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THE EXPERTS OF DIFFICULT MACHINING

CUTTING TOOL CATALOG

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Milling Cutter Denomination System

A	FM	45	-	03000	-	Z07	-	A	0750	R	-	SN12	-	C
1	2	3		4		5		6	7	8		9		10

1. A--ACHTECK

2. Machining method

Face milling	FM
Shoulder milling	SM
Profile milling	PM
High feed milling	HM
Side & face milling	DM
Thread milling	TM
Chamfer milling	CM

3. Approach angle (Kr)

Figure	Angle
90	90°
88	88°
75	75°
60	60°
45	45°
42	42°
•	•
•	•
•	•
15	15
00	Round insert

4. Cutter dia.

01000	1.000in
03000	3.000in
•	•
•	•
10000	10.000in

5. Number of teeth

Z02	2 teeth
•	•
Z05	5 teeth
•	•
Z30	30 teeth

6. Connection

A	Arbor
W	Weldon shank
C	Cylinder shank
N	Whistle notch shank
M	Screw clamped with modular head

7. Coupling Size

0750——Connection diameter 0.750in

8. Direction of tool

R	Right
L	Left
N	Neutral

9. Insert info

SN12——SN12 series insert

10. Others

C	Internal coolant
No mark	No coolant

Porcupine Cutter Denomination

A	PE	90	-	02500	-	Z04	-	A	1000	R	-	LN13	-	L2205	-	F	-	C
1	2	3		4		5		6	7	8		9		10		11		12

1. A--ACHTECK

2. Cutting method	
Porcupine cutter	PE
Shoulder milling cutter	SM
Profile milling cutter	PM
High feed milling cutter	HM
Side and face Milling cutter	DM
Thread milling cutter	TM
Chamfer milling cutter	CM
Face milling cutter	FM

3. Approach angle (Kr)	
Figure	Angle
90	90°
88	88°
75	75°
60	60°
45	45°
42	42°
•	•
•	•
•	•

4. Cutter dia.	
01000	1.000in
02500	2.500in
03000	3.000in
•	•
10000	10.000in

5. Number of teeth	
Z02	2 teeth
Z04	4 teeth
Z05	5 teeth
•	•
Z30	30 teeth

6. Coupling	
A	Arbor
W	Weldon shank
C	Cylinder shank
N	Whistle notch shank
M	Screw clamped with modular head

7. Coupling size
1000——Connection diameter 1.000in

8. Direction of tool	
R	Right
L	Left
N	Neutral

9. Insert information
LN13——LN13 series insert

10. Max. cutting depth	
L1181	1.181in
L1772	1.772in
L2205	2.205in

11. Tool type	
F	Full teeth
H	Half teeth

10. Others	
C	With internal coolant
No indication	Without internal coolant

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THE EXPERTS OF DIFFICULT MACHINING

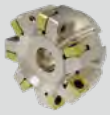
Milling Cutters

Overview of Milling Products

Product family			AFM42-OD06	AFM40-ON05	AFM45-SN12	AFM75-SN12
Page			P196	P198	P200	P202
Approach angle			42°	40°	45°	75°
Max.ap（in）			0.177	0.138	0.256	0.315
Diameter range（in）			⌀ 2.000-6.000	⌀ 2.000-6.000	⌀ 2.000-6.000	⌀ 2.000-10.000
Insert type			OD..0605..	ON..0504..	SN..1206..	SN..1206..
Application	Face milling		●	●	●	●
	Square Shoulder milling					
	Slot milling					
	Ramping		●			
	Helical interpolate milling		●			
	Plunging					
	Profile milling					
	Chamfer milling					
	Pocket milling		●			

Remark: ● Recommended application

Overview of Milling Products

Product family			AFM88-SN12 	AFM45-XN07	AFM45-XN09	AFM45-XN09(W)
Page			P204	P206	P208	P209
Approach angle			88°	45°	45°	45°
Max.ap（in）			0.394	0.173	0.236	0.236
Diameter range（in）			∅2.000-6.000	∅2.000-4.000	∅2.500-8.000	∅ 3.000-8.000
Insert type			SN..1206..	XN..0705..	XN..0906..	XN..0906..
Application	Face milling		●	●	●	●
	Square Shoulder milling					
	Slot milling					
	Ramping					
	Helical interpolate milling					
	Plunging					
	Profile milling					
	Chamfer milling					
	Pocket milling					

Remark: ● Recommended application

Overview of Milling Products

Product family			ASM90-LN09	ASM90-LN13	ASM90-WN08-N	ASM90-AP17
Page			P211	P214	P216	P219
Approach angle			90°	90°	90°	90°
Max.ap（in）			0.314	0.472	0.275	0.630
Diameter range（in）			∅ 1.000-3.000	∅ 2.000-4.000	∅ 1.500-6.000	∅ 1.000-2.500
Insert type			LNHU 0904..	LNHU 1306..	WNMU 0806..	APKT 1705..
Application	Face milling		●	●	●	●
	Square Shoulder milling		●	●	●	●
	Slot milling		●	●	●	●
	Ramping					●
	Helical interpolate milling					●
	Plunging					
	Profile milling					
	Chamfer milling					
	Pocket milling					●

Remark: ● Recommended application

Overview of Milling Products

Product family			ASM90-TD15	ASM90-AO12	APE90-LN13	AHM20-LN06
Page			P221	P223	P225	P228
Approach angle			90°	90°	90°	20°
Max.ap（in）			0.433	0.433	1.339-2.520	0.026
Diameter range（in）			∅ 1.250-8.000	∅ 0.750-3.000	∅ 1.500-3.000	∅ 0.625-2.000
Insert type			TD.T 1505..	AOMT 1204..	LNHU 1306..	LN..0604..
Application	Face milling		●	●	●	●
	Square Shoulder milling		●	●	●	
	Slot milling		●	●		●
	Ramping		●	●		●
	Helical interpolate milling		●	●		●
	Plunging					●
	Profile milling					
	Chamfer milling					
	Pocket milling		●	●		●

Remark: ● Recommended application

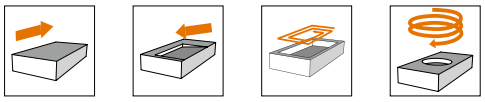
Overview of Milling Products

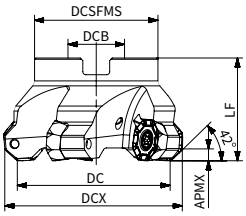
Product family			AHM25-LN10	APM00-RO10	APM00-RO12
Page			P230	P232	P234
Approach angle			25°	-	-
Max.ap（in）			0.047	0.197	0.236
Diameter range（in）			⌀ 1.000-5.000	⌀ 1.000-2.000	⌀ 1.250-3.000
Insert type			LN..1005..	RO..10T3..	RO..1204..
Application	Face milling		●	●	●
	Square Shoulder milling				
	Slot milling		●		
	Ramping		●	●	●
	Helical interpolate milling		●	●	●
	Plunging		●		
	Profile milling			●	●
	Chamfer milling				
	Pocket milling		●	●	●

Remark: ● Recommended application

AFM42-OD06

42 °Approaching angle face milling cutter



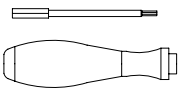


Inch

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM42-02000-Z04-A0750R-OD06-C	2.000	2.409	0.750	1.654	1.575	0.177		4	
AFM42-02500-Z05-A1000R-OD06-C	2.500	2.909	1.000	2.165	1.969	0.177		5	
AFM42-03000-Z05-A1000R-OD06-C	3.000	3.409	1.000	2.165	1.969	0.177		5	
AFM42-03000-Z06-A1000R-OD06-C	3.000	3.409	1.000	2.165	1.969	0.177		6	
AFM42-04000-Z06-A1500R-OD06-C	4.000	4.409	1.500	3.740	2.480	0.177		6	OD..0605..
AFM42-04000-Z07-A1500R-OD06-C	4.000	4.409	1.500	3.740	2.480	0.177		7	
AFM42-05000-Z07-A1500R-OD06-C	5.000	5.409	1.500	3.740	2.480	0.177		7	
AFM42-05000-Z08-A1500R-OD06-C	5.000	5.409	1.500	3.740	2.480	0.177		8	
AFM42-06000-Z10-A2000R-OD06	6.000	6.409	2.000	4.724	2.480	0.177		10	

Metric

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM42-050-Z04-A16R-OD06-C	50	60.4	16	40	40	4.5		4	
AFM42-063-Z05-A22R-OD06-C	63	73.4	22	48	40	4.5		5	
AFM42-080-Z05-A27R-OD06-C	80	90.4	27	62	50	4.5		5	
AFM42-080-Z06-A27R-OD06-C	80	90.4	27	62	50	4.5		6	
AFM42-100-Z06-A32R-OD06-C	100	110.4	32	80	50	4.5		6	OD..0605..
AFM42-100-Z07-A32R-OD06-C	100	110.4	32	80	50	4.5		7	
AFM42-125-Z07-A40R-OD06-C	125	135.4	40	87	63	4.5		7	
AFM42-125-Z08-A40R-OD06-C	125	135.4	40	87	63	4.5		8	
AFM42-160-Z10-A40R-OD06	160	170.4	40	107	63	4.5		10	

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀2.000-6.000			44 in lbs
	SP04512043	DT-TP20	

Note: With internal coolant
Without internal coolant

Product code	Dimension (in)		P			M	K		N
	Corner radius	Wiper length	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AW100K
ODET 0605APFN-FM2	0.031	0.063							●
ODMT 060508EN-MM3	0.031	-	●	●	●		●	●	
ODMT 060512EN-MM3	0.047	-	●						
ODHT 0605APEN-MM3	-	0.063	●	●			●	●	
ODEW 0605APSR-HR2	-	0.063					●	●	
ODMW 060512EN-HR2	0.047	-					●	●	

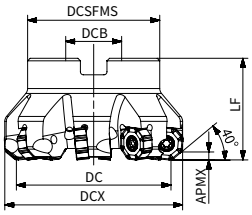
●: Stock available

Materials				Cutting depth and feed							
				OD..0605..							
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	ap		Geometry					
						HR2		MM3		FM2	
						fz					
				(in)							
				min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.008	0.177	0.006	0.016	0.005	0.014	-	-
		<137,785	<280								
	Alloyed steel	101,526-137,785	200-280			0.005	0.014	0.004	0.012	-	-
		137,785-174,044	280-355								
		174,044-203,052	355-415								
M	Duplex stainless steel	112,839	230			-	-	0.003	0.011	-	-
	Austenitic stainless steel	97,900	200								
	Precipitation-hardening stainless steel	146,923	300								
K	Grey cast iron	101,526	220			0.006	0.016	0.005	0.014	-	-
	Nodular cast iron	127,633	260								
	Malleable cast iron	116,030	250								
N	Aluminum	37,709	75			-	-	-	-	0.004	0.014
	Aluminum alloy	64,831	130								
S	Fe-based alloy	136,770	280			-	-	-	-	-	-
	Co-based alloy	156,060	320								
	Ni-based alloy	170,709	350								
	Ti-alloy	183,037	370								
H	Hardened steel	-	50-60HRC			0.004	0.010	-	-	-	-
	Chilled cast iron	-	55HRC								

