24	43	166	18	56	42	22	ZCMT100308R (2) ZDMT100308L (2)	4	ESW-206	T-08SD
S-TSC4-4721S42	•	28	47	174	21	64	42	26	ZPMT13T308R (2) ZDMT13T308L (2)	4	DSW-307H	T-10SD

Note: All cutters supplied without inserts, wrench, & moly.

INSERTS

Fig. 1

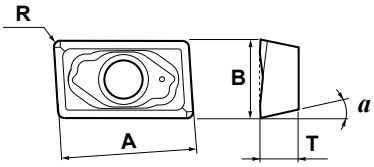
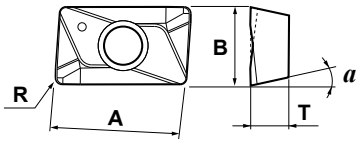


Fig. 2



Specifications

CATALOG NUMBER	DIMENSIONS					FIG.	COATED	
	A	B	T	R	*a*		JC5015	JC5040
ZDMT08T208L	7.9	6	2.78	0.8	15°	1	•	•
ZPMT09T208R	9	5.4	2.78	0.8	11°	2	•	•
ZDMT100308L	10.4	6.35	3.4	0.8	15°	1	•	•
ZCMT100308R	10.4	6.35	3.4	0.8	7°	2	•	•
ZDMT13T308L	12.9	7.938	3.97	0.8	15°	1	•	•
ZPMT13T308R	13.3	7.938	3.97	0.8	11°	2	•	•

Recommended Cutting Data

WORK MATERIAL	HARDNESS HB	INSERT GRADE	CUTTING SPEED (m/min)	FEED RATE (mm/rev)
Low Carbon Steel	180-280	JC5040	40-70	0.4-0.7
High Carbon Steel	180-280	JC5040	40-70	0.4-0.7
Gray Cast Iron	200-250	JC5015	60-100	0.5-0.8
Ductile Cast Iron	180-250	JC5015	40-70	0.3-0.6

DIJET®

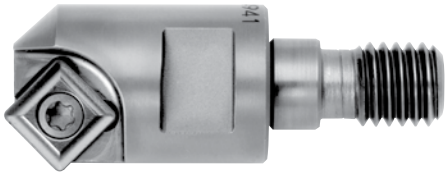
Chamfering | Chamfering

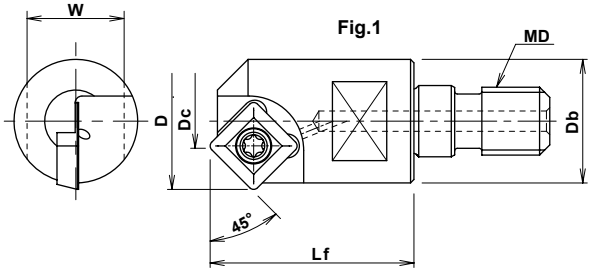
Modular Head

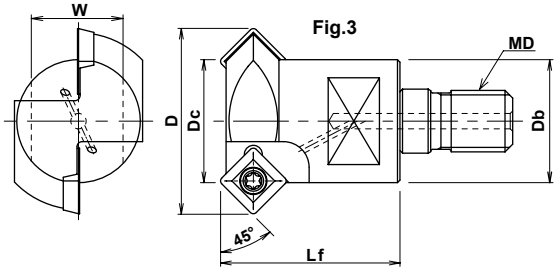
METRIC

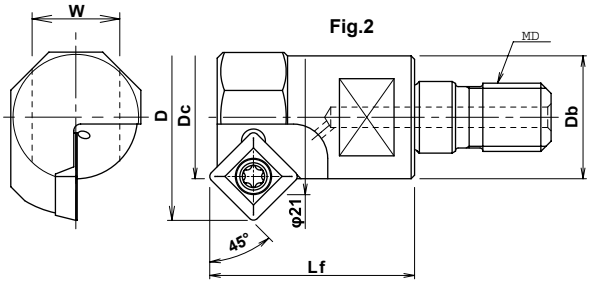
CHAMFER CUTTERS

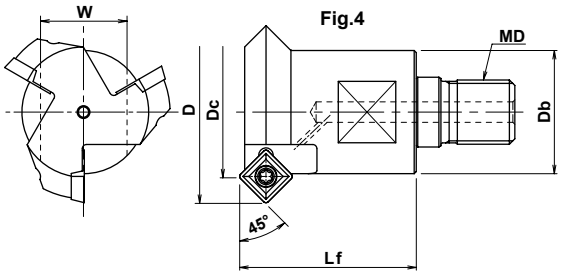
MCM Type











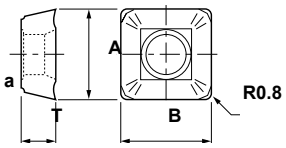
Specifications

CATALOG NUMBER	STK	APPLICABLE CHAMFERING DIAMETER		DIMENSIONS					FIG.	HEAD TORQUE Nm	INSERT	Q	PARTS	
		TOP FACE	REVERSE FACE	D	Dc	Lf	Db	MD					Screw	Wrench
MCM-0919-M10	•	8.5~19.6	-	20.2	8	30	18.2	M10	1	16	IM-SP32GS	1	CSW-407	T-15
MCM-1929-M10	•	18.5~29.6	21~29.6	30.2	18	30	18	M10	2	16		1		
MCM-2535-M12	•	24.5~35.6	26~35.6	36.2	24	35	24	M12	3	20		2		
MCM-3343-M16	•	32.5~43	33~43	44.2	32	43	30	M16	4	25		3		

Note: Modular Head Holders on page 109.

Note: All cutters supplied without inserts, wrench, & moly.

INSERTS



Specifications

CATALOG NUMBER	DIMENSIONS					PVD COATED	
	A	B	T	R	a	JC5015	JC5040
IM-SP32GS	9.52	9.52	3.18	0.8	14°	•	•

METRIC

Modular Heads

MCM Type

Recommended Cutting Data for MCM and MSN

Work Materials	Insert Grade	Type of Machining	CATALOG NUMBER							
			MCM-0919-M10				MCM-1929-M10			
			No. of Teeth: 1				No. of Teeth: 1			
			Vc (m/min)	n (min^{-1})	fz (mm/t)	Vf (mm/min)	Vc (m/min)	n (min^{-1})	fz (mm/t)	Vf (mm/min)
Carbon & Alloy Steel (S-C, SCM) Below 250HB	JC5040	Chamfering	100	1,680	0.3	500	100	1,100	0.3	330
		C'sink	100	1,680	0.3	500	100	1,100	0.3	330
Die Steel (SKD) Below 255HB	JC5040	Chamfering	80	1,340	0.3	400	80	880	0.3	270
		C'sink	80	1,340	0.3	400	80	880	0.3	270
Cast Iron (GG) 150HB	JC5015	Chamfering	90	1,510	0.3	460	90	990	0.3	300
		C'sink	90	1,510	0.3	460	90	990	0.3	300
Nodular Cast Iron (GGG) Below 220HB	JC5015	Chamfering	75	1,260	0.3	380	75	820	0.3	250
		C'sink	75	1,260	0.3	380	75	820	0.3	250

