

ASM/AHU Mini

Indexable Side Milling & High Feed End Mill



D8mm ~ D32mm

• **Shank & Modular Types**

• **2 Insert Types:**

EDMT: **R2**

JDMT: **CR0.2 | 0.4 | 0.8**

EDMT



Standard



Low-force
breaker type

JDMT



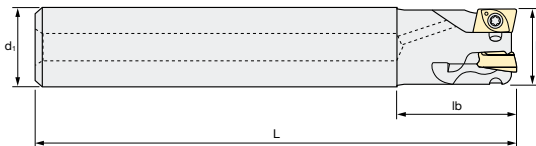
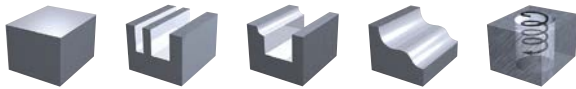
DLC Coated



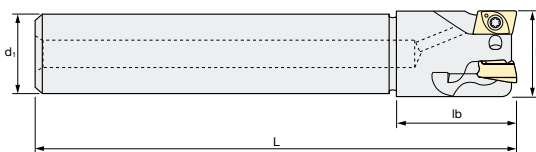
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ASM | Shank Type (Short/Long)

Q max	Jet	▽	▽▽	▽▽▽	HRC	No. of Teeth
High Efficient	Air Hole	Roughing	Semi-Finishing	Finishing	50	1 ~ 5



Standard type



Undercut type

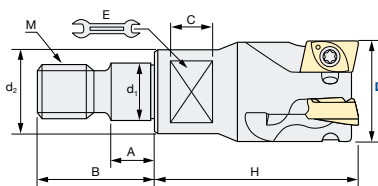
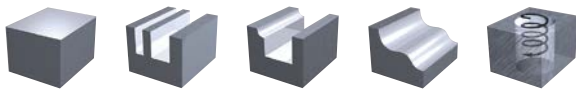


Diameter Holder only [mm]	Fastening Torque [Nm]
-0.1/-0.2 mm	0.5 Nm

Shank Type		Flutes	D	L	lb	d ₁	Shape	Inserts
Short	FH116	1	8	75	16	10	Standard type	JDMT0702..R EDMT070220R (-T)
	FH117	2	10					
	FH118	3	12	80	20	12	Undercut type	
	FH119	4	14				Standard type	
	FH120	5	16	90	25	16	Undercut type	
	FH121	6	17	115	20	20	Standard type	
	FH122	7	20	105	25	20	Undercut type	
	FH123	8	21	140	20	20	Standard type	
Long	FH124	4	16	115	50	16	Standard type	
	FH125	5	20	140	60	20	Standard type	

ASM | Modular

Q max	Jet	▽	▽▽	▽▽▽	HRC	No. of Teeth
High Efficient	Air Hole	Roughing	Semi-Finishing	Finishing	50	1 ~ 8



Diameter Holder only [mm]	Fastening Torque [Nm]
-0.1/-0.2 mm	0.5 Nm

Modular Type															
ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	C	E	Airhole	Inserts		
FH126	ASMM-0708R-1	1	8	20	6.5	M6	9.8	5.5	14.5	5	7	— •	JDMT0702..R EDMT070220R (-T)		
FH127	ASMM-0710R-2	2	10				9.4								
FH128	ASMM-0712R-3	3	12				9.8								
FH129	ASMM-0716R-4	4	16	25	8.5	M8	12.8	5.5	17	8	10				
FH130	ASMM-0720R-5	5	20						30	10.5	M10			17.8	19
FH135	ASMM-0725R-6	6	25	12.5	M12	20.8	22								17
FH136	ASMM-0732R-8	8	32		17	M16	28.8	6	23	12	22				

D10–D32 with Airhole

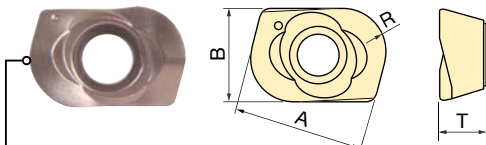
Cutting Conditions | Schnittwerte | Condizioni di taglio | Condiciones de Corte | Conditions de coupe | Valores de corte:

EDMT: D 8 (Z1) – D 32 (Z8); Page 5

JDMT: D 8 (Z1) – D 32 (Z8); Page 6–7

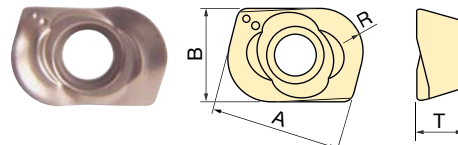
INSERTS ASM/AHU | Mini

EDMT070220R - **T** Standard Type



Insert with 2.0 mm corner R for low-depth, high-feed-rate cutting ($a_{p \max} = 0.3 \text{ mm}$)

EDMT070220R Low-force breaker type

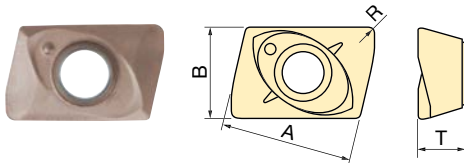


Insert with 2.0 mm corner R for low-depth, high-feed-rate cutting ($a_{p \max} = 0.3 \text{ mm}$)

ID Code	Item Code	Tolerance Class	Target Hardness of Workpiece			Size				Shape
			Soft	Grade	Hard	A	B	R	T	
WF663	EDMT070220R	M		JM4060	JX1020	6.4	4.3	2	2.5	Low-force type
WF664	EDMT070220R-T									Standard type
WF709	EDMT070220R-T									
WF710	EDMT070220R-T									
WF711	EDMT070220R									Low-force type
WF712	EDMT070220R									

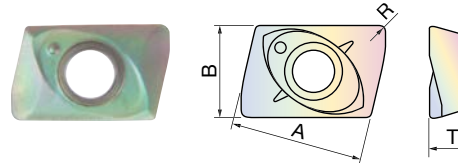
JM4060	PVD · General steels for 30 HRC
JP4020	PVD · For pre-hardened steels 40 – 55 HRC
JX1020	PVD · General steels for 30 – 40 HRC

JDMT07020..R



Insert with 5 mm flute length for shoulder cutting ($a_{p \max} = 5.0 \text{ mm}$)

