

PRODUCT NEWS

PN-E-008

SERIES EXPANSION



High-Feed Milling Cutter with Double-Sided Inserts

QMGII Series



GMX07/MXG07

Modular type: Ø10–Ø20

Shank type: Ø10–Ø16

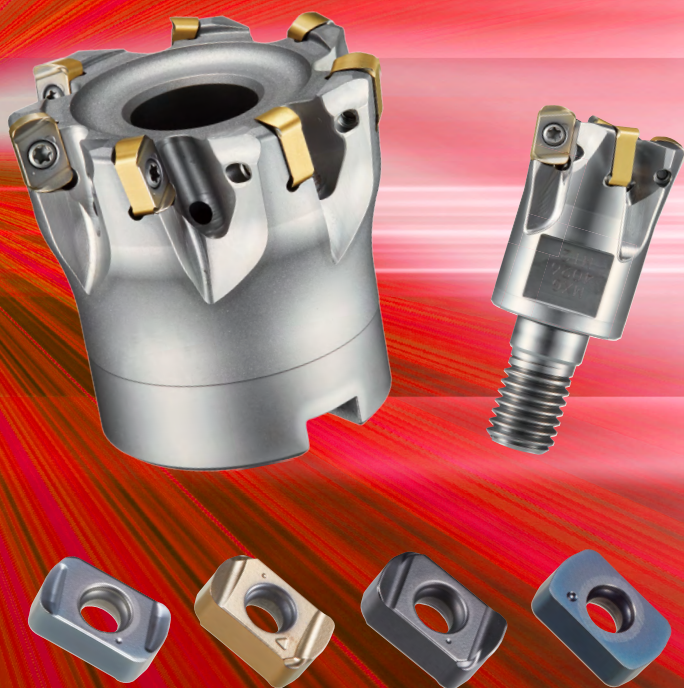


GMX10/MXG10

Bore type: Ø40–Ø66

Modular type: Ø16–Ø42

Shank type: Ø16–Ø32



DIJET GmbH

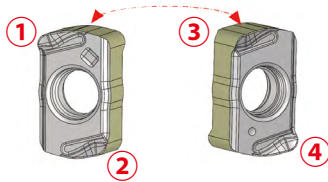
www.dijet.de

High-Feed Milling Cutter Multi-Blade Design with **Double-Sided Compact Inserts** for High Productivity

Feature 1

Lineup from Ø10, featuring economical double-sided inserts with four cutting edges.

1. Economical Double-Sided Inserts



2. Lineup from Ø10 – Insert size 07



- ✓ Tool diameter **Ø10**–Ø20 mm
- ✓ Max. depth of cut: **0.5 mm**
- ✓ **Modular type**: Ø10–Ø20 mm
- Shank type**: Ø10–Ø16 mm

Feature 2

High-Rigidity Design for Stable, Reliable Machining.

1. Increased insert rigidity



NEW

MXG07
ENMU07...

MPM
EOMT06...



2. M2 Fine-Pitch Screw

Fine-pitch
M2 screw



NEW

MXG07

Coarse-pitch
M1.8 screw

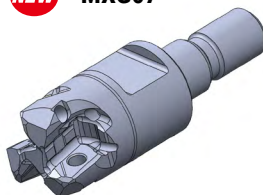


MPM
(Conventional model)

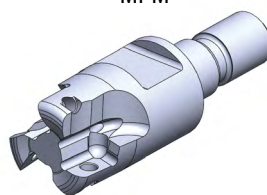
3. High-Rigidity Body Design

NEW

MXG07



MPM



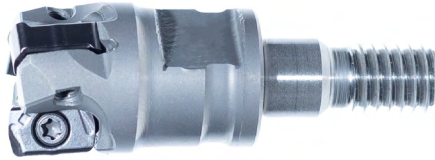
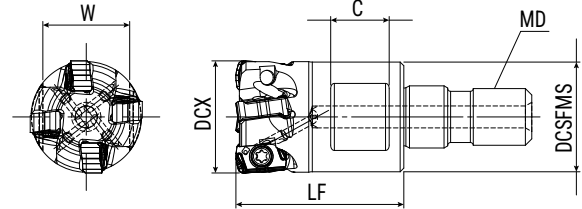
Body rigidity improved by 44%

Through
coolant
hole



MXG07
TYPE

Modular Type



Cat. No.	Stock	No. of inserts	Dimensions (mm)						Insert
			DCX	LF	DCSFMS	MD	C	W	
MXG-2010-07-M6	●	2	10	18	9.5	M6	6.5	8	ENMU07T207ZER-**
MXG-2011-07-M6	●	2	11	18	9.6	M6	6.5	8	
MXG-3012-07-M6	●	3	12	20	11.2	M6	6.5	8	
MXG-3013-07-M6	●	3	13	20	11.2	M6	6.5	8	
MXG-4016-07-M8	●	4	16	23	15	M8	8	12	
MXG-4017-07-M8	●	4	17	23	15	M8	8	12	
MXG-5020-07-M10	●	5	20	30	18	M10	9	14	

Note: All cutter bodies are supplied without inserts, wrenches, or MOLY.