Work Materials	Insert Grade	Type of Machining	CATALOG NUMBER							
			MCM-2535-M12				MCM-3343-M13			
			No. of Teeth: 2				No. of Teeth: 3			
			Vc (m/min)	n (min^{-1})	fz (mm/t)	Vf (mm/min)	Vc (m/min)	n (min^{-1})	fz (mm/t)	Vf (mm/min)
Carbon & Alloy Steel (S-C, SCM) Below 250HB	JC5040	Chamfering	100	910	0.3	550	100	760	0.3	680
		C'sink	125	1,130	0.3	680	125	950	0.3	850
Die Steel (SKD) Below 255HB	JC5040	Chamfering	80	730	0.3	440	80	610	0.3	550
		C'sink	100	910	0.3	550	100	760	0.3	680
Cast Iron (GG) 150HB	JC5015	Chamfering	90	820	0.3	500	90	680	0.3	610
		C'sink	100	1,000	0.3	600	100	760	0.3	680
Nodular Cast Iron (GGG) Below 220HB	JC5015	Chamfering	75	680	0.3	410	75	570	0.3	510
		C'sink	90	820	0.3	490	90	680	0.3	610

Vc = Cutting speed, n = Spindle speed, fz = Feed, Vf = Feed speed

Notes:

1. Cutting speed is relevant to maximum chamfering diameter.
2. In case of 3mm or more chamfering, reduce feed rate.

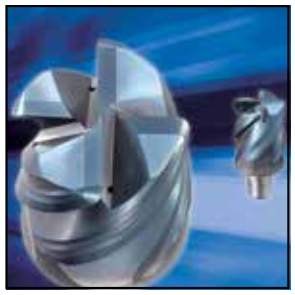
Notes

S-Heads

Solid Carbide Modular Heads

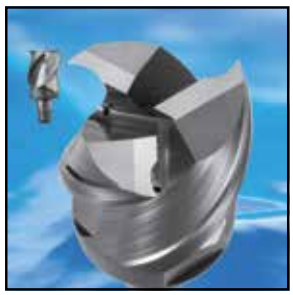
SMSA Features:

- Solid carbide modular head with highly repetitive ground screw.
- Available in 6 or 8 flutes.
- High accuracy for finishing both side walls and bottom surfaces.
- Coolant thru the center of head.
- DV coated JC8015 give excellent wear against heat resistant alloys.



SMSR Features:

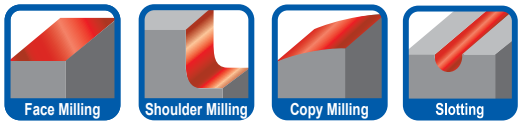
- “Anti-Vibration” solid carbide head with grade DH115 for wide application area.
- Unequal pitch & irregular helix achieves stable machining on thin walls.
- Designed for machining heat-resistant alloys like titanium.
- For deep cutting or finishing of aerospace and mold parts.



SMAL Features:

- Solid carbide head is uncoated & extremely sharp for machining aluminum.
- Positive geometry with 45° helix angle & 20° rake angle.
- 3 flutes allow excellent chip ejection.
- Coolant thru holes prevent material welding.

SMHB Features:



- Solid carbide "Ball S Head" with 4 flutes for hard or difficult to machine materials from roughing to finishing.
- Unique blade shape with sub-pocket achieves stable machining with good chip evacuation.
- Radius accuracy of cutting edge on the 16mm is 8μm or less, and 10μm or less on the 20mm.

DIJET®

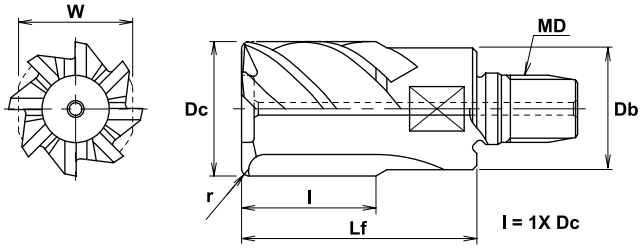
Face Milling | Shoulder Milling | Copy Milling

S-Head

METRIC

SMSA Type

- *Solid carbide modular head with multi-edges & 45º helix angle.*
- *For general steel and difficult to cut materials such as heat resistant alloys and titanium alloys.*



CATALOG NUMBER	STK	Carbide Grade	DIMENSIONS								
			Dc	r	l	Lf	Db	MD	Head Torque Nm	W	No. of Flutes
SMSA-8160R05-M8	•	JC8015	16	0.5	16	30	15	M8	10~11	14	8
SMSA-8160R10-M8	•		16	1	16	30	15	M8	10~11	14	8
SMSA-6160R20-M8	•		16	2	16	30	15	M8	10~11	14	6
SMSA-6160R30-M8	•		16	3	16	30	15	M8	10~11	14	6
SMSA-8200R05-M10	•	JC8015	20	0.5	20	35	19	M10	10~16	17	8
SMSA-8200R10-M10	•		20	1	20	35	19	M10	10~16	17	8
SMSA-8200R20-M10	•		20	2	20	35	19	M10	10~16	17	8
SMSA-6200R30-M10	•		20	3	20	35	19	M10	10~16	17	6
SMSA-8250R10-M12	•	JC8015	25	1	25	43	24	M12	15~20	22	8
SMSA-8250R20-M12	•		25	2	25	43	24	M12	15~20	22	8
SMSA-6250R30-M12	•		25	3	25	43	24	M12	15~20	22	6
SMSA-8300R10-M16	•	JC8015	30	1	30	56	29	M16	20~25	27	8
SMSA-8300R20-M16	•		30	2	30	56	29	M16	20~25	27	8
SMSA-6300R30-M16	•		30	3	30	56	29	M16	20~25	27	6
SMSA-8320R10-M16	•	JC8015	32	1	32	56	30	M16	20~25	27	8
SMSA-8320R20-M16	•		32	2	32	56	30	M16	20~25	27	8
SMSA-6320R30-M16	•		32	3	32	56	30	M16	20~25	27	6

Note: Modular Head Holders on page 109.

Recommended Cutting Data for SMSA

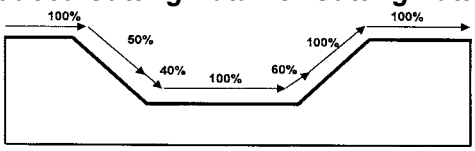
Material	Grade	SFM	IPT	DOC	WOC
Carbon Steel	JC8015	500	.005”	0.8Dc	0.1Dc
Mold Steel	JC8015	400	.004”	0.8Dc	0.1Dc
Hardened Die Steel (40-50 HRC)	JC8015	250	.003”	0.8Dc	0.05Dc
Stainless Steel	JC8015	350	.004”	0.8Dc	0.1Dc
Titanium	JC8015	200	.003”	0.8Dc	0.1Dc
Inconel	JC8015	75	.002”	0.8Dc	0.1Dc

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



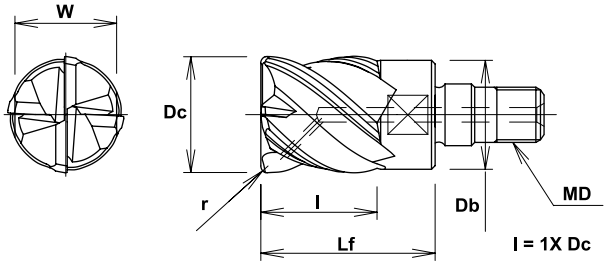
NOTE: Feed should be reduced when cutting the above pattern

METRIC

S-Head

SMSR Type

- *Solid carbide modular head with multi-edges & 42º -45º helix angles.*
- *Widely applied from carbon & mold steel to stainless steel & Ti-Alloy.*
- *Irregular & un-equal flutes for anti-vibration and coolant thru.*