JDMT07020..R DLC Coated

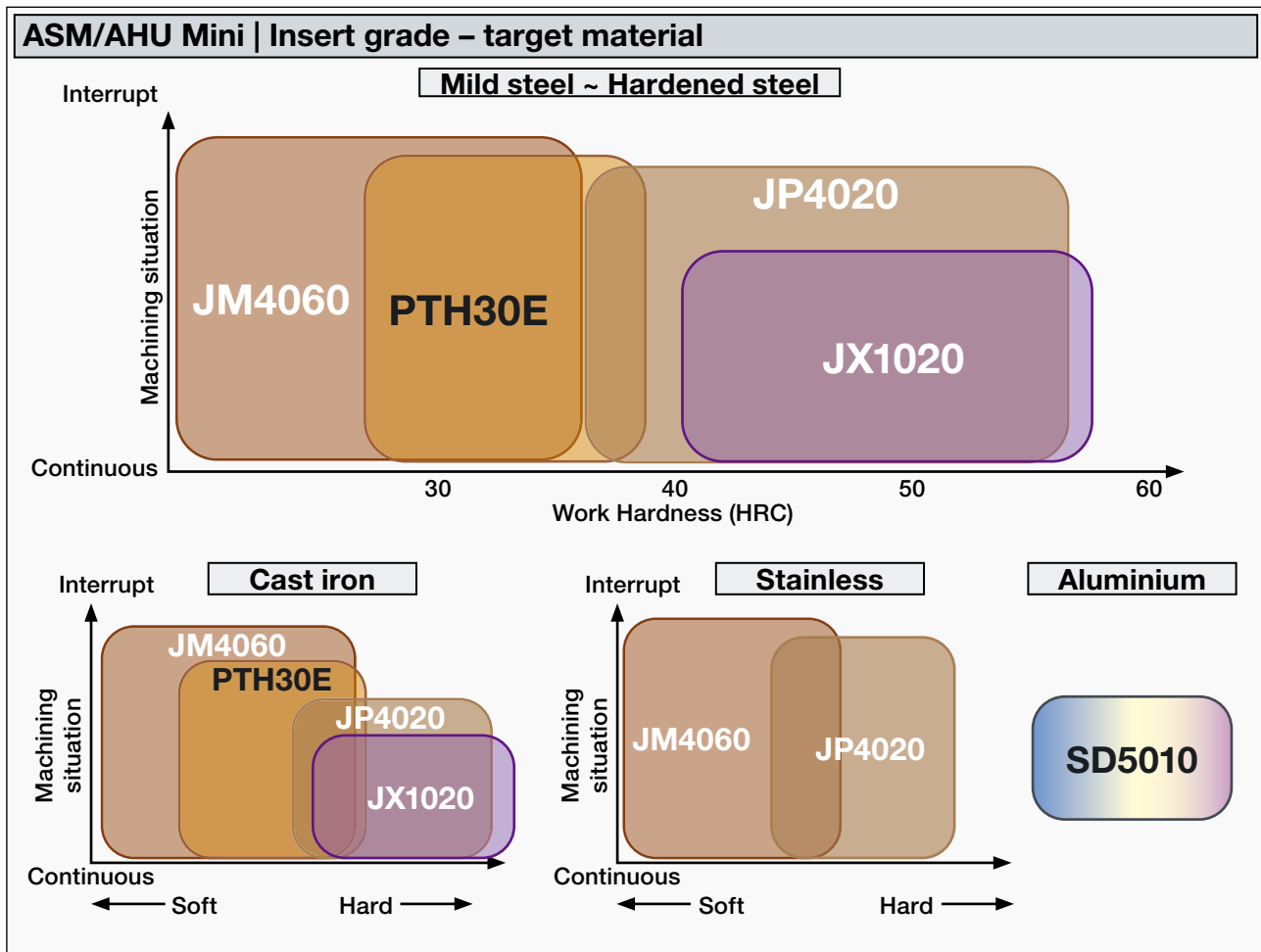


Insert with 5 mm flute length for shoulder cutting ($a_{p \max} = 5.0 \text{ mm}$)

ID Code	Item Code	Tolerance Class	Corner-R	Target Hardness of Workpiece					Size			
				Soft	Grade	Hard			A	B	R	T
WF665	JDMT070202R	M	0.2	SD5010	JM4060	PTH30E	JP4020	JX1020	6.4	4.3	0.8	2.45
WF666	JDMT070202R											
WF671	JDMT070202R											
WF667	JDMT070204R		0.4									
WF668	JDMT070204R											
WF672	JDMT070204R											
WF669	JDMT070208R		0.8									
WF670	JDMT070208R											
WF673	JDMT070208R											
WF689	JDMT070202R		0.2									
WF690	JDMT070202R											
WF691	JDMT070204R		0.4									
WF692	JDMT070204R											
WF693	JDMT070208R		0.8									
WF694	JDMT070208R											

SD5010	DLC · For Aluminium
JM4060	PVD · General steels for 30 HRC
PTH30E	TH Coating
JP4020	PVD · For pre-hardened steels 40 – 55 HRC
JX1020	PVD · General steels for 30 – 40 HRC

Parts	Clamp Screw	Item-Code	Wrench	Item-Code
	ID-Code		ID-Code	
	ET052	240-140	ET053	106-T6

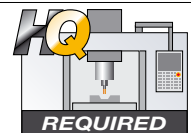


ASM/AHU | Mini | Recommended Cutting Conditions for **EDMT** Inserts

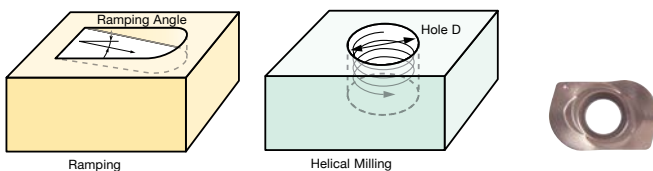
PLEASE NOTE:

The values in these tables are only recommended under the following conditions:

1. The use of a machining centre and toolholder with highest precision, concentricity and rigidity
2. All components – including machine and controller – are of the latest technology



Ramping with EDMT-type inserts



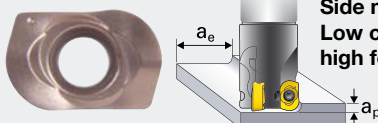










Insert	Cutting edge D (mm)	D 8	D 10	D 12	D 16	D 20	D 25	D 32
EDMT	Ramping Angle °	6.4	6.6	4.1	2.2	1.4	1	0.8
	Helical Milling / Hole Dia. (mm)	10 ~ 15	13 ~ 19	17 ~ 23	25 ~ 31	33 ~ 39	43 ~ 49	57 ~ 63

1. The ramp angle should be set within the ranges listed above. Use at ramp angles of 0.5° is recommended.
2. For hole diameters outside the ranges listed above, a pilot hole should be drilled before milling.

1. Der Rampenfräswinkel sollte innerhalb der oben aufgelisteten Bereiche sein. Empfohlen wird ein Winkel von 0,5°.
2. Für Bohrungen mit einem größeren Durchmesser als oben aufgeführt sollte vor dem Helikalfräsen eine Startbohrung durchgeführt werden.

EDMT | Recommended Cutting Conditions

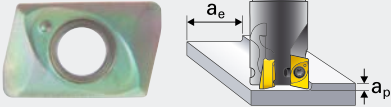







Following values are recommended in stable situation. Please adjust V_c , f_z & a_p as necessary.

		Side milling standard Low cutting depth, high feed rate					 HSK63										
							 HSK50										
							 HSK40										
																	