● : Stocked Items

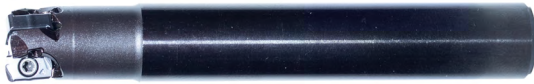
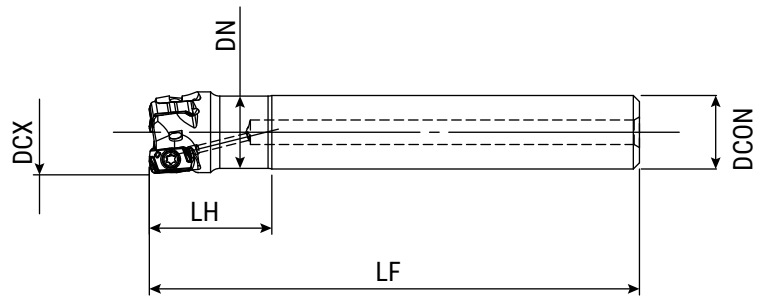
Screw	Torque (N·m)	Wrench
TSW-2044H	0.5	A-06

GMX07/MXG07 type

GMX07
TYPE

Shank Type

Through
coolant
hole



Type	Cat. No.	Stock	No. of inserts	Dimensions (mm)					Insert
				DCX	LH	LF	DN	DCON	
Standard	GMX2010-07-20-S10+A	●	2	10	20	80	9.2	10	ENMU07T207ZER-**
	GMX3012-07-20-S12+A	●	3	12	20	80	11.2	12	
	GMX3014-07-20-S12+A	●	3	14	20	80	11.8	12	
	GMX4016-07-25-S16+A	●	4	16	25	90	14.0	16	
Long shank	GMX2011-07-20-S10-LS+A	●	2	11	20	120	9.6	10	
	GMX3013-07-20-S12-LS+A	●	3	13	20	120	11.6	12	
	GMX3014-07-20-S12-LS+A	●	3	14	20	120	11.8	12	

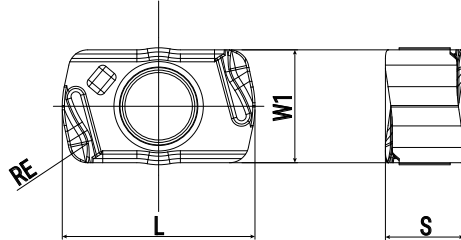
Note: All cutter bodies are supplied without inserts, wrenches, or MOLY.

● : Stocked Items

Screw	Torque (N·m)	Wrench
TSW-2044H	0.5	A-06

GMX07/MXG07 TYPE

Insert



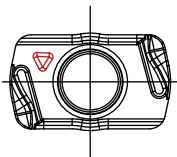
Cat. No.	Tolerance	PVD coating				Dimensions (mm)			
		JC8050	JC8118	DS250	DS217	RE	L	W1	S
ENMU07T207ZER-PM	M	●	●			0.7	7	4.1	2.85
ENMU07T207ZER-SM	M			●	●	0.7	7	4.1	2.85

Note: 10 inserts per case.