CATALOG NUMBER	STK	Carbide Grade	DIMENSIONS								
			Dc	r	l	Lf	Db	MD	Head Torque Nm	W	No. of Flutes
SMSR-4160R05-M8	•	DH115	16	0.5	16	24	15	M8	10~11	14	4
SMSR-4160R10-M8	•		16	1	16	24	15	M8	10~11	14	4
SMSR-4160R20-M8	•		16	2	16	24	15	M8	10~11	14	4
SMSR-4160R30-M8	•		16	3	16	24	15	M8	10~11	14	4
SMSR-4200R05-M10	•	DH115	20	0.5	20	29	19	M10	10~16	17	4
SMSR-4200R10-M10	•		20	1	20	29	19	M10	10~16	17	4
SMSR-4200R20-M10	•		20	2	20	29	19	M10	10~16	17	4
SMSR-4200R30-M10	•		20	3	20	29	19	M10	10~16	17	4
SMSR-4250R10-M12	•	DH115	25	1	25	35	24	M12	15~20	22	4
SMSR-4250R20-M12	•		25	2	25	35	24	M12	15~20	22	4
SMSR-4250R30-M12	•		25	3	25	35	24	M12	15~20	22	4
SMSR-4300R10-M16	•	DH115	30	1	30	44	29	M16	20~25	27	4
SMSR-4300R20-M16	•		30	2	30	44	29	M16	20~25	27	4
SMSR-4300R30-M16	•		30	3	30	44	29	M16	20~25	27	4
SMSR-4320R10-M16	•	DH115	32	1	32	46	30	M16	20~25	27	4
SMSR-4320R20-M16	•		32	2	32	46	30	M16	20~25	27	4
SMSR-4320R30-M16	•		32	3	32	46	30	M16	20~25	27	4

Note: Modular Head Holders on page 109.

Recommended Cutting Data for SMSR

Material	Grade	SFM	IPT	DOC	WOC
Carbon Steel	DH115	500	.005”	0.8Dc	0.1Dc
Mold Steel	DH115	400	.004”	0.8Dc	0.1Dc
Hardened Die Steel (40-50 HRC)	DH115	250	.003”	0.8Dc	0.05Dc
Stainless Steel	DH115	350	.004”	0.8Dc	0.1Dc
Titanium	DH115	200	.003”	0.8Dc	0.1Dc
Inconel	DH115	75	.002”	0.8Dc	0.1Dc

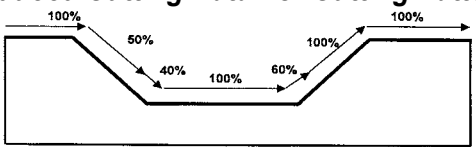
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



NOTE: Feed should be reduced when cutting the above pattern

DIJET®

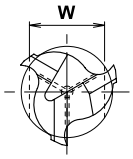
Shoulder Milling | Slotting | Pocket Milling | Helical Interpolation | Drilling

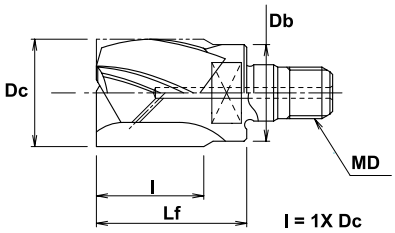
S-Head

METRIC

SMAL Type

- *Solid carbide modular head with multi-edges for aluminum.*
- *Positive geometry; 45° helix & 20° rake angles achieve sharpness and high precision.*
- *Coolant thru prevents welding and improves chip ejection.*





CATALOG NUMBER	STK	Carbide Grade	DIMENSIONS							
			Dc	l	Lf	Db	MD	Head Torque Nm	W	No. of Flutes
SMAL-3180-M8	•	FZ15	18	18	26	15	M8	10~11	14	3
SMAL-3200-M10	•		20	20	28	18	M10	10~16	14	3
SMAL-3220-M10	•		22	22	31	19	M10	10~16	17	3
SMAL-3250-M12	•		25	25	35	23	M12	15~20	19	3
SMAL-3280-M12	•		28	28	38	24	M12	15~20	22	3
SMAL-3320-M16	•		32	32	42	29	M16	20~25	27	3

Note: Modular Head Holders on page 109.

Recommended Cutting Data for SMAL

Material	Grade	SFM	IPT	DOC	WOC
Aluminum	FZ15	2000-4000	.003”	1D	.05D
Cast Aluminim (up to 13% Si)	FZ15	1500	.003”	1D	.05D
Copper	FZ15	300	.007”	1D	.05D

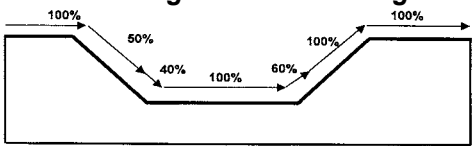
NOTE: 1. These parameters are for stable machining with steel bodies at lengths 4XD. See table below for longer applications.
2. RPM = 3.82 x SFM / Dia.
3. IPM = RPM x IPT x # of flutes (or teeth)

Additional Cutting Data For Longer Tools

Reach/Dia.	~4.0	4.0~4.5	4.5~5.3	5.3~5.7	5.7~6.2	6.3~
rpm %	100	90	80	80	75	70
Feed %	100	90	90	80	75	70

NOTE: The above percentages should be applied, according to tool ratio.

Reduced Cutting Data For Cutting Pattern



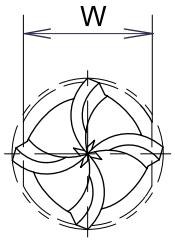
NOTE: Feed should be reduced when cutting the above pattern

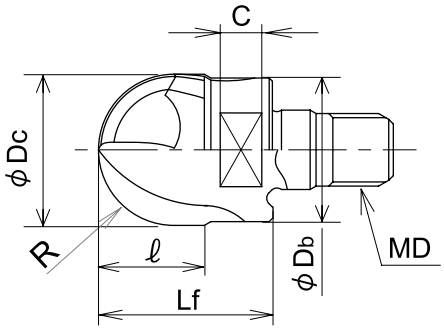
METRIC

S Head

SOLID BALL MODULAR HEAD
SMHB Type

• 4 flutes / Helix angle 45°





R of Ball Nose	Tolerence of R
R8	±0.008
R10	±0.010

CATALOG NUMBER	STK	GRADE	No. of Flutes	DIMENSIONS (mm)								
				R	ØDc	ℓ	Lf	ØDb	MD	HEAD TORQUE Nm	C	W
SMHB-4160-M8	•	DH115	4	8	16	11.2	19	15	M8	10~11	5.5	14
SMHB-4200-M10	•			10	20	14	23	19	M10	10~16	5.5	17

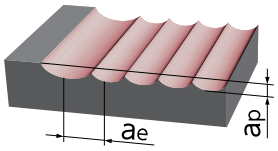
Note: Be sure to use DIJET DS type spanner wrench to prevent over-tightening.

Note: Modular Head Holders on page 109.