D8 (Z1)	D10 (Z2)	D12 (Z3)	D16 (Z4)	D20 (Z5)	D25 (Z6)	D32 (Z8)											
Work piece material		Recommend grade & Target hardness (HRC)					Emulsion	Mist	Air	Parameter	Side milling						
		30	40	50													
I	Mild steel <200HB						•	•	•	V_c m/min	200	200	200	200	200	200	200
		JM4060								n min ⁻¹	7960	6370	5310	3980	3180	2550	1990
			JX1020							f_z mm/t	0.6	0.6	0.6	0.6	0.6	0.6	0.6
										V_f mm/min	4770	7640	9550	9550	9550	9170	9550
										a_p mm	0.3	0.3	0.3	0.3	0.3	0.3	0.3
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	4.3	11.5	20.1	28.7	31.5	46.8	63.0
II	Carbon-Steel Alloy-Steel <30HRC						•	•	•	V_c m/min	180	180	180	180	180	180	180
		JM4060								n min ⁻¹	7160	5730	4770	3580	2860	2290	1790
			JX1020							f_z mm/t	0.6	0.6	0.6	0.6	0.6	0.6	0.6
										V_f mm/min	4300	6880	8590	8590	8590	8250	8590
										a_p mm	0.3	0.3	0.3	0.3	0.3	0.3	0.3
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	3.9	10.3	18.0	25.8	28.3	42.1	56.7
III	Alloy-Steel Tool-Steel 30~40HRC						•	•	•	V_c m/min	150	150	150	150	150	150	150
			JP4020							n min ⁻¹	5970	4770	3980	2980	2390	1910	1490
			JX1020							f_z mm/t	0.5	0.5	0.5	0.5	0.5	0.5	0.5
										V_f mm/min	2980	4770	5970	5970	5970	5730	5970
										a_p mm	0.25	0.25	0.25	0.25	0.25	0.25	0.25
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	2.2	6.0	10.4	14.9	16.4	24.4	32.8
IV	Hardened steel 40~50HRC						•	•	•	V_c m/min	120	120	120	120	120	120	120
			JP4020							n min ⁻¹	4770	3820	3180	2390	1910	1530	1190
			JX1020							f_z mm/t	0.5	0.5	0.5	0.5	0.5	0.5	0.5
										V_f mm/min	2390	3820	4770	4770	4770	4580	4770
										a_p mm	0.2	0.2	0.2	0.2	0.2	0.2	0.2
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	1.4	3.8	6.7	9.5	10.5	15.6	21.0
V	Stainless steel (wet condition)*						•	•	•	V_c m/min	150	150	150	150	150	150	150
		JM4060								n min ⁻¹	5970	4770	3980	2980	2390	1910	1490
			JP4020							f_z mm/t	0.5	0.5	0.5	0.5	0.5	0.5	0.5
										V_f mm/min	2980	4770	5970	5970	5970	5730	5970
										a_p mm	0.3	0.3	0.3	0.3	0.3	0.3	0.3
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	2.7	7.2	12.5	17.9	19.7	29.2	39.4
VI	Cast-Iron GG EN-GJL						•	•	•	V_c m/min	180	180	180	180	180	180	180
		JM4060								n min ⁻¹	7160	5730	4770	3580	2860	2290	1790
			JX1020							f_z mm/t	0.6	0.6	0.6	0.6	0.6	0.6	0.6
										V_f mm/min	4300	6880	8590	8590	8590	8250	8590
										a_p mm	0.3	0.3	0.3	0.3	0.3	0.3	0.3
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	3.9	10.3	18.0	25.8	28.3	42.1	56.7
VII	Cast-Iron GGG EN-GJS EN-JS						•	•	•	V_c m/min	150	150	150	150	150	150	150
			JP4020							n min ⁻¹	5970	4770	3980	2980	2390	1910	1490
			JX1020							f_z mm/t	0.4	0.4	0.4	0.4	0.4	0.4	0.4
										V_f mm/min	2390	3820	4770	4770	4770	4580	4770
										a_p mm	0.3	0.3	0.3	0.3	0.3	0.3	0.3
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	2.2	5.7	10.0	14.3	15.7	23.4	31.5
VIII	Titanium						•	•	•	V_c m/min	60	60	60	60	60	60	60
			JP4020							n min ⁻¹	2390	1910	1590	1190	950	760	600
										f_z mm/t	0.25	0.25	0.25	0.25	0.25	0.25	0.25
										V_f mm/min	600	950	1190	1190	1190	1150	1190
										a_p mm	0.2	0.3	0.3	0.3	0.3	0.3	0.3
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	0.4	1.4	2.5	3.6	3.9	5.9	7.9
IX	Inconel Heat resistant alloy						•	•	•	V_c m/min	40	40	40	40	40	40	40
			JP4020							n min ⁻¹	1590	1270	1060	800	640	510	400
										f_z mm/t	0.12	0.12	0.12	0.12	0.12	0.12	0.12
										V_f mm/min	190	310	380	380	380	370	380
										a_p mm	0.3	0.3	0.3	0.3	0.3	0.3	0.3
										a_e mm	3	5	7	10	11	17	22
										Q cm ³ /min	0.2	0.5	0.8	1.1	1.3	1.9	2.5

*Comments: We recommend to increase V_c 30% more in dry condition

JDMT | Recommended Cutting Conditions

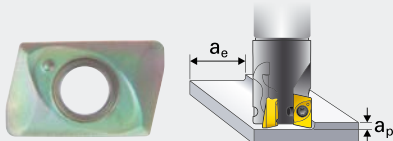








Following values are recommended in stable situation. Please adjust V_c , f_z & a_p as necessary.