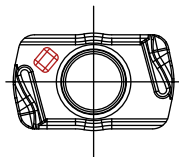
● : Stocked Items

GRADE MARKING

ENMU07T207ZER-PM/-SM

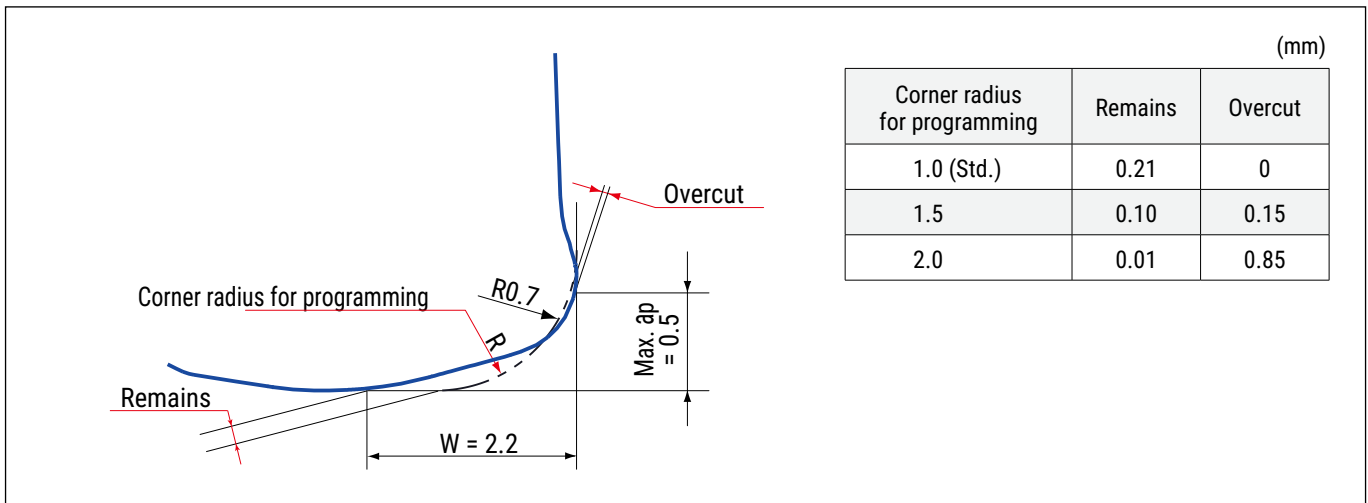


JC8118/DS217



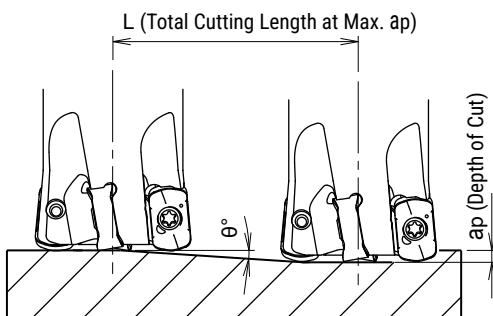
JC8050/DS250

Definition of corner shape for programming

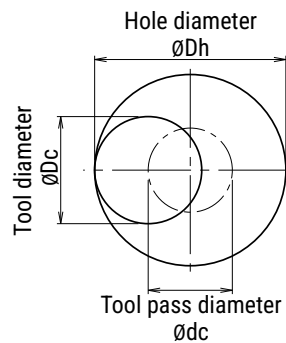


Recommended Data for Profile Milling

Ramping



Helical interpolation



- Calculation of tool pass dia.

$$\phi_{dc} = \phi_{Dh} - \phi_{Dc}$$

Tool pass dia. Hole dia. Tool Dia.

- Depth of cut per circuit should not exceed max. depth of cut (a_p).
- Down cutting is recommended, tool pass rotation should be counterclockwise.

- For ramping and helical interpolation, use 70% or less of the feed rate (V_f) listed in the standard cutting conditions table.
- Drilling is not recommended.

● ENMU07T207ZER-**

(Unit: mm)

Tool dia. ϕ_{Dc}	Effective Cutting Dia.	Max. a_p	Ramping		Helical Interpolation		
			Max. ramping angle θ	L	Through hole Dh min	Flat Bottom Dh min	Through hole Dh max
10	5.5	0.5	1.1	26.0	15	16	19
11	6.5	0.5	1.4	20.5	17	18	21
12	7.5	0.5	1.2	23.9	19	20	23
13	8.4	0.5	1.1	26.0	21	22	25
16	11.4	0.5	0.9	31.8	27	28	31
17	12.4	0.5	0.8	35.8	29	30	33
20	15.4	0.5	0.6	47.7	35	36	39

■ Recommended Cutting Conditions | GMX07/MXG07 type

Material	Insert	Grade	V _c (m/min)	f _z (mm/t)	a _p (mm)	a _e (mm)
Carbon Steel below 250 HB	ENMU07...-PM	JC8050 (JC8118)	165	1.0	0.30	0.5-0.6 Dc
Cast steel Below 285 HB	ENMU07...-PM	JC8050 (JC8118)	150	1.0	0.30	0.5-0.6 Dc
Tool & Die steel Below 255 HB	ENMU07...-PM	JC8050 (JC8118)	150	1.0	0.30	0.5-0.6 Dc
Mold steel 30-36 HRC	ENMU07...-PM	JC8050 (JC8118)	150	1.0	0.30	0.5-0.6 Dc
Mold steel 38-43 HRC	ENMU07...-PM	JC8118	110	0.9	0.25	0.5-0.6 Dc
Hardened die steel 42-52 HRC	ENMU07...-PM	JC8118	90	0.6	0.25	0.5-0.6 Dc
Cast iron 160-260 HB	ENMU07...-PM	JC8118	200	1.0	0.30	0.5-0.6 Dc
Nodular cast iron 170-300 HB	ENMU07...-PM	JC8118	180	1.0	0.30	0.5-0.6 Dc
Austenitic stainless steel (AISI 304, 316, 317)	ENMU07...-SM	DS250 (DS217)	125	0.8	0.30	0.5-0.6 Dc
Ferritic / martensitic stainless steel (AISI 403, 420J2, 430)	ENMU07...-SM	DS250 (DS217)	150	1.0	0.30	0.5-0.6 Dc
Super duplex stainless steel (S32750)	ENMU07...-SM	DS217 (DS250)	70	0.5	0.30	0.5-0.6 Dc
Precipitation hardening stainless steel Below 280 HB	ENMU07...-SM	DS217 (DS250)	100	0.7	0.30	0.5-0.6 Dc