Recommended Cutting Data for SMHB type

For Finishing

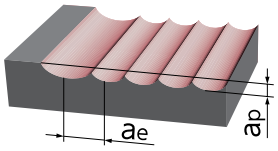
Work Material		Carbon Steel (1049)		Mold Steel (P20)		Tool & Die Steel (40~50HRC)	
Tool Diameter		n (RPM)	Vf (IPM)	n (RPM)	Vf (IPM)	n (RPM)	Vf (IPM)
R	ØDc						
8	16	6,000	157	5,000	118	5,500	137
10	20	5,700	157	4,500	118	5,000	137



ap≦0.03Dc
ae≦0.03Dc

For Roughing & Semi-Finishing

Work Material		Carbon Steel		Mold Steel		Tool & Die Steel	
Tool Diameter		n (RPM)	Vf (IPM)	n (RPM)	Vf (IPM)	n (RPM)	Vf (IPM)
R	ØDc						
8	16	4,500	118	3,800	86	4,200	102
10	20	4,300	118	3,400	86	3,800	102



ap≦0.1Dc
ae≦0.25Dc

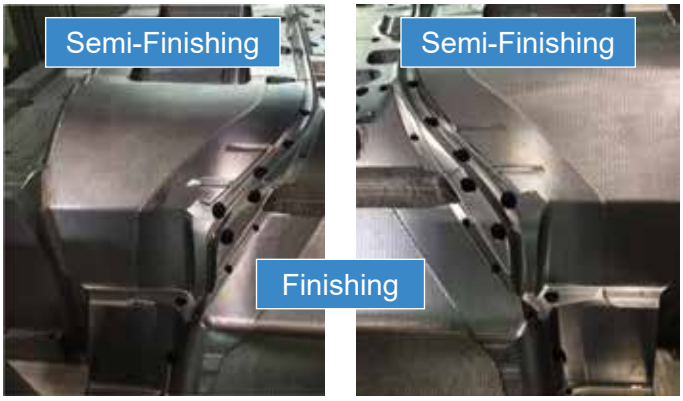
DIJET

Shoulder Milling | Copy Milling | Pocket Milling | Helical Interpolation

S Head

METRIC

Cutting Data ① - (1049)



Reach: 100mm

	Competitor A Solid Ball Nose End Mill 2 Flutes	SMHB-4200-M10 DH115
Surface Finish	Good	Good
Wear or Chipping	Wear	Wear

Work	Part Name	Plastic mold
	Material	1049, C50
	Hardness	-
Tool	Tool No.	Ø20mm
	Cutting speed	4,100min^{-1} (258m/min)
Cutting Conditions	Feed speed	Competitor A 2,400mm/min (fz=0.15mm/t) **DIJET SMHB 4,800mm/min (fz=0.15mm/t)**
	ap	0.2mm
	ae	0.2mm
	Coolant	Air blow

Result

2 times machining efficiency
2 times tool life

Cutting Data ② - (DAC55)

Reach: 48mm

	Competitor A High Precision Indexabe Ball Nose Endmill	SMHB-4160-M8 DH115
Surface Finish	Good	Good
Wear or Chipping	Wear	Wear

Work	Part Name	Slide core
	Material	DAC55, H13
	Hardness	43-45HRC
Tool	Tool No.	Ø16mm
	Cutting speed	8,000min^{-1} (402m/min)
Cutting Conditions	Feed speed	Competitor A 2,400mm/min (fz=0.15mm/t) **DIJET SMHB 4,800mm/min (fz=0.15mm/t)**
	ap	0.05mm
	ae	0.14mm
	Coolant	Water soluble

Result

Tool life was 78 minutes.
But, can continue to use due to small wear.

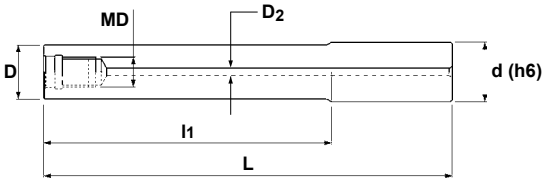
INCH

Modular Head Holders

MODULAR HEAD HOLDERS

MSN Type

Solid Carbide with Coolant Thru



Specifications

CATALOG NUMBER	STK	DIMENSIONS					
		D	l1	L	d	MD	D2
MSN-M6-0.5-S050C	•	.452	.500	2.50	.500	M6	.118
MSN-M6-1.0-S050C	•	.452	1.00	3.15	.500	M6	.118
MSN-M6-2.0-S050C	•	.452	2.00	3.93	.500	M6	.118
MSN-M6-3.0-S050C	•	.452	3.00	5.12	.500	M6	.118
MSN-M8-0.5-S062C	•	.591	.500	3.50	.625	M8	.157
MSN-M8-1.0-S062C	•	.591	1.00	4.00	.625	M8	.157
MSN-M8-2.0-S062C	•	.591	2.00	5.00	.625	M8	.157
MSN-M8-4.0-S062C	•	.591	4.00	7.00	.625	M8	.157
MSN-M8-6.0-S062C	•	.591	6.00	9.00	.625	M8	.157
MSN-M10-0.5-S075C	•	.728	.500	3.50	.750	M10	.157
MSN-M10-1.0-S075C	•	.728	1.00	4.00	.750	M10	.157
MSN-M10-2.0-S075C	•	.728	2.00	5.00	.750	M10	.157
MSN-M10-3.0-S075C	•	.728	3.00	6.00	.750	M10	.157
MSN-M10-4.0-S075C	•	.728	4.00	7.00	.750	M10	.157
MSN-M10-5.0-S075C	•	.728	5.00	8.00	.750	M10	.157
MSN-M10-6.0-S075C	•	.728	6.00	9.00	.750	M10	.157
MSN-M12-0.5-S100C	•	.945	.500	3.50	1.00	M12	.236
MSN-M12-1.0-S100C	•	.945	1.00	4.00	1.00	M12	.236
MSN-M12-2.0-S100C	•	.945	2.00	5.00	1.00	M12	.236
MSN-M12-3.0-S100C	•	.945	3.00	6.00	1.00	M12	.236
MSN-M12-4.0-S100C	•	.945	4.00	7.00	1.00	M12	.236
MSN-M12-5.0-S100C	•	.945	5.00	8.00	1.00	M12	.236
MSN-M12-6.0-S100C	•	.945	6.00	9.00	1.00	M12	.236
MSN-M12-8.0-S100C	•	.945	8.00	11.00	1.00	M12	.236
MSN-M16-0.5-S125C	•	1.14	.500	3.50	1.25	M16	.315
MSN-M16-1.0-S125C	•	1.14	1.00	4.00	1.25	M16	.315
MSN-M16-2.0-S125C	•	1.14	2.00	5.00	1.25	M16	.315
MSN-M16-4.0-S125C	•	1.14	4.00	7.00	1.25	M16	.315
MSN-M16-6.0-S125C	•	1.14	6.00	9.00	1.25	M16	.315
MSN-M16-8.0-S125C	•	1.14	8.00	11.00	1.25	M16	.315

DIJET®

Modular Head Series

METRIC

MODULAR HEAD HOLDERS

MSN Type

Solid Carbide with Coolant Thru

Fig. 1

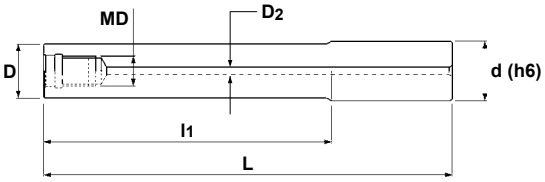
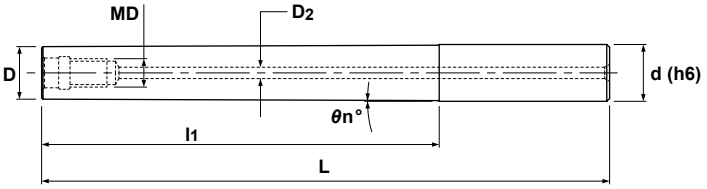