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

AFM40-ON05

40° Approaching angle face milling cutter



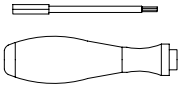
Inch

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM40-02000-Z04-A0750R-ON05-N-C	2.000	2.346	0.750	1.654	1.575	0.137	✓	4	
AFM40-02000-Z06-A0750R-ON05-N-C	2.000	2.346	0.750	1.654	1.575	0.137	✓	6	
AFM40-02500-Z05-A1000R-ON05-N-C	2.500	2.846	1.000	2.165	1.969	0.137	✓	5	
AFM40-02500-Z06-A1000R-ON05-N-C	2.500	2.846	1.000	2.165	1.969	0.137	✓	6	
AFM40-02500-Z08-A1000R-ON05-N-C	2.500	2.846	1.000	2.165	1.969	0.137	✓	8	
AFM40-03000-Z06-A1000R-ON05-N-C	3.000	3.346	1.000	2.165	1.969	0.137	✓	6	
AFM40-03000-Z08-A1000R-ON05-N-C	3.000	3.346	1.000	2.165	1.969	0.137	✓	8	
AFM40-03000-Z09-A1000R-ON05-N-C	3.000	3.346	1.000	2.165	1.969	0.137	✓	9	ON..0504..
AFM40-04000-Z07-A1500R-ON05-N-C	4.000	4.346	1.500	3.740	2.480	0.137	✓	7	
AFM40-04000-Z09-A1500R-ON05-N-C	4.000	4.346	1.500	3.740	2.480	0.137	✓	9	
AFM40-04000-Z11-A1500R-ON05-N-C	4.000	4.346	1.500	3.740	2.480	0.137	✓	11	
AFM40-05000-Z07-A1500R-ON05-N-C	5.000	5.346	1.500	3.740	2.480	0.137	✓	7	
AFM40-05000-Z09-A1500R-ON05-N-C	5.000	5.346	1.500	3.740	2.480	0.137	✓	9	
AFM40-05000-Z14-A1500R-ON05-N-C	5.000	5.346	1.500	3.740	2.480	0.137	✓	14	
AFM40-06000-Z10-A2000R-ON05-N	6.000	6.346	2.000	4.724	2.480	0.137	✗	10	

Metric

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM40-050-Z04-A22R-ON05-N-C	50	58.8	22	47	40	3.5	✓	4	
AFM40-050-Z06-A22R-ON05-N-C	50	58.8	22	47	40	3.5	✓	6	
AFM40-063-Z05-A22R-ON05-N-C	63	71.8	22	52	40	3.5	✓	5	
AFM40-063-Z06-A22R-ON05-N-C	63	71.8	22	52	40	3.5	✓	6	
AFM40-063-Z08-A22R-ON05-N-C	63	71.8	22	52	40	3.5	✓	8	
AFM40-080-Z06-A27R-ON05-N-C	80	88.8	27	62	50	3.5	✓	6	
AFM40-080-Z08-A27R-ON05-N-C	80	88.8	27	62	50	3.5	✓	8	
AFM40-080-Z09-A27R-ON05-N-C	80	88.8	27	62	50	3.5	✓	9	ON..0504..
AFM40-100-Z07-A32R-ON05-N-C	100	108.8	32	77	50	3.5	✓	7	
AFM40-100-Z09-A32R-ON05-N-C	100	108.8	32	77	50	3.5	✓	9	
AFM40-100-Z11-A32R-ON05-N-C	100	108.8	32	77	50	3.5	✓	11	
AFM40-125-Z07-A40R-ON05-N-C	125	133.8	40	90	63	3.5	✓	7	
AFM40-125-Z09-A40R-ON05-N-C	125	133.8	40	90	63	3.5	✓	9	
AFM40-125-Z14-A40R-ON05-N-C	125	133.8	40	90	63	3.5	✓	14	
AFM40-160-Z10-A40R-ON05-N	160	168.8	40	107	63	3.5	✗	10	

Note: ✓ With internal coolant
✗ Without internal coolant

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 2.000-6.000			35 in lbs
	SP040090	DT-TP15	

Product code	Dimension (in)		P			M	K		N
	Corner radius	Wiper length	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AW100K
ONHU 050408-MM3	0.031	-	●						
ONMU 050408-MM4	0.031	-	●	●			●	●	
ONHU 0504ZNR-MM3	0.031	0.055	●						

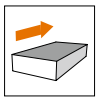
●: Stock available

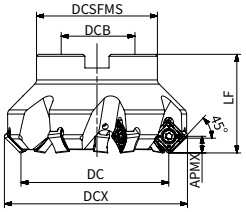
Materials				Cutting depth and feed					
				ON..0504..					
ISO	Material classification	Tensile strength (1bs/in²)	Hardness (HB)	ap		Geometry			
						MM3		MM4	
						fz			
				(in)					
				min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.008	0.138	0.004	0.010	0.006	0.014
		<137,785	<280						
	Alloyed steel	101,526-137,785	200-280						
		137,785-174,044	280-355						
		174,044-203,052	355-415						
M	Duplex stainless steel	112,839	230			0.003	0.008	0.004	0.010
	Austenitic stainless steel	97,900	200						
	Precipitation-hardening stainless steel	146,923	300						
K	Grey cast iron	101,526	220			0.004	0.010	0.006	0.014
	Nodular cast iron	127,633	260						
	Malleable cast iron	116,030	250						
N	Aluminum	37,709	75			-	-	-	-
	Aluminum alloy	64,831	130						
S	Fe-based alloy	136,770	280			-	-	-	-
	Co-based alloy	156,060	320						
	Ni-based alloy	170,709	350						
	Ti-alloy	183,037	370						
H	Hardened steel	-	50-60HRC			-	-	-	-
	Chilled cast iron	-	55HRC						

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

AFM45-SN12

45° Approaching angle face milling cutter



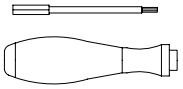


Inch

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM45-02000-Z04-A0750R-SN12-C	2.000	2.548	0.750	1.654	1.575	0.255	✓	4	SN..1206ANN.. SN..1206..
AFM45-02000-Z06-A0750R-SN12-C	2.000	2.548	0.750	1.654	1.575	0.255	✓	6	
AFM45-02500-Z06-A1000R-SN12-C	2.500	3.048	1.000	2.165	1.969	0.255	✓	6	
AFM45-03000-Z05-A1000R-SN12-C	3.000	3.548	1.000	2.165	1.969	0.255	✓	5	
AFM45-03000-Z07-A1000R-SN12-C	3.000	3.548	1.000	2.165	1.969	0.255	✓	7	
AFM45-04000-Z06-A1500R-SN12-C	4.000	4.548	1.500	3.740	2.480	0.255	✓	6	
AFM45-04000-Z08-A1500R-SN12-C	4.000	4.548	1.500	3.740	2.480	0.255	✓	8	
AFM45-05000-Z08-A1500R-SN12-C	5.000	5.548	1.500	3.740	2.480	0.255	✓	8	
AFM45-05000-Z10-A1500R-SN12-C	5.000	5.548	1.500	3.740	2.480	0.255	✓	10	
AFM45-06000-Z10-A2000R-SN12	6.000	6.548	2.000	4.724	2.480	0.255	✗	10	
AFM45-06000-Z12-A2000R-SN12	6.000	6.548	2.000	4.724	2.480	0.255	✗	12	

Metric

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM45-050-Z04-A22R-SN12-N-C	50	63.9	22	47	40	6.5	✓	4	SN..1206ANN.. SN..1206..
AFM45-050-Z06-A22R-SN12-N-C	50	63.9	22	47	40	6.5	✓	6	
AFM45-063-Z04-A22R-SN12-N-C	63	76.9	22	52	40	6.5	✓	4	
AFM45-063-Z06-A22R-SN12-N-C	63	76.9	22	52	40	6.5	✓	6	
AFM45-063-Z08-A22R-SN12-N-C	63	76.9	22	52	40	6.5	✓	8	
AFM45-080-Z04-A27R-SN12-N-C	80	93.9	27	62	50	6.5	✓	4	
AFM45-080-Z05-A27R-SN12-N-C	80	93.9	27	62	50	6.5	✓	5	
AFM45-080-Z07-A27R-SN12-N-C	80	93.9	27	62	50	6.5	✓	7	
AFM45-100-Z06-A32R-SN12-N-C	100	113.9	32	77	50	6.5	✓	6	
AFM45-100-Z08-A32R-SN12-N-C	100	113.9	32	77	50	6.5	✓	8	
AFM45-125-Z07-A40R-SN12-N-C	125	138.9	40	90	63	6.5	✓	7	
AFM45-125-Z08-A40R-SN12-N-C	125	138.9	40	90	63	6.5	✓	8	
AFM45-125-Z10-A40R-SN12-N-C	125	138.9	40	90	63	6.5	✓	10	
AFM45-160-Z10-A40R-SN12-N	160	173.9	40	107	63	6.5	✗	10	
AFM45-200-Z14-A60R-SN12-N	200	213.9	60	130	63	6.5	✗	14	
AFM45-250-Z16-A60R-SN12-N	250	263.9	60	180	63	6.5	✗	16	
AFM45-315-Z14-A60R-SN12-M	315	328.5	60	220	63	6.5	✗	14	

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 2.000-6.000			31 in lbs
	SP050120	DT-TP20	

Note: ✓ With internal coolant
✗ Without internal coolant

Product code	Dimension (in)		P			M	K		N
	Corner radius	Wiper length	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AW100K
SNGX 1206ANN-MM3	0.016	0.071	●	●	●		●	●	
SNGX 1206ANN-MM4	0.016	0.071	●	●	●	●	●	●	
SNGX 1206ANN-MR6	0.016	0.071	●	●	●		●	●	
SNGX 1206ANN-RR2	0.020	0.071	●	●	●		●	●	
SNGX 120608-MM4	0.031	-	●	●	●		●	●	
SNGX 120612-MM4	0.047	-	●						
SNMX 1206ANN-MM3	0.016	0.071	●	●	●		●	●	
SNMX 1206ANN-MM4	0.016	0.071	●	●	●	●	●	●	
SNMX 1206ANN-MR6	0.016	0.071	●	●	●		●	●	
SNMX 120608-MM4	0.031	-	●	●	●		●	●	
SNMX 120612-MM3	0.047	-	●	●	●		●	●	
SNMX 120612-MM4	0.047	-	●	●	●		●	●	
SNMX 120612R-MM4	0.047	-	●	●	●	●	●	●	
SNMX 120612-MR6	0.047	-	●	●	●		●	●	
SNMX 120612-RR2	0.047	-	●	●	●		●	●	
SNMX 120620-MM4	0.079	-	●	●	●		●	●	
SNMX 120620-RR2	0.079	-	●	●	●		●	●	
SNHX 1206ANN-FM2	0.020	0.071							●
SNHX 1206ANN-W	0.047	0.264	●				●		

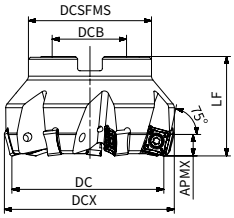
●: Stock available

Materials				Cutting depth and feed											
				SN.. 1206..											
				ap		Geometry									
						MM3		MM4		MR6		RR2		FM2	
						fz									
						(in)									
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	min	max	min	max	min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.008	0.256	0.006	0.014	0.007	0.015	0.007	0.016	0.007	0.018	-	-
		<137,785	<280												
	Alloyed steel	101,526-137,785	200-280			0.005	0.013	0.006	0.014	0.006	0.015	0.006	0.015	-	-
		137,785-174,044	280-355												
		174,044-203,052	355-415												
M	Duplex stainless steel	112,839	230			0.005	0.012	0.005	0.013	-	-	-	-	-	-
	Austenitic stainless steel	97,900	200												
	Precipitation-hardening stainless steel	146,923	300												
K	Grey cast iron	101,526	220			0.006	0.014	0.007	0.015	0.007	0.016	0.007	0.018	-	-
	Nodular cast iron	127,633	260												
	Malleable cast iron	116,030	250												
N	Aluminum	37,709	75			-	-	-	-	-	-	-	-	0.006	0.014
	Aluminum alloy	64,831	130												
S	Fe-based alloy	136,770	280			0.004	0.010	0.005	0.011	-	-	-	-	-	-
	Co-based alloy	156,060	320												
	Ni-based alloy	170,709	350												
	Ti-alloy	183,037	370												
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-	-	-	-	-
	Chilled cast iron	-	55HRC												