Notes:

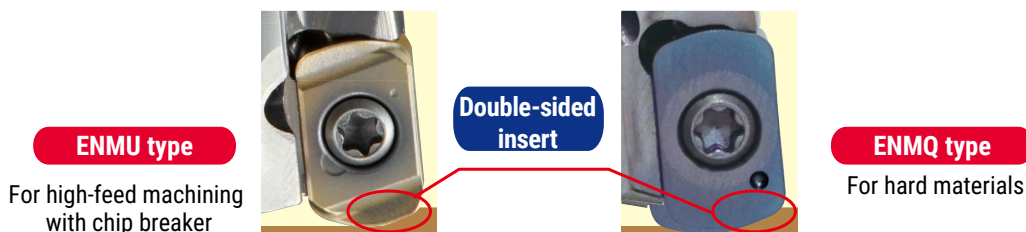
1. These parameters represent stable machining with an overhang length of 3×D.
Please adjust the cutting conditions according to machine rigidity and workpiece rigidity.
2. In case of chatter, reduce a_p or rpm while maintaining the feed per tooth.
3. Reduce a_p when using a low-rigidity machine.
4. Use air blow.

Achieve High Metal Removal Rates! High-Efficiency Machining for Versatile Applications



Feature 1

Optimized cutting edge for a wide range of applications



Feature 2

Economical double-sided insert with four cutting edges for a wide range of materials:
Carbon steel, hardened materials (up to 62 HRC), stainless steel, and titanium alloys

● Lineup



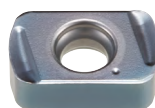
ENMU100412ZER-SL

- Low cutting force
- Sharp cutting edge
- Grade JC7550, **JC7518**, DS118, DS150



ENMU100412ZER-PH

- For general applications
- Grade JC8118, **JC8050**, JC7560



ENMU100312ZER-HL

- For hardened materials up to 60 HRC
- Enhanced cutting-edge strength while retaining sharpness
- Grade DH102



ENMQ100312ZER

- Flat-top insert
- Grade DH102
- For hardened materials over 60 HRC

● Insert grades

ISO	P					M					K				S				H		
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	S01	S10	S20	S30	H01	H10	H20
Range																					
																DS118					
																DS150					
											DH102				DH102				DH102		
			JC8118				JC8118				JC8118				JC8118				JC8118		
			JC8050				JC8050				JC8050				JC8050				JC8050		
			JC7518				JC7518								JC7518				JC7518		
			JC7550				JC7550								JC7550				JC7550		
			JC7560				JC7560								JC7560				JC7560		

GMX10 TYPE

Bore Type

Through
coolant
hole

G-
Body

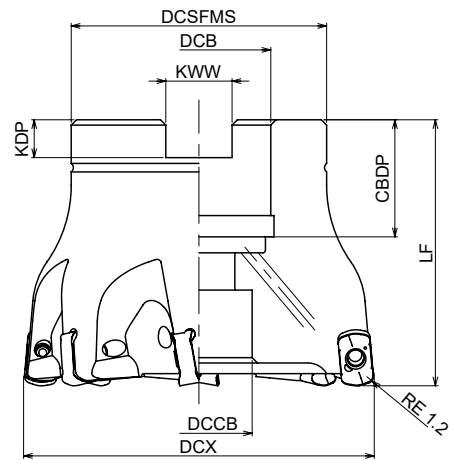
Face Milling

Copy Milling

Pocket Milling

Helical Interpolation

Slotting



Cat. No.	Stock	No. of inserts	Dimensions (mm)								Weight (kg)	Inserts
			DCX	LF	DCSFMS	DCB	DCCB	KWW	KDP	CBDP		
GMX-6040R-16+A	●	6	40	45	35	16	13.5	8.4	5.6	19	0.24	ENMU100412ZER-** ENMU100312ZER-HL ENMQ100312ZER
GMX-6042R-16+A	●	6	42	45	35	16	13.5	8.4	5.6	19	0.25	
GMX-7050R-22	●	7	50	50	40	22	17	10.4	6.3	20	0.35	
GMX-7052R-22	●	7	52	50	40	22	17	10.4	6.3	20	0.40	
GMX-7063R-22	●	7	63	50	48	22	17	10.4	6.3	20	0.64	
GMX-7066R-27	●	7	66	50	48	27	20	12.4	7	22	0.66	

Note: All cutter bodies are supplied without inserts, wrenches, or MOLY.