Fig. 2



Specifications

CATALOG NUMBER	STK	DIMENSIONS							FIG.
		D	l1	L	d	θn°	MD	D2	
MSN-M6-12-S10C	•	9.7	12	60	10	-	M6	3	1
MSN-M6-30-S10C	•	9.7	30	80	10	-	M6	3	1
MSN-M6-50-S10C	•	9.7	50	100	10	-	M6	3	1
MSN-M6-80-S10C	•	9.7	80	130	10	-	M6	3	1
MSN-M6-15-S12C	•	11.5	15	60	12	-	M6	3	1
MSN-M6-15-16C	•	13.5	15	60	16	-	M6	3	1
MSN-M6-30-S12C	•	11.5	30	80	12	-	M6	3	1
MSN-M6-30-S16C	•	13.5	30	80	16	-	M6	3	1
MSN-M6-35T-S12C	•	9.5	35	92	12	1°30'	M6	3	2
MSN-M6-50-S12C	•	11.5	50	100	12	-	M6	3	1
MSN-M6-50-S16C	•	13.5	50	100	16	-	M6	3	1
MSN-M6-57T-S12C	•	9.5	57	114	12	1°	M6	3	2
MSN-M6-65T-S16C	•	11.2	65	125	16	1°45'	M6	3	2
MSN-M6-80-S12C	•	11.5	80	130	12	-	M6	3	1
MSN-M6-80-S16C	•	13.5	80	130	16	-	M6	3	1
MSN-M8-20-S16C	•	15.5	20	75	16	-	M8	4	1
MSN-M8-40-S16C	•	15.5	40	95	16	-	M8	4	1
MSN-M8-40T-S20C	•	14.5	40	100	20	3°30'	M8	4	2
MSN-M8-77T-S20C	•	14.5	77	143	20	1°45'	M8	4	2
MSN-M8-80-S16C	•	15.5	80	135	16	-	M8	4	1
MSN-M8-120-S16C	•	15.5	120	175	16	-	M8	4	1
MSN-M8-152-S16C	•	15.5	152	207	16	-	M8	4	1
MSN-M10-20-S20C	•	19.5	20	80	20	-	M10	6	1
MSN-M10-40-S20C	•	19.5	40	100	20	-	M10	4	1
MSN-M10-40T-S20C	•	18.5	40	100	20	0°43'	M10	4	2
MSN-M10-70-S20C	•	19.5	70	130	20	-	M10	4	1
MSN-M10-85T-S25C	•	18.5	85	161	25	2°	M10	4	2
MSN-M10-90-S20C	•	19.5	90	150	20	-	M10	4	1
MSN-M10-90T-S20C	•	18.5	90	150	20	0°19'	M10	4	2
MSN-M10-140-S20C	•	19.5	140	200	20	-	M10	4	1
MSN-M10-140T-S20C	•	18.5	140	200	20	0°12'	M10	4	2
MSN-M10-160-S20C	•	19.5	160	220	20	-	M10	4	1
MSN-M10-210-S20C	•	19.5	210	270	20	-	M10	4	1

METRIC

Modular Head Holders

MODULAR HEAD HOLDERS

MSN Type

Solid Carbide with Coolant Thru

Fig. 1

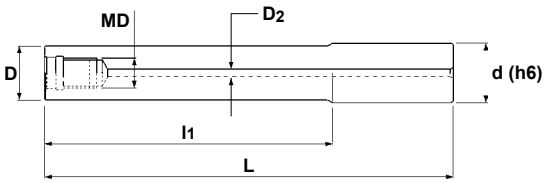
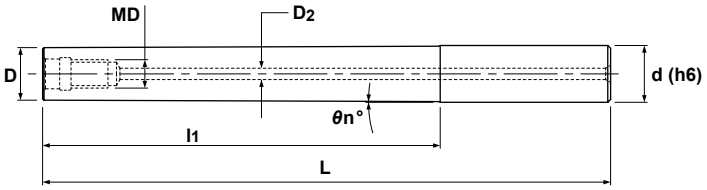


Fig. 2



Specifications

CATALOG NUMBER	STK	DIMENSIONS							FIG.
		D	l1	L	d	θn°	MD	D2	
MSN-M12-25-S25C	•	24	25	90	25	-	M12	6	1
MSN-M12-55-S25C	•	24	55	120	25	-	M12	6	1
MSN-M12-100T-S32C	•	23.5	100	180	32	2°	M12	6	2
MSN-M12-105-S25C	•	24	105	170	25	-	M12	6	1
MSN-M12-135-S25C	•	24	135	215	25	-	M12	6	1
MSN-M12-155-S25C	•	24	155	220	25	-	M12	6	1
MSN-M12-200-S25C	•	24	200	265	25	-	M12	6	1
MSN-M16-25-S32C	•	29	25	90	32	-	M16	8	1
MSN-M16-55-S32C	•	29	55	120	32	-	M16	8	1
MSN-M16-77-S32C	•	29	77	157	32	-	M16	8	1
MSN-M16-97-S32C	•	29	97	177	32	-	M16	8	1
MSN-M16-105-S32C	•	29	105	170	32	-	M16	8	1
MSN-M16-117T-S32C	•	29	117	197	32	0°38’	M16	8	2
MSN-M16-127-S32C	•	29	127	207	32	-	M16	8	1
MSN-M16-127T-S32C	•	29	127	207	32	0°30'	M16	8	2
MSN-M16-155-S32C	•	29	155	220	32	-	M16	8	1
MSN-M16-177-S32C	•	29	177	257	32	-	M16	8	1
MSN-M16-177T-S32C	•	29	177	257	32	0°23’	M16	8	2
MSN-M16-195-S32C	•	29	195	260	32	-	M16	8	1
MSN-M16-197T-S32C	•	29	197	277	32	0°23’	M16	8	2
MSN-M16-225-S32C	•	29	225	290	32	-	M16	8	1
MSN-M16-245-S32C	•	29	245	310	32	-	M16	8	1
MSN-M16-295-S32C	•	29	295	360	32	-	M16	8	1