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

AFM75-SN12

75° Approaching angle face milling cutter

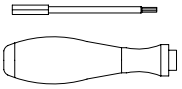


Inch

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM75-02000-Z04-A0750R-SN12-C	2.000	2.252	0.750	1.654	1.575	0.315	✓	4	SN..1206ENN.. SN..1206..
AFM75-02500-Z06-A1000R-SN12-C	2.500	2.752	1.000	2.165	1.969	0.315	✓	6	
AFM75-03000-Z07-A1000R-SN12-C	3.000	3.252	1.000	2.165	1.969	0.315	✓	7	
AFM75-04000-Z08-A1500R-SN12-C	4.000	4.252	1.500	3.740	2.480	0.315	✓	8	
AFM75-05000-Z08-A1500R-SN12-C	5.000	5.252	1.500	3.740	2.480	0.315	✓	8	
AFM75-05000-Z10-A1500R-SN12-C	5.000	5.252	1.500	3.740	2.480	0.315	✓	10	
AFM75-06000-Z10-A2000R-SN12	6.000	6.252	2000	4.724	2.480	0.315	✗	10	
AFM75-08000-Z14-A2500R-SN12	8.000	8.252	2.500	5.118	2.480	0.315	✗	14	
AFM75-10000-Z16-A2500R-SN12	10.000	10.252	2.500	6.299	2.480	0.315	✗	16	

Metric

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM75-050-Z04-A22R-SN12-N-C	50	56.4	22	42	40	8	✓	4	SN..1206ENN.. SN..1206..
AFM75-063-Z06-A22R-SN12-N-C	63	69.4	22	52	40	8	✓	6	
AFM75-080-Z07-A27R-SN12-N-C	80	86.4	27	62	50	8	✓	7	
AFM75-100-Z08-A32R-SN12-N-C	100	106.4	32	67	50	8	✓	8	
AFM75-125-Z08-A40R-SN12-N-C	125	131.4	40	90	63	8	✓	8	
AFM75-125-Z10-A40R-SN12-N-C	125	131.4	40	90	63	8	✓	10	
AFM75-160-Z10-A40R-SN12-N	160	166.4	40	107	63	8	✗	10	
AFM75-200-Z14-A60R-SN12-N	200	206.4	60	130	63	8	✗	14	
AFM75-250-Z16-A60R-SN12-N	250	256.4	60	180	63	8	✗	16	

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 2.000-10.000			31 in lbs
	SP050120	DT-TP20	

Note: ✓ With internal coolant
✗ Without internal coolant

Product code	Dimension (in)		P			M	K		N
	Corner radius	Wiper length	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AW100K
SNGX 1206ENN-MM3	0.031	0.047	●	●	●		●	●	
SNGX 1206ENN-MM4	0.031	0.047	●	●	●		●	●	
SNGX 1206ENN-MR6	0.031	0.047	●	●	●		●	●	
SNGX 120608-MM4	0.031	-	●	●	●		●	●	
SNGX 120612-MM4	0.047	-	●						
SNMX 1206ENN-MM4	0.031	0.047			●			●	
SNMX 120608-MM4	0.031	-	●	●	●		●	●	
SNMX 120612-MM3	0.047	-	●	●	●		●	●	
SNMX 120612-MM4	0.047	-	●	●	●		●	●	
SNMX 120612R-MM4	0.047	-	●	●	●	●	●	●	
SNMX 120612-MR6	0.047	-	●	●	●		●	●	
SNMX 120612-RR2	0.047	-	●	●	●		●	●	
SNMX 120620-MM4	0.079	-	●	●	●		●	●	
SNMX 120620-RR2	0.079	-	●	●	●		●	●	
SNHX 1206ENN-W	0.024	0.189	●				●		

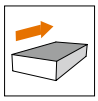
●: Stock available

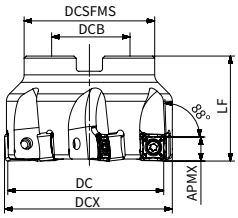
Materials				Cutting depth and feed									
				SN..1206..									
ISO	Material classification	Tensile strength ($1bs/in^2$)	Hardness (HB)	ap		Geometry							
						MM3		MM4		MR6		RR2	
						fz							
				(in)									
				min	max	min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.008	0.315	0.005	0.013	0.007	0.014	0.006	0.015	0.007	0.016
		<137,785	<280										
	Alloyed steel	101,526-137,785	200-280			0.004	0.012	0.005	0.013	0.004	0.014	0.006	0.014
		137,785-174,044	280-355										
		174,044-203,052	355-415										
M	Duplex stainless steel	112,839	230			0.004	0.011	0.004	0.012	-	-	-	-
	Austenitic stainless steel	97,900	200										
	Precipitation-hardening stainless steel	146,923	300										
K	Grey cast iron	101,526	220			0.005	0.013	0.006	0.014	0.005	0.014	0.007	0.016
	Nodular cast iron	127,633	260										
	Malleable cast iron	116,030	250										
N	Aluminum	37,709	75			-	-	-	-	-	-	-	-
	Aluminum alloy	64,831	130										
S	Fe-based alloy	136,770	280			0.004	0.009	0.004	0.010	-	-	-	-
	Co-based alloy	156,060	320										
	Ni-based alloy	170,709	350										
	Ti-alloy	183,037	370										
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-	-	-
	Chilled cast iron	-	55HRC										

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

AFM88-SN12

88° Approaching angle face milling cutter



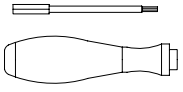


Inch

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM88-02000-Z04-A0750R-SN12-C	2.000	2.031	0.750	1.654	1.575	0.393	✓	4	SN..1206ZNN.. SN..1206..
AFM88-02500-Z06-A1000R-SN12-C	2.500	2.531	1.000	2.165	1.969	0.393	✓	6	
AFM88-03000-Z07-A1000R-SN12-C	3.000	3.031	1.000	2.165	1.969	0.393	✓	7	
AFM88-04000-Z08-A1500R-SN12-C	4.000	4.037	1.500	3.740	2.480	0.393	✓	8	
AFM88-04000-Z11-A1500R-SN12-C	4.000	4.037	1.500	3.740	2.480	0.393	✓	11	
AFM88-05000-Z10-A1500R-SN12-C	5.000	5.037	1.500	3.740	2.480	0.393	✓	10	
AFM88-05000-Z13-A1500R-SN12	5.000	5.037	1.500	3.740	2.480	0.393	✗	13	
AFM88-06000-Z12-A2000R-SN12	6.000	6.030	2.000	4.724	2.480	0.393	✗	12	

Metric

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM88-050-Z04-A22R-SN12-N-C	50	51.2	22	42	40	10	✓	4	SN..1206ZNN.. SN..1206..
AFM88-063-Z04-A22R-SN12-N-C	63	64.2	22	52	40	10	✓	4	
AFM88-063-Z06-A22R-SN12-N-C	63	64.2	22	62	40	10	✓	6	
AFM88-080-Z04-A27R-SN12-N-C	80	81.2	27	62	50	10	✓	4	
AFM88-080-Z07-A27R-SN12-N-C	80	81.2	27	62	50	10	✓	7	
AFM88-100-Z08-A32R-SN12-N-C	100	101.2	32	77	50	10	✓	8	
AFM88-100-Z11-A32R-SN12-N-C	100	101.2	32	77	50	10	✓	11	
AFM88-125-Z10-A40R-SN12-N-C	125	126.2	40	90	63	10	✓	10	
AFM88-125-Z13-A40R-SN12-N-C	125	126.2	40	90	63	10	✓	13	
AFM88-160-Z12-A40R-SN12-N	160	161.2	40	108	63	10	✗	12	
AFM88-200-Z14-A60R-SN12-N	200	201.2	60	130	63	10	✗	14	
AFM88-250-Z12-A60R-SN12-M	250	250.9	60	180	63	10	✗	12	
AFM88-315-Z14-A60R-SN12-M	315	315.9	60	220	63	10	✗	14	

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 2.000-6.000			31 in lbs
	SP050120	DT-TP20	

Note: ✓ With internal coolant
✗ Without internal coolant

Product code	Dimension (in)		P			M	K		N
	Corner radius	Wiper length	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AW100K
SNGX 1206ZNN-MM3	0.031	0.047	●	●	●		●	●	
SNGX 1206ZNN-MM4	0.031	0.047	●	●	●	●	●	●	
SNGX 1206ZNN-MR6	0.031	0.047	●	●	●		●	●	
SNGX 120608-MM4	0.031	-	●	●	●		●	●	
SNGX 120612-MM4	0.047	-	●						
SNMX 120608-MM4	0.031	-	●	●	●		●	●	
SNMX 120612-MM3	0.047	-	●	●	●		●	●	
SNMX 120612-MM4	0.047	-	●	●	●		●	●	
SNMX 120612R-MM4	0.047	-	●	●	●	●	●	●	
SNMX 120612-MR6	0.047	-	●	●	●		●	●	
SNMX 120612-RR2	0.047	-	●	●	●		●	●	
SNMX 120620-MM4	0.079	-	●	●	●		●	●	
SNMX 120620-RR2	0.079	-	●	●	●		●	●	
SNHX 1206ZNN-FM2	0.031	0.047							●
SNHX 1206ZNN-W	0.039	0.173	●				●		

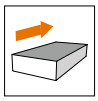
●: Stock available

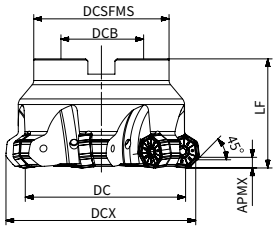
Materials				Cutting depth and feed											
				SN.. 1206..											
				ap		Geometry									
						MM3		MM4		MR6		RR2		FM2	
						fz									
						(in)									
ISO	Material classification	Tensile strength (1bs/in²)	Hardness (HB)	min	max	min	max	min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.008	0.394	0.005	0.013	0.007	0.014	0.006	0.015	0.007	0.016	-	-
		<137,785	<280												
	Alloyed steel	101,526-137,785	200-280			0.004	0.012	0.005	0.013	0.004	0.014	0.006	0.014	-	-
		137,785-174,044	280-355												
		174,044-203,052	355-415												
M	Duplex stainless steel	112,839	230			0.004	0.011	0.004	0.012	-	-	-	-	-	-
	Austenitic stainless steel	97,900	200												
	Precipitation-hardening stainless steel	146,923	300												
K	Grey cast iron	101,526	220			0.005	0.013	0.006	0.014	0.005	0.014	0.007	0.016	-	-
	Nodular cast iron	127,633	260												
	Malleable cast iron	116,030	250												
N	Aluminum	37,709	75			-	-	-	-	-	-	-	-	0.005	0.013
	Aluminum alloy	64,831	130												
S	Fe-based alloy	136,770	280			0.004	0.009	0.004	0.010	-	-	-	-	-	-
	Co-based alloy	156,060	320												
	Ni-based alloy	170,709	350												
	Ti-alloy	183,037	370												
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-	-	-	-	-
	Chilled cast iron	-	55HRC												

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

AFM45-XN07

45° Approaching angle face milling cutter





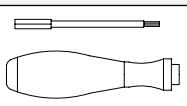
Inch

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM45-02000-Z04-A0750R-XN07-C	2.000	2.380	0.750	1.654	1.575	0.173		4	XN..0705..
AFM45-02000-Z05-A0750R-XN07-C	2.000	2.380	0.750	1.654	1.575	0.173		5	
AFM45-03000-Z06-A1000R-XN07-C	3.000	3.380	1.000	2.165	1.969	0.173		6	
AFM45-03000-Z07-A1000R-XN07-C	3.000	3.380	1.000	2.165	1.969	0.173		7	
AFM45-04000-Z07-A1500R-XN07-C	4.000	4.380	1.500	3.740	2.480	0.173		7	
AFM45-04000-Z08-A1500R-XN07-C	4.000	4.380	1.500	3.740	2.480	0.173		8	