● : Stocked Items

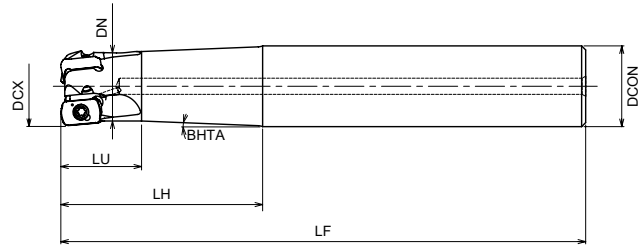
Screw	Torque (N·m)	Wrench
TSW-2567H	1.1	A-08

GMX10/MXG10 type

GMX10
TYPE

Shank Type

Through
coolant
hole



Cat. No.	Stock	No. of inserts	Dimensions (mm)							Insert
			DCX	LU	LH	LF	DN	BHTA	DCON	
GMX-2016-30-S16	●	2	16	16	30	100	14	3.5°	16	ENMU100412ZER-** ENMU100312ZER-HL ENMQ100312ZER
GMX-2016-50-S16	●	2	16	16	50	150	14	1.2°	16	
GMX-3020-50-S20	●	3	20	20	50	130	17.2	2.3°	20	
GMX-3020-80-S20	●	3	20	20	80	160	17.2	1°	20	
GMX-4025-60-S25	●	4	25	25	60	140	22	2°	25	
GMX-4025-100-S25	●	4	25	25	100	180	22	0.9°	25	
GMX-5032-70-S32	●	5	32	30	70	150	29	1.5°	32	
GMX-5032-120-S32	●	5	32	30	120	200	29	0.6°	32	

Note: All cutter bodies are supplied without inserts, wrenches, or MOLY.

● : Stocked Items

Screw	Torque (N·m)	Wrench
TSW-2567H	1.1	A-08

MXG10
TYPE

Modular Type

Through
coolant
hole

**G-
Body**

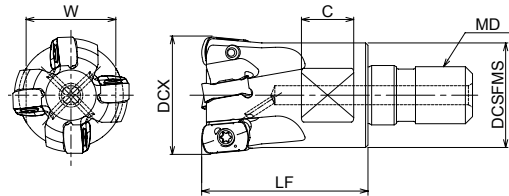
Face Milling

Copy Milling

Pocket Milling

Helical Interpolation

Slotting



Cat. No.	Stock	No. of inserts	Dimensions (mm)						Insert
			DCX	LF	DCSFMS	MD	C	W	
MXG-2016-M8	●	2	16	23	14	M8	8	12	ENMU100412ZER-** ENMU100312ZER-HL ENMQ100312ZER
MXG-2017-M8	●	2	17	23	14	M8	8	12	
MXG-3020-M10	●	3	20	30	18	M10	9	14	
MXG-3021-M10	●	3	21	30	18	M10	9	14	
MXG-3022-M10	○	3	22	30	18	M10	9	14	
MXG-3025-M12	●	3	25	35	22	M12	11	19	
MXG-4025-M12	●	4	25	35	22	M12	11	19	
MXG-4026-M12	●	4	26	35	22.5	M12	11	19	
MXG-4028-M12	○	4	28	35	23.6	M12	11	19	
MXG-5030-M16	●	5	30	43	27	M16	12	22	
MXG-5032-M16	●	5	32	43	29	M16	12	22	
MXG-5035-M16	●	5	35	43	29	M16	12	22	
MXG-6040-M16	●	6	40	43	32	M16	14	26	
MXG-6042-M16	●	6	42	43	32	M16	14	26	

Note: All cutter bodies are supplied without inserts, wrenches, or MOLY.