		<div><div></div><div>HSK63</div><div>HSK50</div><div>HSK40</div><div>D8 (Z1)</div><div>D10 (Z2)</div><div>D12 (Z3)</div><div>D16 (Z4)</div><div>D20 (Z5)</div><div>D25 (Z6)</div><div>D32 (Z8)</div></div>														
		Recommend grade & Target hardness (HRC)			Emulsion	Mist	Air	Parameter								
		30	40	50					Side milling	Side milling	Side milling	Side milling	Side milling	Side milling	Side milling	
I	Mild steel <200HB							V_c	m/min	250	250	250	250	250	250	250
		PTH30E			•	•	•	n	min ⁻¹	9950	7960	6630	4970	3980	3180	2490
		JM4060			•	•	•	f_z	mm/t	0.07	0.07	0.07	0.07	0.07	0.07	0.07
								V_f	mm/min	700	1110	1390	1390	1390	1340	1390
								a_p	mm	2	2	2	2	2	2	2
								a_e	mm	3	4	5	6	8	10	12
								Q	cm ³ /min	4.2	8.9	13.9	16.7	22.2	26.8	33.4
II	Carbon-Steel Alloy-Steel <30HRC							V_c	m/min	200	200	200	200	200	200	200
		PTH30E			•	•	•	n	min ⁻¹	7960	6370	5310	3980	3180	2550	1990
		JM4060			•	•	•	f_z	mm/t	0.06	0.06	0.06	0.06	0.06	0.06	0.06
								V_f	mm/min	480	760	950	950	950	920	950
								a_p	mm	2	2	2	2	2	2	2
								a_e	mm	3	4	5	6	8	10	12
								Q	cm ³ /min	2.9	6.1	9.5	11.4	15.2	18.4	22.8
III	Alloy-Steel Tool-Steel 30~40HRC							V_c	m/min	160	160	160	160	160	160	160
		JP4020			•	•	•	n	min ⁻¹	6370	5090	4240	3180	2550	2040	1590
		JX1020						f_z	mm/t	0.06	0.06	0.06	0.06	0.06	0.06	0.06
								V_f	mm/min	380	610	760	760	760	730	760
								a_p	mm	2	2	2	2	2	2	2
								a_e	mm	3	4	5	6	8	10	12
								Q	cm ³ /min	2.3	4.9	7.6	9.1	12.2	14.6	18.2
IV	Hardened steel 40~50HRC							V_c	m/min	120	120	120	120	120	120	120
		JP4020			•	•	•	n	min ⁻¹	4770	3820	3180	2390	1910	1530	1190
								f_z	mm/t	0.05	0.05	0.05	0.05	0.05	0.05	0.05
								V_f	mm/min	240	380	480	480	480	460	480
								a_p	mm	2	2	2	2	2	2	2
								a_e	mm	3	4	5	6	8	10	12
								Q	cm ³ /min	1.4	3.0	4.8	5.8	7.7	9.2	11.5
V	Stainless steel (wet condition)*							V_c	m/min	150	150	150	150	150	150	150
		JM4060			•	•	•	n	min ⁻¹	5970	4770	3980	2980	2390	1910	1490
		JP4020			•	•	•	f_z	mm/t	0.06	0.06	0.06	0.06	0.06	0.06	0.06
								V_f	mm/min	360	570	720	720	720	690	720
								a_p	mm	2	2	2	2	2	2	2
								a_e	mm	3	4	5	6	8	10	12
								Q	cm ³ /min	2.2	4.6	7.2	8.6	11.5	13.8	17.3
VI	Cast-Iron GG EN-GJL							V_c	m/min	180	180	180	180	180	180	180
		JM4060			•	•	•	n	min ⁻¹	7160	5730	4770	3580	2860	2290	1790
		PTH30E			•	•	•	f_z	mm/t	0.07	0.07	0.07	0.07	0.07	0.07	0.07
								V_f	mm/min	500	800	1000	1000	1000	960	1000
								a_p	mm	2	2	2	2	2	2	2
								a_e	mm	3	4	5	6	8	10	12
								Q	cm ³ /min	3.0	6.4	10.0	12.0	16.0	19.2	24.0
VII	Cast-Iron GGG EN-GJS EN-JS							V_c	m/min	150	150	150	150	150	150	150
		JP4020			•	•	•	n	min ⁻¹	5970	4770	3980	2980	2390	1910	1490
		JX1020						f_z	mm/t	0.06	0.06	0.06	0.06	0.06	0.06	0.06
								V_f	mm/min	360	570	720	720	720	690	720
								a_p	mm	2	2	2	2	2	2	2
								a_e	mm	3	4	5	6	8	10	12
								Q	cm ³ /min	2.2	4.6	7.2	8.6	11.5	13.8	17.3

*Comments: We recommend to increase V_c 30% more in dry condition

JDMT | Recommended Cutting Conditions

Following values are recommended in stable situation. Please adjust V_c , f_z & a_p as necessary.