Metric

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM45-040-Z03-A16R-XN07-C	40	49.7	16	35	40	4.4		3	XN..0705..
AFM45-050-Z04-A22R-XN07-C	50	59.7	22	42	40	4.4		4	
AFM45-050-Z05-A22R-XN07-C	50	59.7	22	42	40	4.4		5	
AFM45-063-Z05-A22R-XN07-C	63	72.7	22	48	40	4.4		5	
AFM45-063-Z06-A22R-XN07-C	63	72.7	22	48	40	4.4		6	
AFM45-080-Z06-A27R-XN07-C	80	89.7	27	62	50	4.4		6	
AFM45-080-Z07-A27R-XN07-C	80	89.7	27	62	50	4.4		7	
AFM45-100-Z07-A32R-XN07-C	100	109.7	32	77	50	4.4		7	
AFM45-100-Z08-A32R-XN07-C	100	109.7	32	77	50	4.4		8	
AFM45-125-Z08-A40R-XN07-C	125	134.7	40	87	63	4.4		8	
AFM45-125-Z10-A40R-XN07-C	125	134.7	40	87	63	4.4		10	
AFM45-160-Z09-A40R-XN07	160	169.7	40	107	63	4.4		9	
AFM45-160-Z12-A40R-XN07	160	169.7	40	107	63	4.4		12	
AFM45-200-Z14-A60R-XN07	200	209.3	60	130	63	4.4		14	
AFM45-250-Z14-A60R-XN07-S	250	259.6	60	180	63	4.4		14	

Note: With internal coolant
Without internal coolant

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
∅ 2.000-4.000			27 in lbs
	SP035120H	DT-TP15	

Product code	Dimension (in)		P			M	K		N
	corner radius	Wiper length	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AW100K
XNGU 0705ANN-MM3	0.031	0.043	●	●			●		
XNGU 0705ANN-MM4	0.031	0.043	●				●		
XNMU 0705ANN-MM4	0.031	0.043	●	●	●		●	●	
XNMU 0705ANN-MR6	0.031	0.043	●	●			●	●	
XNMU 070508-MM4	0.031	-	●	●		●	●	●	
XNGX 0705ANN-W	0.039	0.220	●				●		

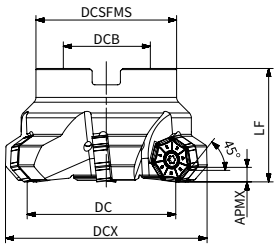
●: Stock available

Materials				Cutting depth and feed							
				XN.. 0705..							
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	ap		Geometry					
						MM3		MM4		MR6	
						fz					
				(in)							
				min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.008	0.173	0.006	0.014	7.000	0.015	0.007	0.016
		<137,785	<280								
	Alloyed steel	101,526-137,785	200-280			0.005	0.013	0.006	0.014	0.006	0.015
		137,785-174,044	280-355								
		174,044-203,052	355-415								
M	Duplex stainless steel	112,839	230			0.005	0.012	0.005	0.013	-	-
	Austenitic stainless steel	97,900	200								
	Precipitation-hardening stainless steel	146,923	300								
K	Grey cast iron	101,526	220			0.006	0.014	0.007	0.015	0.007	0.016
	Nodular cast iron	127,633	260								
	Malleable cast iron	116,030	250								
N	Aluminum	37,709	75			-	-	-	-	-	-
	Aluminum alloy	64,831	130								
S	Fe-based alloy	136,770	280			0.004	0.010	0.005	0.011	-	-
	Co-based alloy	156,060	320								
	Ni-based alloy	170,709	350								
	Ti-alloy	183,037	370								
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-
	Chilled cast iron	-	55HRC								

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

AFM45-XN09

45° Approaching angle face milling cutter



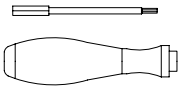
Inch

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM45-02500-Z05-A1000R-XN09-C	2.500	2.980	1.000	2.165	1.969	0.236	✓	5	XN..0906..
AFM45-03000-Z06-A1000R-XN09-C	3.000	3.480	1.000	2.165	1.969	0.236	✓	6	
AFM45-04000-Z07-A1500R-XN09-C	4.000	4.480	1.500	3.740	2.480	0.236	✓	7	
AFM45-04000-Z08-A1500R-XN09-C	4.000	4.480	1.500	3.740	2.480	0.236	✓	8	
AFM45-05000-Z08-A1500R-XN09-C	5.000	5.480	1.500	3.740	2.480	0.236	✓	8	
AFM45-05000-Z10-A1500R-XN09-C	5.000	5.480	1.500	3.740	2.480	0.236	✓	10	
AFM45-06000-Z09-A2000R-XN09	6.000	6.480	2.000	4.724	2.480	0.236	✗	9	
AFM45-06000-Z11-A2000R-XN09	6.000	6.480	2.000	4.724	2.480	0.236	✗	11	
AFM45-08000-Z12-A2500R-XN09	8.000	8.480	2.500	5.118	2.480	0.236	✗	12	

Metric

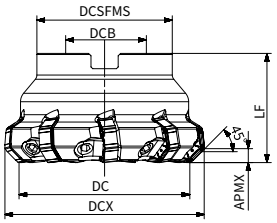
Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM45-063-Z05-A22R-XN09-C	63	75.2	22	48	40	6	✓	5	XN..0906..
AFM45-080-Z06-A27R-XN09-C	80	92.2	27	62	50	6	✓	6	
AFM45-100-Z07-A32R-XN09-C	100	112.2	32	80	50	6	✓	7	
AFM45-100-Z08-A32R-XN09-C	100	112.2	32	80	50	6	✓	8	
AFM45-125-Z08-A40R-XN09-C	125	137.2	40	87	63	6	✓	8	
AFM45-125-Z10-A40R-XN09-C	125	137.2	40	87	63	6	✓	10	
AFM45-160-Z09-A40R-XN09	160	172.2	40	107	63	6	✗	9	
AFM45-160-Z11-A40R-XN09	160	172.2	40	107	63	6	✗	11	
AFM45-200-Z12-A60R-XN09	200	212.2	60	130	63	6	✗	12	
AFM45-250-Z12-A60R-XN09-S	250	262.8	60	180	63	6	✗	12	
AFM45-315-Z14-A60R-XN09-S	315	328.2	60	240	63	6	✗	14	

Note: ✓ With internal coolant
✗ Without internal coolant

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 2.500-8.000			44 in lbs
	SP050130	DT-TP20	

AFM45-XN09-W

45° Wedge clamping face milling cutter



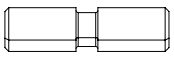
Inch

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM45-03000-Z09-A1000R-XN09-W	3.000	3.502	1.000	2.165	1.969	0.236		9	XN..0906..
AFM45-04000-Z12-A1500R-XN09-W	4.000	4.502	1.500	3.740	2.480	0.236		12	
AFM45-05000-Z16-A1500R-XN09-W	5.000	5.502	1.500	3.740	2.480	0.236		16	
AFM45-05000-Z16-A1500L-XN09-W	5.000	5.502	1.500	3.740	2.480	0.236		16	
AFM45-06000-Z20-A2000R-XN09-W	6.000	6.502	2.000	4.724	2.480	0.236		20	
AFM45-06000-Z20-A2000L-XN09-W	6.000	6.502	2.000	4.724	2.480	0.236		20	
AFM45-08000-Z26-A2500R-XN09-W	8.000	8.502	2.500	5.118	2.480	0.236		26	
AFM45-08000-Z26-A2500L-XN09-W	8.000	8.502	2.500	5.118	2.480	0.236		26	

Metric

Product code	DC	DCX	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
AFM45-080-Z09-A27R-XN09-W	80	92.7	27	62	50	6		9	XN..0906..
AFM45-100-Z12-A32R-XN09-W	100	112.7	32	80	50	6		12	
AFM45-125-Z16-A40R-XN09-W	125	137.7	40	87	63	6		16	
AFM45-125-Z16-A40L-XN09-W	125	137.7	40	87	63	6		16	
AFM45-160-Z20-A40R-XN09-W	160	172.7	40	107	63	6		20	
AFM45-160-Z20-A40L-XN09-W	160	172.7	40	107	63	6		20	
AFM45-200-Z26-A60R-XN09-W	200	212.7	60	130	63	6		26	
AFM45-200-Z26-A60L-XN09-W	200	212.7	60	130	63	6		26	
AFM45-250-Z30-A60R-XN09-W	250	262.7	60	170	63	6		30	
AFM45-315-Z39-A60R-XN09-W	315	327.7	60	250	63	6		39	

Note: With internal coolant
Without internal coolant

Dimension (in)	Spare parts			
Cutter diameter	Wedge	Screw	Wrench	Touque
⌀ 3.000-8.000				62 in lbs
	AWG-8H	WD080320F	AWH4	

Product code	Dimension (in)		P			M	K		N
	Corner radius	Wiper length	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AW100K
XNGU 0906ANN-MM3	0.031	0.055	●	●	●		●		
XNGU 0906ANN-MM4	0.031	0.055	●	●	●		●		
XNMU 0906ANN-MR6	0.031	0.055	●				●	●	
XNMF 0906ANN-MR6	0.031	0.055					●	●	
XNMU 090612-MM4	0.047	-	●	●		●	●	●	
XNGX 0906ANN-W	0.039	0.295	●				●		

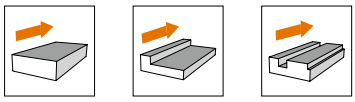
●: Stock available

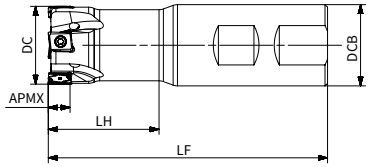
Materials				Cutting depth and feed							
				XN..0906..							
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	ap		Geometry					
						MM3		MM4		MR6	
						fz					
				(in)							
				min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.008	0.236	0.006	0.014	0.007	0.015	0.007	0.016
		<137,785	<280								
	Alloyed steel	101,526-137,785	200-280			0.005	0.013	0.015	0.014	0.006	0.015
		137,785-174,044	280-355								
		174,044-203,052	355-415								
M	Duplex stainless steel	112,839	230			0.005	0.012	0.005	0.013	-	-
	Austenitic stainless steel	97,900	200								
	Precipitation-hardening stainless steel	146,923	300								
K	Grey cast iron	101,526	220			0.006	0.014	0.007	0.015	0.007	0.016
	Nodular cast iron	127,633	260								
	Malleable cast iron	116,030	250								
N	Aluminum	37,709	75			-	-	-	-	-	-
	Aluminum alloy	64,831	130								
S	Fe-based alloy	136,770	280			0.004	0.010	0.005	0.011	-	-
	Co-based alloy	156,060	320								
	Ni-based alloy	170,709	350								
	Ti-alloy	183,037	370								
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-
	Chilled cast iron	-	55HRC								

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

ASM90-LN09

Square shoulder milling cutter



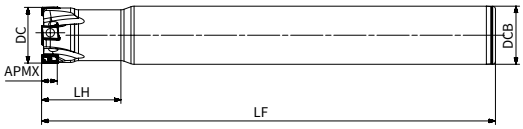


Inch

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-01000-Z03-W1000R-LN09-C	1.000	1.000	4.000	1.719	0.314		3	LNHU 0904..
ASM90-01000-Z04-W1000R-LN09-C	1.000	1.000	4.000	1.719	0.314		4	
ASM90-01250-Z04-W1250R-LN09-C	1.250	1.250	4.000	1.719	0.314		4	
ASM90-01250-Z05-W1250R-LN09-C	1.250	1.250	4.000	1.719	0.314		5	
ASM90-01500-Z04-W1500R-LN09-C	1.500	1.250	4.000	1.200	0.314		4	
ASM90-01500-Z06-W1500R-LN09-C	1.500	1.250	4.000	1.200	0.314		6	