● : Stocked Items ○ : Stock in Japan

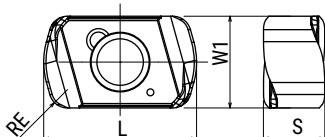
Screw	Torque (N·m)	Wrench
TSW-2567H	1.1	A-08

GMX10/MXG10 type

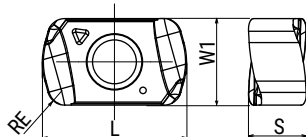
GMX10/MXG10 TYPE

Insert

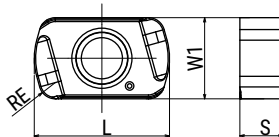
ENMU100412ZER-PH



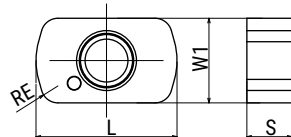
ENMU100412ZER-SL



ENMU100312ZER-HL



ENMQ100312ZER



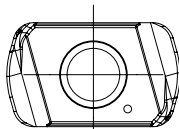
Cat. No.	Tolerance	PVD coating								Dimensions (mm)			
		DH102	JC7518	JC7550	JC7560	JC8050	JC8118	DS118	DS150	RE	L	W1	S
ENMU100412ZER-PH	M				●	●	●			1.2	10	6	4
ENMU100412ZER-SL	M		●	●				●	●	1.2	10	6	4
ENMU100312ZER-HL	M	●								1.2	10	6	3.2
ENMQ100312ZER	M	●								1.2	10	6	3.2

Note: 10 inserts per case.