																
Work piece material		Recommend grade & Target hardness (HRC)			Emulsion	Mist	Air	Parameter								
		30	40	50					Side milling	Side milling	Side milling	Side milling	Side milling	Side milling	Side milling	
VIII Titanium			JP4020		•	•	•	V_c m/min	50	50	50	50	50	50	50	
								n min ⁻¹	1990	1590	1330	990	800	640	500	
								f_z mm/t	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
								V_f mm/min	100	160	200	200	200	190	200	
								a_p mm	2	2	2	2	2	2	2	
								a_e mm	3	4	5	6	8	10	12	
								Q cm ³ /min	0.6	1.3	2.0	2.4	3.2	3.8	4.8	
IX Inconel Heat resistant alloy			JP4020		•	•	•	V_c m/min	30	30	30	30	30	30	30	
								n min ⁻¹	1190	950	800	600	480	380	300	
								f_z mm/t	0.08	0.08	0.08	0.08	0.08	0.08	0.08	
								V_f mm/min	100	150	190	190	190	180	190	
								a_p mm	2	2	2	2	2	2	2	
								a_e mm	3	4	5	6	8	10	12	
								Q cm ³ /min	0.6	1.2	1.9	2.3	3.0	3.6	4.6	
X Aluminium (Wet condition)			SD5010		•	•	•	V_c m/min	500	500	500	500	500	500	500	
								n min ⁻¹	19890	15920	13260	9950	7960	6370	4970	
								f_z mm/t	0.08	0.08	0.08	0.08	0.08	0.08	0.08	
								V_f mm/min	1590	2550	3180	3180	3180	3060	3180	
								a_p mm	2	2	2	2	2	2	2	
								a_e mm	4	5	6	8	10	12.5	16	
								Q cm ³ /min	13	26	38	51	64	77	102	
Cast Aluminium (Wet condition)			SD5010		•	•	•	V_c m/min	450	450	450	450	450	450	450	
								n min ⁻¹	17900	14320	11940	8950	7160	5730	4480	
								f_z mm/t	0.08	0.08	0.08	0.08	0.08	0.08	0.08	
								V_f mm/min	1430	2290	2860	2860	2860	2750	2860	
								a_p mm	2	2	2	2	2	2	2	
								a_e mm	4	5	6	8	10	12.5	16	
								Q cm ³ /min	11	23	34	46	57	69	92	
Pure Copper (Wet condition)			SD5010		•	•	•	V_c m/min	300	300	300	300	300	300	300	
								n min ⁻¹	11940	9550	7960	5970	4770	3820	2980	
								f_z mm/t	0.08	0.08	0.08	0.08	0.08	0.08	0.08	
								V_f mm/min	950	1530	1910	1910	1910	1830	1910	
								a_p mm	2	2	2	2	2	2	2	
								a_e mm	4	5	6	8	10	12.5	16	
								Q cm ³ /min	8	15	23	31	38	46	61	

*Comments: We recommend to increase V_c 30% more in dry condition

ASM/AHU | Mini | Recommended Cutting Conditions for JDMT Inserts

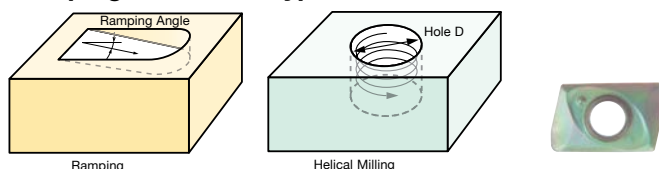
PLEASE NOTE:

The values in these tables are only recommended under the following conditions:

1. The use of a machining centre and toolholder with highest precision, concentricity and rigidity
2. All components – including machine and controller – are of the latest technology



Ramping with JDMT-type inserts



Insert	Cutting edge D (mm)	D 8	D 10	D 12	D 16	D 20	D 25	D 32
JDMT	Ramping Angle °	8.3	7.3	5	2.9	2	1.5	1
	Helical Milling / Hole Dia. (mm)	10 ~ 15	13 ~ 19	17 ~ 23	25 ~ 31	33 ~ 39	43 ~ 49	57 ~ 63

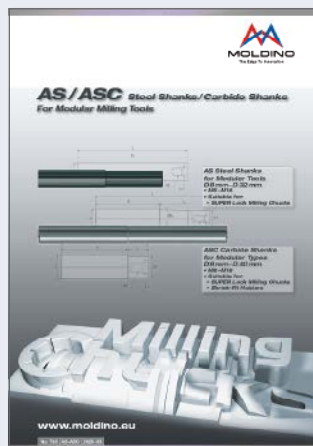
1. The ramp angle should be set within the ranges listed above. Use at ramp angles of 1° is recommended.
2. For hole diameters outside the ranges listed above, a pilot hole should be drilled before milling.
1. Der Rampenfräswinkel sollte innerhalb der oben aufgelisteten Bereiche sein. Empfohlen wird ein Winkel von 1°.
2. Für Bohrungen mit einem größeren Durchmesser als oben aufgeführt sollte vor dem Helikalfräsen eine Startbohrung durchgeführt werden.

➔ For more information about Modular Tools and available Shanks please check our brochures:

Indexable Modular No. 328.x



AS/ASC Shanks No. 708



⚠ Attention on Safety

1. Cautions regarding handling

- (1) When removing the tool from its case (packaging), be careful that the tool does not pop out or is dropped. Be particularly careful regarding contact with the tool flutes.
- (2) When handling tools with sharp cutting flutes, be careful not to touch the cutting flutes directly with your bare hands.

2. Cautions regarding mounting

- (1) Before use, check the outside appearance of the tool for scratches, cracks, etc. and that it is firmly mounted in the collet chuck, etc.
- (2) When preparing for use, be sure that the inserts are firmly mounted in place and that they are firmly mounted on the arbor, etc.
- (3) If abnormal chattering, etc. occurs during use, stop the machine immediately and remove the cause of the chattering.

3. Cautions during use

- (1) Before use, confirm the dimensions and direction of rotation of the tool and milling work material.
- (2) The numerical values in the standard cutting conditions table should be used as criteria when starting new work. The cutting conditions should be adjusted as appropriate when the cutting depth is large, the rigidity of the machine being used is low, or according to the conditions of the work material.
- (3) Cutting tools are made of a hard material. During use, they may break and fly off. In addition, cutting chips may also fly off. Since there is a danger of injury to workers, fire, or eye damage from such flying pieces, a safety cover should be attached when work is performed and safety equipment such as safety goggles should be worn to create a safe environment for work.
- (4) There is a risk of fire or inflammation due to sparks, heat due to breakage, and cutting chips. Do not use where there is a risk of fire or explosion. Please caution of fire while using oil base coolant, fire prevention is necessary.
- (5) Do not use the tool for any purpose other than that for which it is intended.

4. Cautions regarding regrinding

- (1) If regrinding is not performed at the proper time, there is a risk of the tool breaking. Replace the tool with one in good condition, or perform regrinding.
- (2) Grinding dust will be created when regrinding a tool. When regrinding, be sure to attach a safety cover over the work area and wear safety clothes such as safety goggles, etc.
- (3) This product contains the specified chemical substance cobalt and its inorganic compounds. When performing regrinding or similar processing, be sure to handle the processing in accordance with the local laws and regulations regarding prevention of hazards due to specified chemical substances.

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