Metric

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-025-Z03-W25R-LN09-C	25	25	100	39	8		3	LNHU 0904..
ASM90-025-Z04-W25R-LN09-C	25	25	100	39	8		4	
ASM90-032-Z04-W32R-LN09-C	32	32	110	44	8		4	
ASM90-032-Z05-W32R-LN09-C	32	32	110	44	8		5	
ASM90-040-Z04-W32R-LN09-C	40	32	110	25	8		4	
ASM90-040-Z06-W32R-LN09-C	40	32	110	25	8		6	



Inch

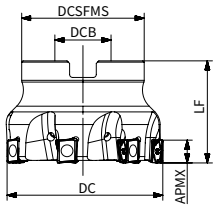
Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-00750-Z02-C0750R-LN09-L4500	0.750	0.750	4.500	1.220	0.314		2	LNHU 0904..
ASM90-00750-Z03-C0750R-LN09-L4500	0.750	0.750	4.500	1.220	0.314		3	
ASM90-01000-Z03-C1000R-LN09-L8000-C	1.000	1.000	8.000	1.574	0.314		3	
ASM90-01000-Z04-C1000R-LN09-L8000-C	1.000	1.000	8.000	1.574	0.314		4	
ASM90-01250-Z04-C1250R-LN09-L10000-C	1.250	1.250	10.000	1.968	0.314		4	
ASM90-01250-Z05-C1250R-LN09-L10000-C	1.250	1.250	10.000	1.968	0.314		5	

Metric

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-020-Z02-C20R-LN09-L110	20	20	110	30	8		2	LNHU 0904..
ASM90-020-Z03-C20R-LN09-L110	20	20	110	30	8		3	
ASM90-021-Z02-C20R-LN09-L200	21	20	200	30	8		2	
ASM90-025-Z03-C25R-LN09-L200-C	25	25	200	34	8		3	
ASM90-025-Z04-C25R-LN09-L200-C	25	25	200	34	8		4	
ASM90-026-Z03-C25R-LN09-L200-C	26	25	200	34	8		3	
ASM90-028-Z03-C25R-LN09-L110-C	28	25	110	34	8		3	
ASM90-032-Z04-C32R-LN09-L250-C	32	32	250	45	8		4	
ASM90-032-Z05-C32R-LN09-L250-C	32	32	250	45	8		5	
ASM90-033-Z04-C32R-LN09-L250-C	33	32	250	45	8		4	

ASM90-LN09

Square shoulder milling cutter



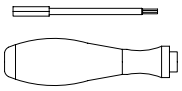
Inch

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-01500-Z04-A0750R-LN09-C	1.500	0.750	1.575	1.378	0.314		4	LNHU 0904..
ASM90-01500-Z06-A0750R-LN09-C	1.500	0.750	1.575	1.378	0.314		6	
ASM90-02000-Z05-A0750R-LN09-C	2.000	0.750	1.575	1.654	0.314		5	
ASM90-02000-Z07-A0750R-LN09-C	2.000	0.750	1.575	1.654	0.314		7	
ASM90-02500-Z07-A1000R-LN09-C	2.500	1.000	1.969	2.165	0.314		7	
ASM90-02500-Z10-A1000R-LN09-C	2.500	1.000	1.969	2.165	0.314		10	
ASM90-03000-Z09-A1000R-LN09-C	3.000	1.000	1.969	2.165	0.314		9	
ASM90-03000-Z13-A1000R-LN09-C	3.000	1.000	1.969	2.165	0.314		13	

Metric

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-040-Z04-A16R-LN09-C	40	16	40	35	8		4	LNHU 0904..
ASM90-040-Z06-A16R-LN09-C	40	16	40	35	8		6	
ASM90-050-Z05-A22R-LN09-C	50	22	40	42	8		5	
ASM90-050-Z07-A22R-LN09-C	50	22	40	42	8		7	
ASM90-063-Z07-A22R-LN09-C	63	22	40	48	8		7	
ASM90-063-Z10-A22R-LN09-C	63	22	40	48	8		10	
ASM90-080-Z09-A27R-LN09-C	80	27	50	62	8		9	
ASM90-080-Z13-A27R-LN09-C	80	27	50	62	8		13	

Note: With internal coolant
Without internal coolant

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 0.750-3.000			16 in lbs
	SP030083	DT-TP09	

Product code	Dimension (in)		P		M		K		N
	Corner radius	Wiper length	AP251U	AP351U	AP351M	AP403M	AC301K	AP251K	AW100K
LNHU 090404ER-FM2	0.016	0.073							●
LNHU 090404ER-MM3	0.016	0.073		●		●			
LNHU 090404ER-MR2	0.016	0.073	●	●		●	●	●	
LNHU 090408ER-MR2	0.031	0.051	●	●		●	●	●	
LNHU 090412ER-MR2	0.047	0.039	●			●	●		
LNHU 090416ER-MR2	0.063	0.026	●			●	●		
LNHU 090420ER-MR2	0.079	0.026	●			●	●		
LNHU 0904PDER-W	0.016	0.142	●				●		

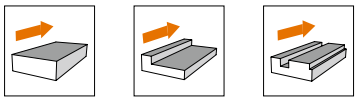
●: Stock available

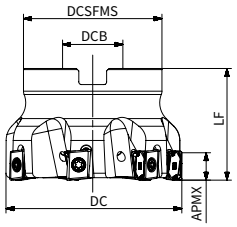
Materials				Cutting depth and feed							
				LNHU 0904..							
				ap		Geometry					
						MR2		MM4		FM2	
						fz					
						(in)					
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.008	0.314	0.003	0.011	0.003	0.010	-	-
		<137,785	<280								
	Alloyed steel	101,526-137,785	200-280			0.002	0.009	0.002	0.008	-	-
		137,785-174,044	280-355								
		174,044-203,052	355-415								
M	Duplex stainless steel	112,839	230			0.002	0.009	0.002	0.008	-	-
	Austenitic stainless steel	97,900	200								
	Precipitation-hardening stainless steel	146,923	300								
K	Grey cast iron	101,526	220			0.003	0.012	0.003	0.011	-	-
	Nodular cast iron	127,633	260								
	Malleable cast iron	116,030	250								
N	Aluminum	37,709	75			-	-	-	-	0.002	0.010
	Aluminum alloy	64,831	130								
S	Fe-based alloy	136,770	280			-	-	0.003	0.006	-	-
	Co-based alloy	156,060	320								
	Ni-based alloy	170,709	350								
	Ti-alloy	183,037	370								
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-
	Chilled cast iron	-	55HRC								

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

ASM90-LN13

Square shoulder milling cutter





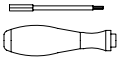
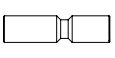
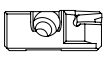
Inch

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-02000-Z05-A0750R-LN13-C	2.000	0.750	1.575	1.654	0.472	✓	5	LNHU 1306..
ASM90-02000-Z06-A0750R-LN13-C	2.000	0.750	1.575	1.654	0.472	✓	6	
ASM90-03000-Z07-A1000R-LN13-C	3.000	1.000	1.969	2.165	0.472	✓	7	
ASM90-03000-Z10-A1000R-LN13-C	3.000	1.000	1.969	2.165	0.472	✓	10	
ASM90-04000-Z09-A1500R-LN13-C	4.000	1.500	2.480	3.740	0.472	✓	9	
ASM90-04000-Z13-A1500R-LN13	4.000	1.500	2.480	3.740	0.472	✗	13	

Metric

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-040-Z04-A16R-LN13-C	40	16	40	35	12	✓	4	LNHU 1306..
ASM90-040-Z05-A16R-LN13-C	40	16	40	35	12	✓	5	
ASM90-050-Z05-A22R-LN13-C	50	22	40	42	12	✓	5	
ASM90-050-Z06-A22R-LN13-C	50	22	40	42	12	✓	6	
ASM90-063-Z04-A22R-LN13-C	63	22	40	48	12	✓	4	
ASM90-063-Z06-A22R-LN13-C	63	22	40	48	12	✓	6	
ASM90-063-Z08-A22R-LN13-C	63	22	40	48	12	✓	8	
ASM90-080-Z05-A27R-LN13-C	80	27	50	62	12	✓	5	
ASM90-080-Z07-A27R-LN13-C	80	27	50	62	12	✓	7	
ASM90-080-Z10-A27R-LN13-C	80	27	50	62	12	✓	10	
ASM90-100-Z07-A32R-LN13-C	100	32	50	80	12	✓	7	
ASM90-100-Z09-A32R-LN13-C	100	32	50	80	12	✓	9	
ASM90-100-Z13-A32R-LN13-C	100	32	50	80	12	✓	13	
ASM90-125-Z09-A40R-LN13-C	125	40	63	87	12	✓	9	
ASM90-125-Z11-A40R-LN13-C	125	40	63	87	12	✓	11	
ASM90-125-Z16-A40R-LN13-C	125	40	63	87	12	✓	16	
ASM90-160-Z09-A40R-LN13	160	40	63	107	12	✗	9	
ASM90-160-Z13-A40R-LN13	160	40	63	107	12	✗	13	
ASM90-200-Z12-A60R-LN13	200	60	63	140	12	✗	12	
ASM90-250-Z12-A60R-LN13-M	250	60	63	180	12	✗	12	
ASM90-315-Z14-A60R-LN13-M	315	60	63	220	12	✗	14	

Note: ✓ With internal coolant
✗ Without internal coolant

Dimension (in)	Spare parts								
Cutter diameter	Screw	Wrench	Wedge	Wedge wrench	Wedge screw	Cartridge	Cartridge wrench	Cartridg escrew	Torque
⌀ 2.000-4.000									3.5Nm
	SP040115	DT-TP15	AWG-6H-6	LT-H3	AWCH624	C-LN1342-62-90	LT-H5	ACH622	

Product code	Dimension (in)		P		M		K		N
	Corner radius	Wiper length	AP251U	AP351U	AP351M	AP403M	AC301K	AP251K	AW100K
LNHU 130608ER-FM2	0.031	0.106							●
LNHU 130608ER-MM3	0.031	0.106		●		●			
LNHU 130608ER-MR2	0.031	0.106	●	●	●	●	●	●	
LNHU 130612ER-MR2	0.047	0.091	●	●	●	●	●		
LNHU 130616ER-MR2	0.063	0.075	●	●	●	●	●	●	
LNHU 130620ER-MR2	0.079	0.059	●	●	●	●			
LNHU 130624ER-MR2	0.094	0.039		●	●	●			
LNHU 130631ER-MR2	0.122	0.016		●	●	●	●		
LNHU 1306PDR-W	0.031	0.220	●				●		

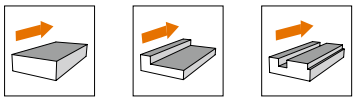
●: Stock available

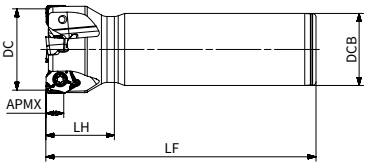
Materials				Cutting depth and feed					
				LNHU..1306..					
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	ap		Geometry			
						MM3		MR2	
						fz			
				(in)					
				min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.012	0.472	0.004	0.012	0.005	0.014
		<137,785	<280						
	Alloyed steel	101,526-137,785	200-280			0.003	0.010	0.004	0.012
		137,785-174,044	280-355						
		174,044-203,052	355-415						
M	Duplex stainless steel	112,839	230			0.002	0.008	0.003	0.010
	Austenitic stainless steel	97,900	200						
	Precipitation-hardening stainless steel	146,923	300						
K	Grey cast iron	101,526	220			-	-	0.005	0.014
	Nodular cast iron	127,633	260						
	Malleable cast iron	116,030	250						
N	Aluminum	37,709	75			-	-	-	-
	Aluminum alloy	64,831	130						
S	Fe-based alloy	136,770	280			0.002	0.007	0.003	0.009
	Co-based alloy	156,060	320						
	Ni-based alloy	170,709	350						
	Ti-alloy	183,037	370						
H	Hardened steel	-	50-60HRC			-	-	0.003	0.008
	Chilled cast iron	-	55HRC						