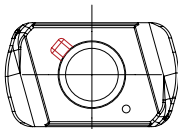
● : Stocked Items

GRADE MARKING

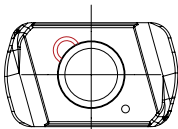
ENMU100412ZER-PH



JC8118

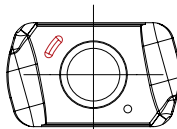


JC8050

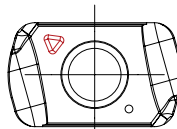


JC7560

ENMU100412ZER-SL



JC7518/DS118



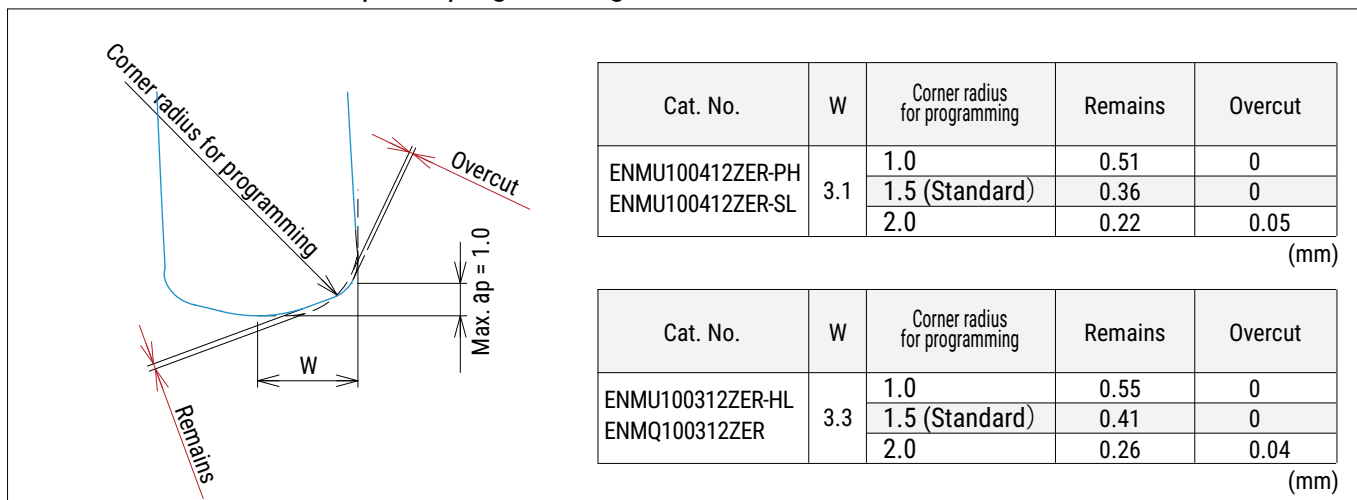
JC7550/DS150

■ Insert selection guide

Material	Grade	Cat. No.			
		ENMU100412ZER-PH	ENMU100412ZER-SL	ENMU100312ZER-HL	ENMQ100312ZER
Chip breaker		For general milling	Low cutting force	For hardened materials	Flat-top insert
Carbon Steel (S50C, S55C) below 250 HB	JC8118	○			
	JC8050	◎			
	JC7560	●			
	JC7518		☆		
Tool & Die Steel (SKD61, SKD11) below 255 HB	JC8118	○			
	JC8050	◎			
	JC7560	●			
	JC7518		☆		
Mold Steel (HPM7, PX5, P20) 30–36 HRC	JC8118	○			
	JC8050	◎			
	JC7560	●			
	JC7518		☆		
Mold Steel (NAK80, HPM1, P21) 38–43 HRC	JC8118	◎			
	JC8050	●			
	JC7518		☆		
Hardened Die Steel (SKD61, DAC, DHA) 42–52 HRC	JC8118	◎			
	JC7518		☆		
	DH102			●	
Hardened Die Steel (SKD11, SLD, DC11) 55–62 HRC	JC8118	×			
	JC8050	×			
	JC7560	×			
	JC7550		×		
	JC7518		×		
	DH102			○	◎
Grey Cast Iron Nodular Cast Iron (FC, FCD)	JC8118	◎			
	JC8050	○			
	JC7560	●			
Stainless Steel (SUS304) below 250 HB	JC8118	○			
	JC8050	●			
	JC7550		◎		
	JC7518		☆		
Titanium Alloy (Ti-6Al-4V)	JC8050	●			
	JC7550		○		
	DS118		☆		
	DS150		◎		
Heat-Resistant Alloy (INC0718)	JC8050	●			
	JC7518		○		
	DS118		◎		

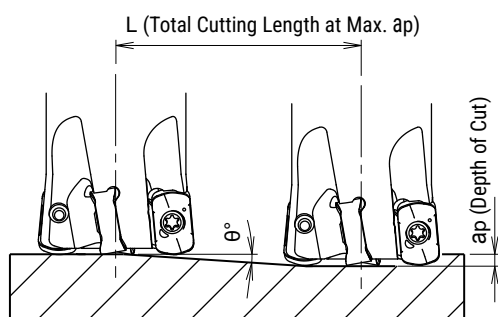
◎: First choice ○: For general milling ●: For unstable milling ☆: Light cutting ×: Not recommended

Definition of corner shape for programming

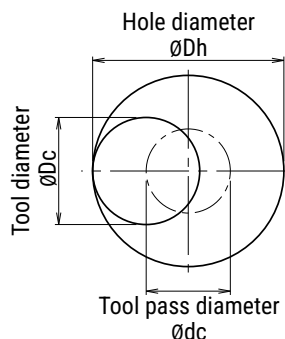


Recommended Data for Profile Milling

Ramping



Helical interpolation



- Calculation of tool pass dia.

$$\phi_{dc} = \phi_{Dh} - \phi_{Dc}$$

Tool pass dia. Hole dia. Tool Dia.

- Depth of cut per circuit should not exceed max. depth of cut (ap).
- Down cutting is recommended, and the tool pass rotation should be counterclockwise.

- For ramping and helical interpolation, use 70% or less of the feed rate (Vf) listed in the standard cutting conditions table.
- For drilling, use 20% or less of the Z-axis feed listed in the standard cutting conditions table.
- Long continuous chips may be generated during drilling. Ensure safe operation during machining.

● ENMU100412ZER-**

(Unit: mm)

Tool dia. ØDc	Effective Cutting Dia.	Max. ap	Ramping		Helical Interpolation			Max. Drilling Depth Z
			Max. ramping angle θ	L	Through hole Dh min	Flat Bottom Dh min	Through hole Dh max	
16	10.1	0.7	1.6	25.1	23	27	31	0.35
17	11.0	0.7	1.6	25.1	25	29	33	0.35
20	13.9	1.0	1.5	38.2	30	34	39	0.35
21	14.9	1.0	1.5	38.2	32	36	41	0.35
22	15.9	1.0	1.4	40.9	34	38	43	0.35
25	18.9	1.0	1.2	47.7	40	44	49	0.35
26	19.9	1.0	1.2	47.7	42	46	51	0.35
28	21.9	1.0	1.1	52.1	46	50	55	0.35
30	23.9	1.0	0.9	63.6	50	54	59	0.35
32	25.8	1.0	0.9	63.6	54	58	63	0.35
35	28.8	1.0	0.7	81.8	60	64	69	0.35
40	33.8	1.0	0.5	114.5	70	74	79	0.35
42	35.8	1.0	0.5	114.5	74	78	83	0.35
50	43.8	1.0	0.4	143.2	90	94	99	0.35
52	45.8	1.0	0.4	143.2	94	98	103	0.35
63	56.8	1.0	0.3	190.9	116	120	125	0.35
66	59.8	1.0	0.3	190.9	122	126	131	0.35

● ENMU100312ZER-HL / ENMQ100312ZER

(Unit: mm)