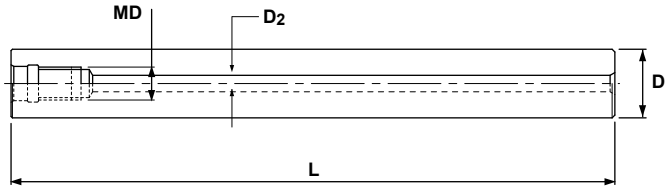
DIJET®

Modular Head Holders

METRIC

MODULAR HEAD HOLDERS

MSN Type - Straight
Solid Carbide with Coolant Thru



Specifications

CATALOG NUMBER	STK	DIMENSIONS			
		D	L	MD	D2
MSN-M6-67S-S9.8C	•	9.8	67	M6	3
MSN-M6-107S-S9.8C	•	9.8	107	M6	3
MSN-M6-82S-S10C	•	10	82	M6	3
MSN-M6-122S-S10C	•	10	122	M6	3
MSN-M6-80S-S11.8C	•	11.8	80	M6	3
MSN-M6-120S-S11.8C	•	11.8	120	M6	3
MSN-M6-90S-S12C	•	12	90	M6	3
MSN-M6-130S-S12C	•	12	130	M6	3
MSN-M8-87S-S14C	•	14	87	M8	4
MSN-M8-97S-S15C	•	15	97	M8	4
MSN-M8-137S-S14C	•	14	137	M8	4
MSN-M8-147S-S15C	•	15	147	M8	4
MSN-M8-197S-S15C	•	15	197	M8	4
MSN-M8-107S-S16C	•	16	107	M8	4
MSN-M8-157S-S16C	•	16	157	M8	4
MSN-M10-130S-S18C	•	18	130	M10	4
MSN-M10-190S-S18C	•	18	190	M10	4
MSN-M10-240S-S18C	•	18	240	M10	4
MSN-M10-130S-S20C	•	20	130	M10	4
MSN-M10-190S-S20C	•	20	190	M10	4
MSN-M10-250S-S20C	•	20	250	M10	4
MSN-M12-185S-S23C	•	23	185	M12	6
MSN-M12-265S-S23C	•	23	265	M12	6
MSN-M12-185S-S24C	•	24	185	M12	6
MSN-M12-265S-S24C	•	24	265	M12	6
MSN-M12-145S-S25C	•	25	145	M12	6
MSN-M12-215S-S25C	•	25	215	M12	6
MSN-M12-285S-S25C	•	25	285	M12	6
MSN-M16-160S-S28C	•	28	160	M16	8
MSN-M16-230S-S28C	•	28	230	M16	8
MSN-M16-310S-S28C	•	28	310	M16	8
MSN-M16-157S-S32C	•	32	157	M16	8
MSN-M16-217S-S32C	•	32	217	M16	8
MSN-M16-287S-S32C	•	32	287	M16	8
MSN-M16-357S-S32C	•	32	357	M16	8

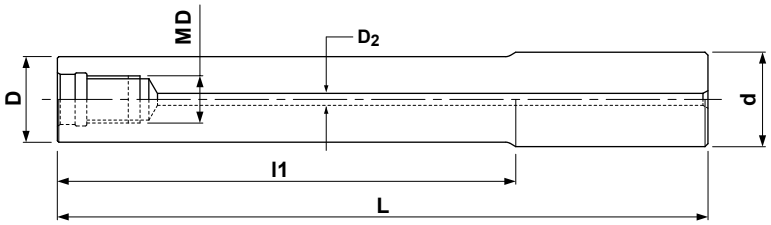
INCH METRIC

Modular Head Holders

MODULAR HEAD HOLDERS

MGN Type
G-Body with Coolant Thru

G-Body



Specifications - Inch

CATALOG NUMBER	STK	DIMENSIONS					
		D	l1	L	d	MD	D2
MGN-M6-0.5-S050	•	.452	.500	2.50	.500	M6	.118
MGN-M6-1.0-S050	•	.452	1.00	3.15	.500	M6	.118
MGN-M6-2.0-S050	•	.452	2.00	3.93	.500	M6	.118
MGN-M8-0.5-S062	•	.591	.500	3.50	.625	M8	.157
MGN-M8-1.0-S062	•	.591	1.00	4.00	.625	M8	.157
MGN-M8-2.0-S062	•	.591	2.00	5.00	.625	M8	.157
MGN-M10-0.5-S075	•	.728	.500	3.50	.750	M10	.157
MGN-M10-1.0-S075	•	.728	1.00	4.00	.750	M10	.157
MGN-M10-2.0-S075	•	.728	2.00	5.00	.750	M10	.157
MGN-M12-0.5-S100	•	.945	.500	3.50	1.00	M12	.236
MGN-M12-1.0-S100	•	.945	1.00	4.00	1.00	M12	.236
MGN-M12-2.0-S100	•	.945	2.00	5.00	1.00	M12	.236
MGN-M12-3.0-S100	•	.945	3.00	6.00	1.00	M12	.236
MGN-M16-0.5-S125	•	1.14	.500	3.50	1.25	M16	.315
MGN-M16-1.0-S125	•	1.14	1.00	4.00	1.25	M16	.315
MGN-M16-2.0-S125	•	1.14	2.00	5.00	1.25	M16	.315
MGN-M16-3.0-S125	•	1.14	3.00	6.00	1.25	M16	.315

Specifications - Metric

CATALOG NUMBER	STK	DIMENSIONS					
		D	l1	L	d	MD	D2
MGN-M8-17-S16	•	15.5	17	97	16	M8	4
MGN-M10-30-S20	•	19	30	100	20	M10	4
MGN-M12-35-S25	•	24	35	105	25	M12	4
MGN-M12-85-S25	•	24	85	165	25	M12	4
MGN-M16-37-S32	•	29	37	107	32	M16	6
MGN-M16-77-S32	•	29	77	157	32	M16	6

Proper Mounting of Modular Heads

Cleaning
Remove dirt and chips with air from the connecting thread, face of modular head and MSN/MGN shank holder.

Initial Tightening
Tighten by hand until the head and the shank holder faces touch.

Final Tightening
Tighten slowly with torque control spanner wrench or DIJET DS type spanner wrench and confirm that there is no gap.
Attention: Final tightening without initial tightening cause connecting thread damage.

Steel Modular Heads

Thread	Tightening torque	Spanner size
M8	16N·m	10, 12 ✧
M10	16N·m	14, 15
M12	20N·m	17, 19
M16	25N·m	22, 26

Solid Carbide Heads

Thread	Tightening torque	Spanner size
M8	10-11 Nm	14
M10	10-16 Nm	17
M12	15-20 Nm	22
M16	20-25 Nm	27

Modular heads are supplied without spanner wrench.

In case of choosing torque control spanner wrench, confirm that the wrench size is matched to the dimensions W & C of each modular head. (There are some cases that modifying the thickness of spanner wrench is necessary)

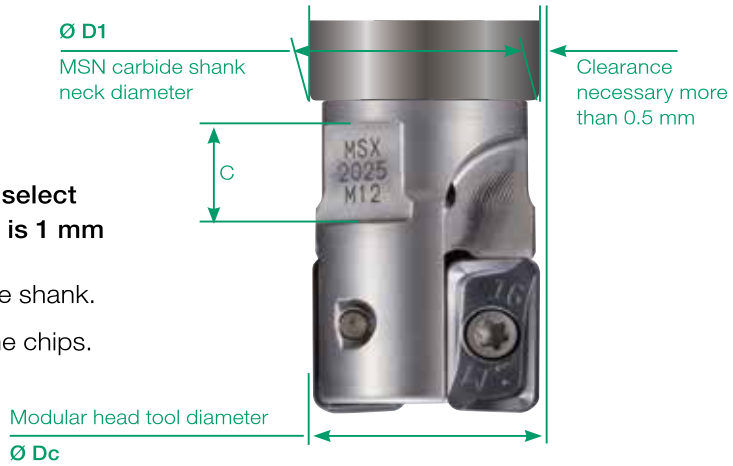
✧ = DIJET stocks DS-8 and DS-12 type spanner wrenches.

SELECTION OF MSN CARBIDE SHANK HOLDER

Ø Dc – Ø D1 ≥ 1mm

When using modular head over Ø 16mm, **please select MSN carbide shank which the diameter (Ø D1) is 1 mm or smaller than modular head (Ø Dc)**.
Wrong selection can cause damage to the carbide shank.

Coolant or air blow is recommended to remove the chips.



Caution for mounting in shrink fit holder.
When you use a carbide shank and a modular head on a shrink fit holder, please shrink fit only the carbide shank without mounting the modular head. Mount the modular head on the shank after shrink fit operation is complete.

In case of shrink fit MSN shank + modular head together, it will be difficult to loosen due to heat dissapation.