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

ASM90-WN08-N

Square shoulder milling cutter



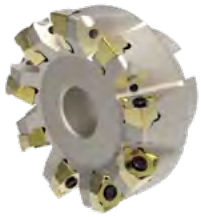


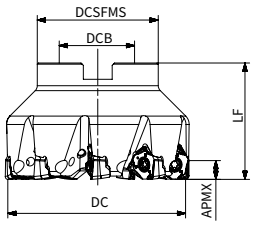
Inch

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-01500-Z03-W1250R-WN08-N-C	1.500	1.250	4.500	1.378	0.275		3	WNMU 0806..
ASM90-01500-Z04-W1250R-WN08-N-C	1.500	1.250	4.500	1.378	0.275		4	

Metric

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-040-Z03-W32R-WN08-N-C	40	32	120	30	7		3	WNMU 0806..
ASM90-040-Z04-W32R-WN08-N-C	40	32	120	30	7		4	





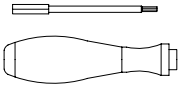
Inch

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-02000-Z04-A0750R-WN08-N-C	2.000	0.750	1.575	1.654	0.275		4	WNMU 0806..
ASM90-02000-Z05-A0750R-WN08-N-C	2.000	0.750	1.575	1.654	0.275		5	
ASM90-02500-Z04-A1000R-WN08-N-C	2.500	1.000	1.969	2.165	0.275		4	
ASM90-02500-Z06-A1000R-WN08-N-C	2.500	1.000	1.969	2.165	0.275		6	
ASM90-02500-Z07-A1000R-WN08-N-C	2.500	1.000	1.969	2.165	0.275		7	
ASM90-03000-Z05-A1000R-WN08-N-C	3.000	1.000	1.969	2.165	0.275		5	
ASM90-03000-Z07-A1000R-WN08-N-C	3.000	1.000	1.969	2.165	0.275		7	
ASM90-03000-Z09-A1000R-WN08-N-C	3.000	1.000	1.969	2.165	0.275		9	
ASM90-04000-Z06-A1500R-WN08-N-C	4.000	1.500	2.480	3.740	0.275		6	
ASM90-04000-Z08-A1500R-WN08-N-C	4.000	1.500	2.480	3.740	0.275		8	
ASM90-04000-Z11-A1500R-WN08-N	4.000	1.500	2.480	3.740	0.275		11	
ASM90-05000-Z07-A1500R-WN08-N-C	5.000	1.500	2.480	3.740	0.275		7	
ASM90-05000-Z11-A1500R-WN08-N-C	5.000	1.500	2.480	3.740	0.275		11	
ASM90-05000-Z13-A1500R-WN08-N	5.000	1.500	2.480	3.740	0.275		13	
ASM90-06000-Z08-A2000R-WN08-N	6.000	2.000	2.480	4.724	0.275		8	
ASM90-06000-Z12-A2000R-WN08-N	6.000	2.000	2.480	4.724	0.275		12	

Metric

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-050-Z04-A22R-WN08-N-C	50	22	40	42	7		4	WNMU 0806..
ASM90-050-Z05-A22R-WN08-N-C	50	22	40	42	7		5	
ASM90-063-Z04-A22R-WN08-N-C	63	22	40	48	7		4	
ASM90-063-Z06-A22R-WN08-N-C	63	22	40	48	7		6	
ASM90-063-Z07-A22R-WN08-N-C	63	22	40	48	7		7	
ASM90-080-Z05-A27R-WN08-N-C	80	27	50	62	7		5	
ASM90-080-Z07-A27R-WN08-N-C	80	27	50	62	7		7	
ASM90-080-Z09-A27R-WN08-N-C	80	27	50	62	7		9	
ASM90-100-Z06-A32R-WN08-N-C	100	32	50	80	7		6	
ASM90-100-Z08-A32R-WN08-N-C	100	32	50	80	7		8	
ASM90-100-Z11-A32R-WN08-N-C	100	32	50	80	7		11	
ASM90-125-Z07-A40R-WN08-N-C	125	40	63	87	7		7	
ASM90-125-Z11-A40R-WN08-N-C	125	40	63	87	7		11	
ASM90-125-Z13-A40R-WN08-N-C	125	40	63	87	7		13	
ASM90-160-Z08-A40R-WN08-N	160	40	63	107	7		8	
ASM90-160-Z12-A40R-WN08-N	160	40	63	107	7		12	
ASM90-200-Z14-A60R-WN08-N	200	60	63	140	7		14	
ASM90-250-Z16-A60R-WN08-N	250	60	63	180	7		16	

Note: With internal coolant
Without internal coolant

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 1.500-6.000			3.5Nm
	SP040112	DT-TP15	

Product code	Dimension (in)		P	M		K	
	Corner radius	Wiper length	AP251U	AP351M	AP403M	AC301K	AP251K
WNMU 080608R-MR2	0.031	0.091	●	●	●	●	●
WNMU 080608R-MM4	0.031	0.091	●	●	●	●	●
WNMU 080608R-MM3	0.031	0.091	●	●	●	●	●
WNMU 080612R-MR2	0.047	0.047	●	●		●	●
WNMU 080612R-MM4	0.047	0.046	●	●	●		●
WNMU 080616R-MR2	0.063	0.032	●		●		
WNMU 080616R-MM4	0.063	0.031	●		●		

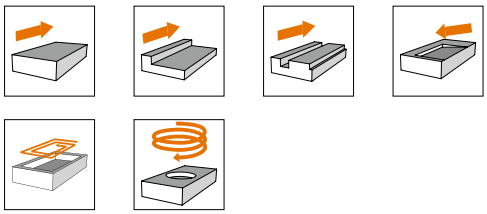
●: Stock available

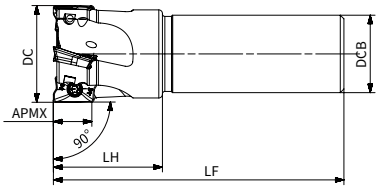
Materials				Cutting depth and feed							
				WNMU 0806..							
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	ap		MM3		MM4		MR2	
				(in)							
				min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.023	0.275	0.005	0.010	0.005	0.011	0.005	0.012
		<137,785	<280								
	Alloyed steel	101,526-137,785	200-280			0.004	0.008	0.004	0.010	0.004	0.011
		137,785-174,044	280-355								
		174,044-203,052	355-415								
M	Duplex stainless steel	112,839	230			0.08	0.007	0.003	0.007	-	-
	Austenitic stainless steel	97,900	200								
	Precipitation-hardening stainless steel	146,923	300								
K	Grey cast iron	101,526	220			0.003	0.008	0.004	0.011	0.006	0.012
	Nodular cast iron	127,633	260								
	Malleable cast iron	116,030	250								
S	Fe-based alloy	136,770	280			0.005	0.005	0.004	0.006	-	-
	Co-based alloy	156,060	320								
	Ni-based alloy	170,709	350								
	Ti-alloy	183,037	370								
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-
	Chilled cast iron	-	55HRC								

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

ASM90-AP17

Square shoulder milling cutter



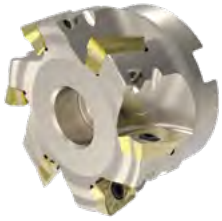


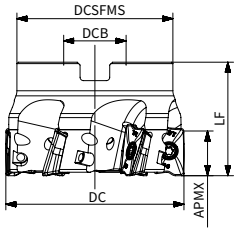
Inch

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-01000-Z02-C1000R-AP17-L4000-C	1.000	1.000	4.000	1.750	0.630		2	APKT 1705..
ASM90-01250-Z03-C1250R-AP17-L4500-C	1.250	1.250	4.500	2.250	0.630		3	
ASM90-01500-Z04-C1500R-AP17-L10000-C	1.500	1.500	10.000	2.250	0.630		4	

Metric

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-025-Z02-C25R-AP17-L100-C	25	25	100	39	16		2	APKT 1705..
ASM90-032-Z03-C32R-AP17-L110-C	32	32	110	40	16		3	
ASM90-032-Z03-C32R-AP17-L200-C	32	32	200	40	16		3	
ASM90-040-Z04-C32R-AP17-L120-C	40	32	120	45	16		4	





Inch

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-02000-Z05-A0750R-AP17-C	2.000	0.750	1.575	1.654	0.630		5	APKT 1705..
ASM90-02500-Z06-A1000R-AP17-C	2.500	1.000	1.969	2.165	0.630		6	

Metric

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-050-Z05-A22R-AP17-C	50	22	40	45	16		5	APKT 1705..
ASM90-063-Z06-A22R-AP17-C	63	22	40	55	16		6	
ASM90-080-Z06-A27R-AP17-C	80	27	50	62	16		6	
ASM90-100-Z08-A32R-AP17-C	100	32	50	78	16		8	

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
∅ 1.000	SP040084	DT-TP15	4.0Nm
∅ 1.250-2.500	SP040100H		

Note: With internal coolant
Without internal coolant

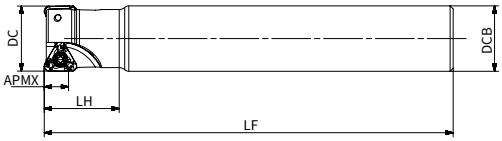
Product code	Dimension (in)		P		M		K		S	N
	Corner radius	Wiper length	AP251U	AP351U	AP351M	AP403M	AC301K	AP251K	AP403S	AW100K
APKT 1705PDER-DT	0.031	0.085	●	●		●		●		●
APKT 170516R-DT	0.063	0.067	●					●		
APKT 170524R-DT	0.094	0.037	●		●	●		●		
APKT 170530R-DT	0.118	0.019	●		●	●		●		
APKT 170540R-DT	0.157	-	●		●	●				

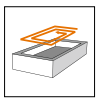
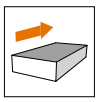
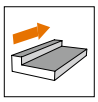
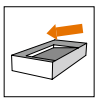
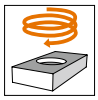
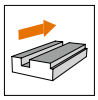
●: Stock available

Materials				Cutting depth and feed			
				APKT..1705..			
				ap		DT fz	
				(in)			
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.004	0.630	0.003	0.010
		<137,785	<280				
	Alloyed steel	101,526-137,785	200-280			0.002	0.009
		137,785-174,044	280-355				
		174,044-203,052	355-415				
M	Duplex stainless steel	112839	230			0.002	0.008
	Austenitic stainless steel	97900	200				
	Precipitation-hardening stainless steel	146923	300				
K	Grey cast iron	101,526	220			0.003	0.010
	Nodular cast iron	127,633	260				
	Malleable cast iron	116,030	250				
N	Aluminum	37,709	75			0.002	0.012
	Aluminum alloy	64,831	130				
S	Fe-based alloy	136,770	280			0.002	0.007
	Co-based alloy	156,060	320				
	Ni-based alloy	170,709	350				
	Ti-alloy	183,037	370				
H	Hardened steel	-	50-60HRC			-	-
	Chilled cast iron	-	55HRC				

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

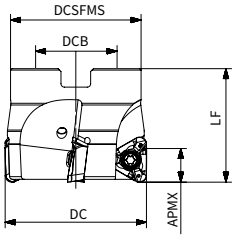
ASM90-TD15
Square shoulder milling cutter



Inch

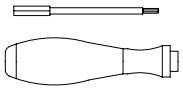
Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-01250-Z02-C1250R-TD15-C	1.250	1.250	5.125	2.750	0.433		2	TD.T 1505..
ASM90-01250-Z02-C1250R-TD15-L8000-C	1.250	1.250	8.000	2.750	0.433		2	
ASM90-01500-Z03-C1250R-TD15-C	1.500	1.250	4.724	1.575	0.433		3	
ASM90-01500-Z03-C1250R-TD15-L8000-C	1.500	1.250	8.000	1.575	0.433		3	