Tool dia. ØDc	Effective Cutting Dia.	Max. ap	Ramping		Helical Interpolation			Max. Drilling Depth Z
			Max. ramping angle θ	L	Through hole Dh min	Flat Bottom Dh min	Through hole Dh max	
16	9.6	0.7	1.6	25.1	23	27	31	0.25
17	10.5	0.7	1.6	25.1	25	29	33	0.25
20	13.5	1.0	1.5	38.2	30	34	39	0.25
21	14.5	1.0	1.5	38.2	32	36	41	0.25
22	15.5	1.0	1.4	40.9	34	38	43	0.25
25	18.4	1.0	1.2	47.7	40	44	49	0.25
26	19.4	1.0	1.2	47.7	42	46	51	0.25
28	21.4	1.0	1.1	52.1	46	50	55	0.25
30	23.4	1.0	0.9	63.6	50	54	59	0.25
32	25.4	1.0	0.9	63.6	54	58	63	0.25
35	28.4	1.0	0.7	81.8	60	64	69	0.25
40	33.4	1.0	0.5	114.5	70	74	79	0.25
42	35.4	1.0	0.5	114.5	74	78	83	0.25
50	43.4	1.0	0.4	143.2	90	94	99	0.25
52	45.4	1.0	0.4	143.2	94	98	103	0.25
63	56.4	1.0	0.3	190.9	116	120	125	0.25
66	59.4	1.0	0.3	190.9	122	126	131	0.25

■ Recommended Cutting Conditions | GMX10/MXG10 type

Material	Insert	Grade	Vc (m/min)	fz (mm/t)	ap (mm)	ae (mm)
Carbon Steel below 250 HB	-PH	JC8050 (JC7560)	180 (130-180)	1.2	0.4-1.0	0.7 Dc
Tool & Die Steel below 255 HB	-PH	JC8050 (JC7560)	180 (130-180)	1.2	0.4-1.0	0.7 Dc
Mold Steel 30-36 HRC	-PH	JC8050 (JC7560)	160 (130-160)	1.2	0.4-1.0	0.7 Dc
Mold Steel 38-43 HRC	-PH	JC8118 (JC8050)	100 (70-100)	1.1 (0.8-1.1)	0.3-0.8	0.7 Dc
Hardened Die Steel 42-52 HRC	-PH (-SL)	JC8118 (JC7518)	90 (70-90)	1.1 (0.8-1.1)	0.1-0.6	0.6 Dc
Hardened Die Steel 55-62 HRC	ENMQ.. (ENMU..-HL)	DH102	80 (60-80)	0.3 (0.25-0.3)	0.1-0.2	0.4 Dc
Grey Cast Iron	-PH	JC8118 (JC8050)	200 (150-200)	1.5 (1.2-1.5)	0.4-1.0	0.7 Dc
Nodular Cast Iron	-PH	JC8118 (JC8050)	200 (150-200)	1.5 (1.2-1.5)	0.4-1.0	0.7 Dc
Austenitic Stainless Steel	-SL	JC7550 (JC7518)	120 (100-120)	1.0 (0.8-1.0)	0.3-0.8	0.6 Dc
Precipitation-Hardening Stainless Steel	-SL (-PH)	JC7550 (JC8050)	100 (90-100)	0.7 (0.6-0.7)	0.2-0.6	0.6 Dc
Duplex Stainless Steel	-SL (-PH)	JC7550 (JC8050)	100 (90-100)	0.3 (0.2-0.3)	0.3-0.8	0.6 Dc
Titanium Alloy	-SL	DS150 (DS118)	60 (50-60)	0.7 (0.6-0.7)	0.3-0.7	0.6 Dc
Heat-Resistant Alloy	-SL	JC7518 (JC7550)	30 (20-30)	0.3	0.2-0.7	0.6 Dc

Notes:

1. Please adjust the cutting conditions according to machine rigidity and workpiece rigidity.
(The above table is a guide for machining on a BT50 machine.)
2. In case of chatter, reduce ap or rpm while maintaining the feed per tooth.
3. Reduce ap when using a low-rigidity machine.
4. Use air blow.
5. Do not exceed the maximum depth of cut (ap) specified for each tool diameter. See page 15.

HEADQUARTERS
DIJET Industrial Co., Ltd.
 2-1-18, Kami-Higashi,
 Hirano-ku, Osaka 547-0002, Japan
PHONE +81-6-6791-6781
FAX +81-6-6793-1221
www.dijet.co.jp



JQA-2089



JQA-EM1580

MAIN OFFICE EUROPE
DIJET GmbH
 Immermannstraße 9
 40210 Düsseldorf, Germany
PHONE +49-211-5008820
FAX +49-211-5008823
www.dijet.de



DIJET EUROPE

Web: www.dijet.de