CATALOG NUMBER	DESCRIPTION	PAGE NUMBER
70710	Wedge	A-86, A-87
A		
A-15T	Wrench	A-4, A-5, A-6, A-14, A-15, A-18, A-24, A-53, A-72, A-73, A-76, A-86, A-87, A-96
A-20	Wrench	A-4, A-5, A-6, A-24, A-25, A-26, A-32, A-38, A-42, A-43, A-44, A-60, A-61, A-80, A-81, A-93
A-316	Wrench	A-24
ALX-…	Aero-Chipper End Mill - Metric	A-65
ALX-…	Aero-Chipper Face Mill - Inch	A-66
ALX-…	Aero-Chipper Face Mill - Metric	A-66
ALX-…LG	Aero-Chipper End Mill - Inch	A-65
ALX-…NP	Aero-Chipper Face Mill - Inch	A-66
APGW150360…	Under Cutter Insert	A-97
C		
CSW-407	Screw	A-25, A-100
CSW-408H	Screw	A-2, A-3, A-93
CSW-513H	Screw	A-38, A-60, A-61
D		
DCM-17	Clamp Assembly	A-4, A-5, A-6, A-80, A-81, A-93
DCM-18	Clamp Assembly	A-3, A-5, A-6
DSW-2563H	Screw	A-32
DSW-306H	Screw	A-93
DSW-307H	Screw	A-24, A-25, A-32, A-48, A-49, A-50, A-94, A-96, A-99
DSW-4075H	Screw	A-42, A-43, A-44, A-64, A-65
DSW-4085	Screw	A-24, A-25, A-64, A-65, A-66, A-96
DSW-410H	Screw	A-2, A-3, A-4, A-5, A-6, A-14, A-15, A-94
DSW-4510H	Screw	A-93
DSW-4512H	Screw	A-4, A-5, A-6, A-80, A-81
DSW-509	Screw	A-24, A-25
DSW-511H	Screw	A-32
DUM-…	Under Cutter End Mill - Metric	A-96
E		
ECS-0030	Screw	A-24
ESW-206	Screw	A-25, A-26, A-94, A-99
ESW-307	Screw	A-98
ESW-406	Screw	A-26
ESW-408	Screw	A-98
ESW-410	Screw	A-98
EXSAP-…	Extreme SAP-17 End Mill - Metric	A-54
EXSAP-…-11…	Extreme SAP-11 End Mill - Metric	A-49
EXSAP-…-11-…NP	Extreme SAP-11 End Mill - Inch	A-49
EXSAP-…LG	Extreme SAP-17 End Mill - Inch	A-54
EXSAP-…R-…	Extreme SAP-17 Face Mill - Inch	A-53
EXSAP-…R-…	Extreme SAP-17 Face Mill - Metric	A-53
EXSAP-…R-11-…	Extreme SAP-11 Face Mill - Inch	A-48
EXSAP-…R-11-…	Extreme SAP-11 Face Mill - Metric	A-48
EXSIX-…	Shoulder Six Face Mill - Inch	A-60
EXSIX-…	Shoulder Six Face Mill - Metric	A-61
EXTDM-…	Extreme Diemaster Face Mill - Inch	A-18
EXTDM-…	Extreme Diemaster Face Mill - Metric	A-18
EXW-510	Screw	A-25, A-26

INDEX

CATALOG NUMBER	DESCRIPTION	PAGE NUMBER
F		
FB3-6	Under Cutter Flange Button	A-93
FB4-6	Under Cutter Flange Button	A-93
H		
HDM-…	Super Diemaster Face Mill - Inch	A-4
HDM-…	Super Diemaster End Mill - Inch	A-4
HDM-…	Super Diemaster Face Mill - Metric	A-5, A-6
HEP-…	Hepta Mill Face Mill - Metric	A-80
HEP-…	Hepta Mill End Mill - Metric	A-80
HEP-…-FM	Hepta Mill Face Mill - Metric	A-81
HSW-614H	Screw	A-24, A-25, A-26
I		
IM-SP32GS	Carbide Insert	A-27, A-28, A-100
IM-SP43GS	Swing Ball Insert	A-27, A-28
L		
LS-110	Wedge Screw	A-86, A-87
LW-020	Wrench	A-93
LW-025	Wrench	A-93
LW-035	SSD90 & SSE45 Shim Wrench	A-72, A-73, A-76, A-77
M		
MAL-…	Aero-Chipper Modular Head - Inch	A-64
MAL-…	Aero-Chipper Modular Head -Metric	A-64
MCM-…	Chamfer Cutter Modular Head - Metric	A-100
MGN-…	Modular Head Steel Holder - Inch	A-113
MGN-…	Modular Head Steel Holder - Metric	A-113
MSN-…-S…-C	Modular Head Carbide Holder - Inch	A-109
MSN-…-S…-C	Modular Head Carbide Holder - Metric	A-110, A-111
MSN-…S-S…-C	Modular Head Carbide Holder - Metric	A-112
MSN-…T-S…-C	Modular Head Carbide Holder - Metric	A-110, A-111
MSU-…	Under Cutter Modular Head - Metric	A-93
MSW-…	Swing Ball Modular Head - Inch	A-24
MSW-…	Swing Ball Modular Head - Metric	A-24
MSWX-…	Swing Ball -Neo Modular Head - Metric	A-32
MSX-…	Extreme SAP-17 Modular Head - Inch	A-55
MSX-…	Extreme SAP-17 Modular Head - Metric	A-55
MSX-…-11…	Extreme SAP-11 Modular Head - Inch	A-50
MSX-…-11…	Extreme SAP-11 Modular Head - Metric	A-50
MTD-…	TDM Blade-Chipper Modular Head - Inch	A-14
MTX-…	Extreme Diemate Modular Head - Metric	A-18
MUC-…	Under Cutter Modular Head - Metric	A-94
N		
NHP-…	Nega-Hepta Mill Face Mill - Metric	A-86
R		
RDGT…	Super Diemaster Insert	A-7
RDHX2006…	Super Diemaster Insert	A-7
RDMT…	Super Diemaster Insert	A-7
RDMW…	Super Diemaster Insert	A-7
RNMU…	Extreme Diemate Insert	A-19
RPMT…	TDM Blade-Chipper Insert	A-15

CATALOG NUMBER	DESCRIPTION	PAGE NUMBER
S		
SDH-…	Super Diemaster Modular Head - Inch	A-2
SDH-…	Super Diemaster Modular Head - Metric	A-3
SDHW1204PDTR	SSD90 Insert	A-73
SDMT1204PDER	SSD90 Insert	A-73
SEGT13T3AGFN-AL	SSE45 Insert	A-77
SEMT13T3AGSN-...	SSE45 Insert	A-77
SMAL-…	S-Head	A-106
SMHB-…	S-Head	A-107
SMSA-…	S-Head	A-104
SM-SD12	SSD90 Shim Seat	A-72, A-73
SMSR-…	S-Head	A-105
SPGA090304	Carbide Insert	A-28, A-97
SPMW090304	Under Cutter Insert	A-97
SSD90-…	SSD90 Face Mill - Metric	A-72
SSE45-…	SSE45 Face Mill - Metric	A-76
SSV-…	Sic-Evo Face Mill - Inch	A-42
SSV-…	Sic-Evo Face Mill - Metric	A-42
SSV-…	Sic-Evo End Mill - Metric	A-43
SSV-…	Sic-Evo Modular Head - Inch	A-44
SSV-…	Sic-Evo Modular Head - Metric	A-44
SSV-…NP	Sic-Evo End Mill - Inch	A-43
SSW-535	SSD90 & SSE45 Shim Screw	A-72, A-73, A-76, A-77
S-TSC4-…	T-Slot End Mill - Metric	A-99
SWB…	Swing Ball End Mill - Metric	A-26
SWB-…	Swing Ball End Mill - Inch	A-25
SWB-…EC	Swing Ball End Cap - Inch	A-24
SWB2…	Swing Ball Inserts - Inch	A-27
SWB2…	Swing Ball Inserts - Metric	A-28
SWB4-…	Swing Ball End Mill - Inch	A-25
SWB6-…	Swing Ball End Mill - Inch	A-25
SWBX-…	Swing Ball -Neo End Mill - Metric	A-32
SWBX2…	Swing Ball -Neo Inserts - Metric	A-33
T		
T-07SD	Wrench	A-99
T-08	Wrench	A-32, A-94, A-98
T-08SD	Wrench	A-2, A-3, A-25, A-26, A-32, A-99
T-10	Wrench	A-32, A-48, A-49, A-50, A-93, A-94
T-10SD	Wrench	A-24, A-25, A-96, A-99
T-15	Wrench	A-2, A-3, A-15, A-25, A-26, A-32, A-54, A-55, A-64, A-65, A-66, A-93, A-94, A-98, A-100
T-25	Wrench	A-26
T-30	Wrench	A-24, A-25, A-26
TDM-…NP	TDM Blade-Chipper End Mill - Inch	A-14
TDM-…R…	TDM Balde-Chipper Face Mill - Inch	A-15
TSB…	T-Slot Insert	A-98
TSC…	T-Slot End Mill - Metric	A-98
TSW-2250	Screw	A-99
TSW-2556H	Screw	A-2, A-3, A-32
TSW-3512H	Screw	A-72, A-73, A-76, A-77
TSW-410H	Screw	A-18, A-32, A-53, A-54, A-55
TSW-511	Screw	A-25, A-26
TSW-614H	Screw	A-26