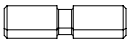
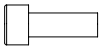
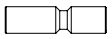


Inch

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-01500-Z04-A0750R-TD15-C	1.500	0.750	1.575	1.378	0.433		4	TD.T 1505..
ASM90-02000-Z04-A0750R-TD15-C	2.000	0.750	1.575	1.654	0.433		4	
ASM90-02000-Z05-A0750R-TD15-C	2.000	0.750	1.575	1.654	0.433		5	
ASM90-02500-Z04-A1000R-TD15-C	2.500	1.000	1.969	2.165	0.433		4	
ASM90-02500-Z05-A1000R-TD15-C	2.500	1.000	1.969	2.165	0.433		5	
ASM90-02500-Z06-A1000R-TD15-C	2.500	1.000	1.969	2.165	0.433		6	
ASM90-03000-Z05-A1000R-TD15-C	3.000	1.000	1.969	2.165	0.433		5	
ASM90-03000-Z06-A1000R-TD15-C	3.000	1.000	1.969	2.165	0.433		6	
ASM90-03000-Z07-A1000R-TD15-C	3.000	1.000	1.969	2.165	0.433		7	
ASM90-04000-Z06-A1500R-TD15-C	4.000	1.500	2.480	3.740	0.433		6	
ASM90-04000-Z08-A1500R-TD15-C	4.000	1.500	2.480	3.740	0.433		8	
ASM90-05000-Z07-A1500R-TD15-C	5.000	1.500	2.480	3.740	0.433		7	
ASM90-05000-Z09-A1500R-TD15-C	5.000	1.500	2.480	3.740	0.433		9	
ASM90-06000-Z08-A2000R-TD15	6.000	2.000	2.480	4.724	0.433		8	
ASM90-06000-Z10-A2000R-TD15	6.000	2.000	2.480	4.724	0.433		10	
ASM90-08000-Z09-A2500R-TD15	8.000	2.500	2.480	5.118	0.433		9	
ASM90-08000-Z11-A2500R-TD15	8.000	2.500	2.480	5.118	0.433		11	

Note: With internal coolant
Without internal coolant

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 1.250-8.000			3.5Nm
	SP040100H	DT-TP15	
ASM90-01500-Z04-A0750R-TD15-C	WD080300	LT-H4	

Mounting bolt	Mounting bolt wrench	Cartridge screw	Cartridge screw wrench	Wedge	Wedge screw	Wedge screw wrench	Cartridge
							
WD080300	LT-H4	ACH622	LT-H5	AWG-6H-6	AWCH624	LT-H3	C-TD1540-62-90

Product code	Dimension (in)		P	M		K		N
	Corner radius	Wiper length	AP251U	AP351M	AP403M	AC301K	AP251K	AW100K
TDMT 150508R-MM4	0.031	0.059	●	●	●	●	●	
TDMT 150512R-MM4	0.047	0.039	●	●	●	●	●	
TDMT 150516R-MM4	0.063	0.037	●	●	●	●	●	
TDMT 150520R-MM4	0.079	0.028	●		●		●	
TDMT 150524R-MM4	0.094	0.023	●		●		●	
TDMT 150531R-MM4	0.122	0.016	●		●		●	
TDMT 150540R-MM4	0.157	0.016	●		●		●	
TDMT 150508R-MM3	0.031	0.059	●		●		●	
TDHT 150508R-MM4	0.031	0.059	●				●	

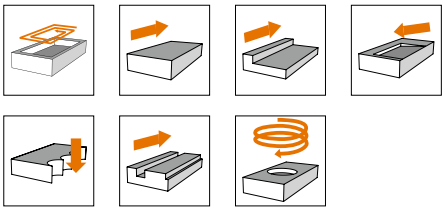
●: Stock available

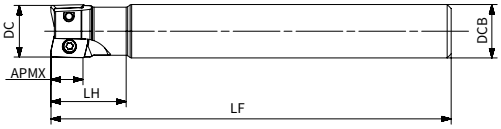
Materials				Cutting depth and feed			
				TD.T 1505..			
				ap		fz	
				(in)			
ISO	Material classification	Tensile strength (1bs/in²)	Hardness (HB)	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.004	0.433	0.003	0.010
		<137,785	<280				
	Alloyed steel	101,526-137,785	200-280			0.002	0.009
		137,785-174,044	280-355				
		174,044-203,052	355-415				
M	Duplex stainless steel	112,839	230			0.002	0.008
	Austenitic stainless steel	97,900	200				
	Precipitation-hardening stainless steel	146,923	300				
K	Grey cast iron	101.526	220			0.003	0.010
	Nodular cast iron	127.633	260				
	Malleable cast iron	116.030	250				
N	Aluminum	37,709	75			0.002	0.012
	Aluminum alloy	64,831	130				
S	Fe-based alloy	136,77	280			0.002	0.007
	Co-based alloy	156,060	320				
	Ni-based alloy	170,709	350				
	Ti-alloy	183,037	370				
H	Hardened steel	-	50-60HRC			-	-
	Chilled cast iron	-	55HRC				

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

ASM90-AO12

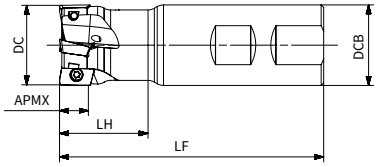
Square shoulder milling cutter





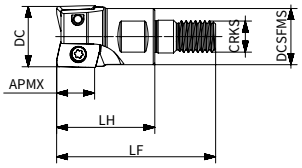
Inch

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-00750-Z02-C0750R-AO12-L6000-C	0.750	0.750	6.000	1.102	0.433		2	AO.T 1204..
ASM90-01000-Z03-C1000R-AO12-L6700-C	1.000	1.000	6.700	1.299	0.433		3	
ASM90-01250-Z04-C1250R-AO12-L10000-C	1.250	1.250	10.000	1.378	0.433		4	



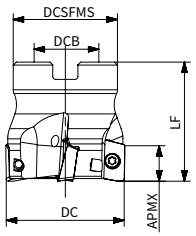
Inch

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
ASM90-00750-Z02-W0750R-AO12-C	0.750	0.750	3.346	1.181	0.433		2	AO.T 1204..
ASM90-01000-Z03-W0750R-AO12-C	1.000	0.750	3.740	1.378	0.433		3	
ASM90-01250-Z04-W1250R-AO12-C	1.250	1.250	4.134	1.575	0.433		4	
ASM90-01500-Z04-W1250R-AO12-C	1.500	1.500	4.724	1.772	0.433		4	



Inch

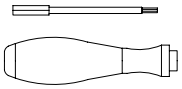
Product code	DC	LF	LH	CRKS	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-00750-Z02-M10R-AO12-C	0.750	2.008	1.220	M10	0.709	0.433		2	AO.T 1204..
ASM90-01000-Z03-M12R-AO12-C	1.000	2.323	1.457	M12	0.906	0.433		3	
ASM90-01250-Z04-M16R-AO12-C	1.250	2.835	1.890	M16	1.142	0.433		4	



Inch

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Z	Inserts
ASM90-01500-Z04-A0750R-AO12-C	1.500	0.750	1.575	1.378	0.433		4	AO.T 1204..
ASM90-02000-Z05-A0750R-AO12-C	2.000	0.750	1.575	1.654	0.433		5	
ASM90-02000-Z07-A0750R-AO12-C	2.000	0.750	1.575	1.654	0.433		7	
ASM90-02500-Z06-A1000R-AO12-C	2.500	1.000	1.969	2.165	0.433		6	
ASM90-02500-Z08-A1000R-AO12-C	2.500	1.000	1.969	2.165	0.433		8	
ASM90-03000-Z07-A1000R-AO12-C	3.000	1.000	1.969	2.165	0.433		7	
ASM90-03000-Z10-A1000R-AO12-C	3.000	1.000	1.969	2.165	0.433		10	

Note: With internal coolant
Without internal coolant

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 0.750-1.250	SP035078		4.0Nm
⌀ 1.500-3.000	SP035086	DT-TP10	

Product code	Dimension (in)		P	M		K		S
	Corner radius	Wiper length	AP251U	AP351M	AP403M	AC301K	AP251K	AP403S
AOGU 120408ER-MM3	0.031	-	●	●	●			●
AOMT 120408ER-MM4	0.031	0.061	●	●	●		●	●
AOMT 120412ER-MM4	0.047	0.046		●	●			●
AOMT 120416ER-MM4	0.063	0.046		●	●			●
AOMT 120420ER-MM4	0.079	0.038	●	●	●			●
AOMT 120424ER-MM4	0.094	0.037	●	●	●			●
AOMT 120431ER-MM4	0.122	0.023		●	●			●
AOMT 120440ER-MM4	0.157	0.030		●	●			●

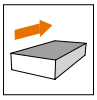
●: Stock available

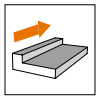
Materials				Cutting depth and feed			
				AO.T 1204..			
				ap		fz	
				(in)			
ISO	Material classification	Tensile strength (lbs/in^2)	Hardness (HB)	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.004	0.433	0.003	0.010
		<137,785	<280				
	Alloyed steel	101,526-137,785	200-280			0.002	0.009
		137,785-174,044	280-355				
		174,044-203,052	355-415				
M	Duplex stainless steel	112839	230			0.002	0.008
	Austenitic stainless steel	97900	200				
	Precipitation-hardening stainless steel	146923	300				
K	Grey cast iron	101,526	220			0.003	0.010
	Nodular cast iron	127,633	260				
	Malleable cast iron	116,030	250				
N	Aluminum	37,709	75			0.002	0.012
	Aluminum alloy	64,831	130				
S	Fe-based alloy	136,770	280			0.002	0.007
	Co-based alloy	156,060	320				
	Ni-based alloy	170,709	350				
	Ti-alloy	183,037	370				
H	Hardened steel	-	50-60HRC			-	-
	Chilled cast iron	-	55HRC				

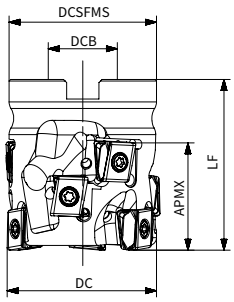
*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

APE90-LN13

Square shoulder porcupine milling cutter







Inch

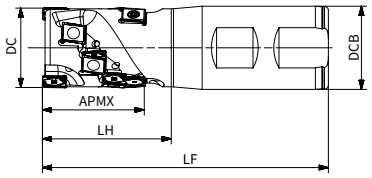
Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Clamping screw	Z	Row	Insert QTY	Inserts
APE90-01500-Z02-A0750R-LN13-L1339-F-C	1.500	0.750	2.165	1.535	1.339		SH100400	2	3	6	
APE90-01500-Z02-A0750R-LN13-L1772-F-C	1.500	0.750	2.559	1.535	1.772		SH100450	2	4	8	
APE90-02000-Z03-A0750R-LN13-L1339-F-C	2.000	0.750	2.165	1.870	1.339		SH100400	3	3	9	
APE90-02000-Z03-A0750R-LN13-L1772-F-C	2.000	0.750	2.559	1.870	1.772		SH100450	3	4	12	LNHU 1306..
APE90-02500-Z04-A1000R-LN13-L2205-F-C	2.500	1.000	3.150	2.343	2.205		SH120600	4	5	20	
APE90-02500-Z04-A1000R-LN13-L1772-F-C	2.500	1.000	2.756	2.343	1.772		SH120500	4	4	16	
APE90-03000-Z05-A1500R-LN13-L2205-F-C	3.000	1.500	3.346	2.976	2.205		SH160650	5	5	25	