INDEX

CATALOG NUMBER	DESCRIPTION	PAGE NUMBER
W		
WDMW…	Under Cutter Insert	A-93
WDR-…	Wild Radius Face Mill - Metric	A-38
X		
XDHW080610ZER-W	Hepta Mill Wiper Insert	A-82
XDMT…	Hepta Mill Insert	A-82
XDMW…	Hepta Mill Insert	A-82
XEHW13T3AGSN-W	SSE45 Wiper Insert	A-77
XNHU0806AEN-W	Nega-Hepta Mill Wiper Insert	A-87
XNMU080610…	Nega-Hepta Mill Insert	A-87
XOGT1605..PDER	Aero-Chipper Insert	A-67
XOGT1605…PDFR	Aero-Chipper Insert	A-67
Y		
YCMU0907..ZER-PM	Shoulder Six Insert	A-60
YDMT…	Wild Radius Insert	A-38
YDMW…	Wild Radius Insert	A-38
Z		
ZCMT100..	Carbide Insert	A-27, A-28, A-94, A-99
ZDMT…	Under Cutter Insert	A-94, A-97, A-99
ZNGU1105..ZER-..	Extreme SAP-11 Insert	A-50
ZNGU1709…ZER-PM	Extreme SAP-17 Insert	A-55
ZOET1605…ZFR-NL	Sic-Evo Insert	A-44
ZOMT1605..ZER-PM	Sic-Evo Insert	A-44
ZPMT…	Under Cutter Insert	A-94, A-97, A-99
ZPMT100308…	Swing Ball -Neo Inserts	A-33

Notes

Notes

DIJET, INC. (USA)

DIJET INDUSTRIAL (JAPAN)

Oaska Plant (Carbide, CT, Wear Parts)

Mie Plant (TA & IT Plant)

Mie Plant (Raw Material Powder)

Tondabayashi Plant

Mie Plant (Carbide)

WORLDWIDE DISTRIBUTION

Europe:

Austria
Belgium
Czech Republic
Denmark
England
Finland
France
Germany
Greece
Holland
Hungary
Italy
Ireland
Netherlands
Norway
Poland
Portugal
Romania
Slovenia
Spain
Sweden
Switzerland

North America:

Canada
Mexico
U.S.A.

North East:

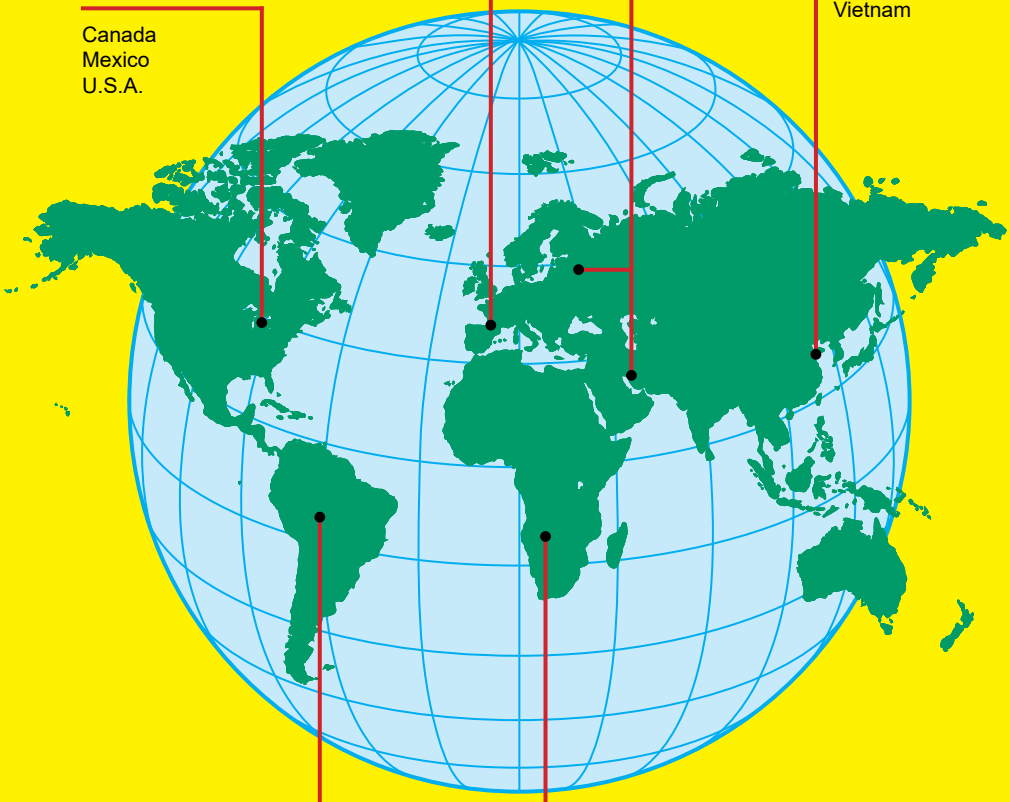
Russia

Middle East:

India
Israel
Pakistan
Turkey

Asia:

China
Indonesia
Japan
Korea
Malaysia
Philippines
Singapore
Taiwan
Thailand
Vietnam



South America:

Brazil
Argentina

Africa:

South Africa

DIJET, INC.
45807 Helm Street, Plymouth, MI 48170
Phone: 1-800-743-4538 Fax: 1-734-454-9395
www.dijetusa.com

DIJET INDUSTRIAL CO., LTD.
2-1-18, Kami-Higashi, Hirano-ku,
Osaka 547-0002, Japan
Phone: +81-6-6794-0167
Fax: +81-6-6793-3930
www.dijet.co.jp

DIJET GmbH
Immermannstr. 9
40210 Düsseldorf, Germany
Phone: +49 (0) 211-50088820
Fax: +49 (0) 211-50088823
www.dijet.de

ISO9001 JQA-2089 ISO14001 JQA-EM1580

No part of this catalog may be printed, copied or reproduced without the expressed written permission of DIJET, Inc.