Metric

Product code	DC	DCB	LF	DCSFMS	APMX	Internal coolant	Clamping screw	Z	Row	Insert QTY	Inserts
APE90-040-Z02-A16R-LN13-L34-F-C	40	16	55	39	34		SH100400	2	3	6	
APE90-040-Z02-A16R-LN13-L45-F-C	40	16	65	39	45		SH100450	2	4	8	
APE90-050-Z03-A22R-LN13-L34-F-C	50	22	55	47.5	34		SH100400	3	3	9	
APE90-050-Z03-A22R-LN13-L45-F-C	50	22	65	47.5	45		SH100450	3	4	12	LNHU 1306..
APE90-063-Z04-A27R-LN13-L56-F-C	63	27	80	59.5	56		SH120600	4	5	20	
APE90-063-Z04-A27R-LN13-L45-F-C	63	27	70	59.5	45		SH120500	4	4	16	
APE90-080-Z05-A32R-LN13-L56-F-C	80	32	85	75.6	56		SH160650	5	5	25	

APE90-LN13

Square shoulder porcupine milling cutter



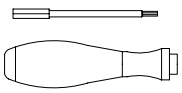
Inch

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Row	Insert QTY	Inserts
APE90-01500-Z02-W1500R-LN13-L1339-F-C	1.500	1.500	4.724	2.126	1.339		2	3	6	LNHU 1306..
APE90-01500-Z02-W1500R-LN13-L1772-F-C	1.500	1.500	5.315	2.520	1.772		2	4	8	

Metric

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Row	Insert QTY	Inserts
APE90-040-Z02-W40R-LN13-L34-F-C	40	40	120	54	34		2	3	6	LNHU 1306..
APE90-040-Z02-W40R-LN13-L45-F-C	40	40	135	64	45		2	4	8	

Clamping screw	Product code	Screw type	Clamping torque
	SH080400	M8*40	41N-m
	SH080500	M8*50	41N-m
	SH100550	M10*55	81N-m
	SH100400	M10*40	81N-m
	SH100450	M10*45	81N-m
	SH120500	M12*50	142N-m
	SH120600	M12*60	142N-m
	SH160650	M16*65	350N-m

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 1.500-3.000			3.5Nm
	SP040115	DT-TP15	

Note: With internal coolant

Without internal coolant

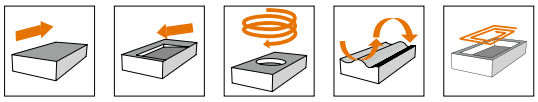
Product code	Dimension (in)		P		M		K		N
	Corner radius	Wiper length	AP251U	AP351U	AP351M	AP403M	AC301K	AP251K	AW100K
LNHU 130608ER-FM2	0.031	0.106							●
LNHU 130608ER-MM3	0.031	0.106		●		●			
LNHU 130608ER-MR2	0.031	0.106	●	●	●	●	●	●	
LNHU 130612ER-MR2	0.047	0.091	●	●	●	●	●	●	
LNHU 130616ER-MR2	0.063	0.075	●	●	●	●		●	
LNHU 130620ER-MR2	0.079	0.059		●	●	●	●		
LNHU 130624ER-MR2	0.094	0.039		●	●	●	●		
LNHU 130631ER-MR2	0.122	0.016		●	●	●	●		
LNHU 1306PDR-W	0.031	0.220	●					●	

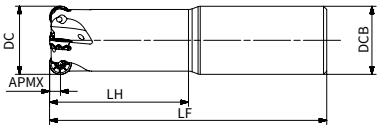
●: Stock available

Materials				Cutting depth and feed					
				LNHU..1306..					
ISO	Material classification	Tensile strength ($1bs/in^2$)	Hardness (HB)	ap		MM3		MR2	
						fz			
				(in)					
				min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.012	0.472	0.004	0.012	0.005	0.014
		<137,785	<280						
	Alloyed steel	101,526-137,785	200-280			0.003	0.010	0.004	0.012
		137,785-174,044	280-355						
		174,044-203,052	355-415						
M	Duplex stainless steel	112839	230			0.002	0.008	0.003	0.010
	Austenitic stainless steel	97900	200						
	Precipitation-hardening stainless steel	146923	300						
K	Grey cast iron	101,526	220			-	-	0.005	0.014
	Nodular cast iron	127,633	260						
	Malleable cast iron	116,030	250						
N	Aluminum	37,709	75			-	-	-	-
	Aluminum alloy	64,831	130						
S	Fe-based alloy	136,770	280			0.002	0.007	0.003	0.009
	Co-based alloy	156,060	320						
	Ni-based alloy	170,709	350						
	Ti-alloy	183,037	370						
H	Hardened steel	-	50-60HRC			-	-	0.003	0.008
	Chilled cast iron	-	55HRC						

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

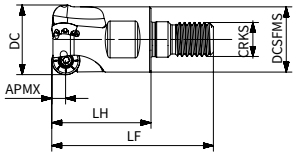
APM00-RO10
Profile milling





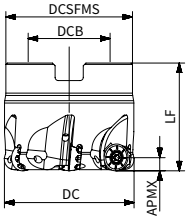
Inch

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
APM00-01000-Z03-C1000R-RO10-L5125-C	1.000	1.000	5.125	2.200	0.197		3	R0..10T3..
APM00-01250-Z04-C1250R-RO10-L5125-C	1.250	1.250	5.125	2.559	0.197		4	



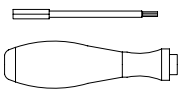
Inch

Product code	DC	CRKS	DCSFMS	LF	LH	APMX	Internal coolant	Z	Inserts
APM00-01000-Z03-M12R-RO10-C	1.000	M12	0.906	2.244	1.378	0.197		3	R0..10T3..
APM00-01250-Z04-M16R-RO10-C	1.250	M16	1.142	2.520	1.575	0.197		4	



Inch

Product code	DC	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
APM00-01500-Z05-A0750R-RO10-C	1.500	0.750	1.378	1.575	0.197		5	R0..10T3..
APM00-02000-Z06-A0750R-RO10-C	2.000	0.750	1.654	1.575	0.197		6	

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 1.000-2.000			18 in lbs
	SP030072H	DT-TP09	

Note: With internal coolant
Without internal coolant

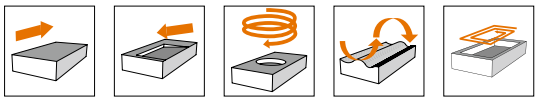
Product code	Dimension (in)		P			M	K		S
	IC	S	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AP403S
ROHT 10T3M8E-MM3	0.398	0.156				●			●
ROMT 10T3M4E-MR6	0.398	0.156				●			●

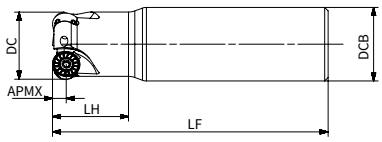
●: Stock available

Materials				Cutting depth and feed									
				RO..10T3..									
ISO	Material classification	Tensile strength (lbs/in^2)	Hardness (HB)	ap		MM3				MR6			
						fz				fz			
						0.1 < ap ⩽ 1.2		1.2 < ap ⩽ 5		0.1 < ap ⩽ 1.2		1.2 < ap ⩽ 5	
				(in)									
				min	max	min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.031	0.197	0.006	0.022	0.004	0.012	0.006	0.024	0.004	0.013
		<137,785	<280										
	Alloyed steel	101,526-137,785	200-280			0.005	0.020	0.003	0.011	0.005	0.022	0.003	0.012
		137,785-174,044	280-355										
		174,044-203,052	355-415										
M	Duplex stainless steel	112,839	230			0.004	0.018	0.003	0.010	0.004	0.020	0.003	0.110
	Austenitic stainless steel	97,900	200										
	Precipitation-hardening stainless steel	146,923	300										
K	Grey cast iron	101,526	220			-	-	-	-	-	-	-	-
	Nodular cast iron	127,633	260										
	Malleable cast iron	116,030	250										
N	Aluminum	37,709	75			-	-	-	-	-	-	-	-
	Aluminum alloy	64,831	130										
S	Fe-based alloy	136,770	280			0.004	0.016	0.003	0.010	-	-	-	-
	Co-based alloy	156,060	320										
	Ni-based alloy	170,709	350										
	Ti-alloy	183,037	370										
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-	-	-
	Chilled cast iron	-	55HRC										

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.

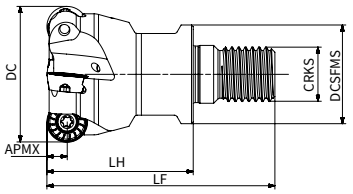
APM00-RO12
Profile milling





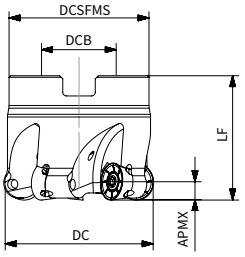
Inch

Product code	DC	DCB	LF	LH	APMX	Internal coolant	Z	Inserts
APM00-01250-Z03-C1250R-RO12-L6000-C	1.250	1.250	6.000	2.704	0.236		3	RO..1204..



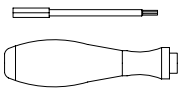
Inch

Product code	DC	CRKS	DCSFMS	LF	LH	APMX	Internal coolant	Z	Inserts
APM00-01500-Z04-M16R-RO12-C	1.500	M16	1.142	2.756	1.811	0.236		4	RO..1204..



Inch

Product code	DC	DCB	DCSFMS	LF	APMX	Internal coolant	Z	Inserts
APM00-02000-Z05-A0750R-RO12-C	2.000	0.750	1.654	1.575	0.236		5	RO..1204..
APM00-02500-Z06-A1000R-RO12-C	2.500	1.000	2.165	1.969	0.236		6	
APM00-03000-Z07-A1000R-RO12-C	3.000	1.000	2.165	1.969	0.236		7	

Dimension (in)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
⌀ 1.250-3.000			36 in lbs
	SP040085H	DT-TP10	

Note: With internal coolant
Without internal coolant

Product code	Dimension (in)		P			M	K		S
	IC	S	AP251U	AP351U	AC301P	AP403M	AC301K	AP251K	AP403S
ROHT 1204M4E-MM3	0.472	0.187				●			●
ROHT 1204M6E-MM3	0.472	0.187				●			●
ROMT 1204M6E-MR6	0.472	0.187				●			●

●: Stock available

Materials				Cutting depth and feed									
				RO..1204..									
ISO	Material classification	Tensile strength (1bs/in^2)	Hardness (HB)	ap		MM3				MR6			
						fz							
						0.1 < ap ⩽ 1.5		1.5 < ap ⩽ 6		0.1 < ap ⩽ 1.5		1.5 < ap ⩽ 6	
				(in)									
				min	max	min	max	min	max	min	max	min	max
P	Unalloyed steel	<87,022	<180	0.031	0.236	0.007	0.024	0.005	0.013	0.007	0.026	0.005	0.014
		<137,785	<280										
	Alloyed steel	101,526-137,785	200-280			0.006	0.022	0.004	0.012	0.006	0.024	0.004	0.013
		137,785-174,044	280-355										
		174,044-203,052	355-415										
M	Duplex stainless steel	112,839	230			0.005	0.020	0.004	0.011	0.005	0.022	0.004	0.012
	Austenitic stainless steel	97,900	200										
	Precipitation-hardening stainless steel	146,923	300										
K	Grey cast iron	101,526	220			-	-	-	-	-	-	-	-
	Nodular cast iron	127,633	260										
	Malleable cast iron	116,030	250										
N	Aluminum	37,709	75			-	-	-	-	-	-	-	-
	Aluminum alloy	64,831	130										
S	Fe-based alloy	136,770	280			0.005	0.018	0.004	0.011	-	-	-	-
	Co-based alloy	156,060	320										
	Ni-based alloy	170,709	350										
	Ti-alloy	183,037	370										
H	Hardened steel	-	50-60HRC			-	-	-	-	-	-	-	-
	Chilled cast iron	-	55HRC										

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolant. Average chip thickness (hm)=fz x sinkr.