WIDIA™

INDEXABLE MILLING

M200 SERIES

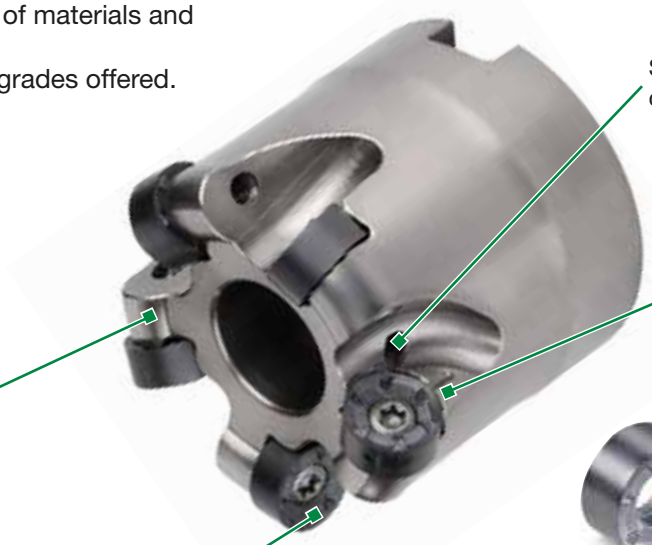
Metric

Double-Sided Round Insert • M200™ Series

Revolutionary IC12mm double-sided round insert, capable of running in multiple types of milling operations and workpiece materials, increases customer's productivity with the most efficient cost per edge.

M200

- Twelve cutting edges per insert.
- Robust anti-rotation feature.
- Able to apply in all type of materials and milling applications.
- Latest WIDIA™ Victory™ grades offered.



Screw-On, end mill, and shell mill cutters with internal coolant.

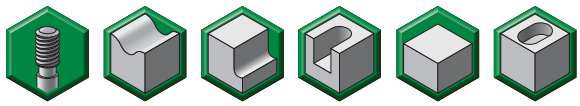
Easy-to-use and unique anti-rotation feature for excellent stability for higher feed rates and cutting forces.

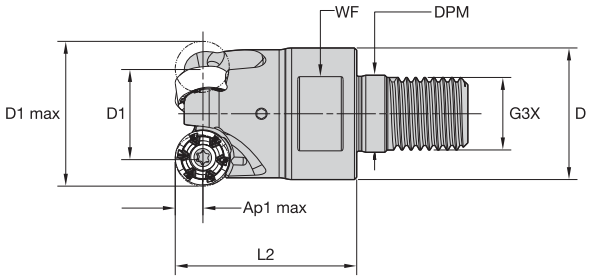
Higher clearance in bodies to permit pocketing, profiling, and 5-axis machining.

Three insert topography styles with the new WIDIA Victory milling grades cover any type of component and application.

Double-sided insert with 12 cutting edges!

- Double-sided, 12 cutting edges.
- Anti-rotation feature for better stability and higher feed rates.
- Pocketing and profiling capabilities.





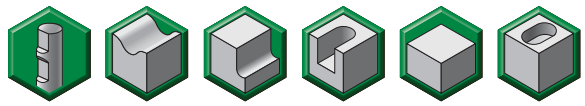
M200 • Screw-On End Mills

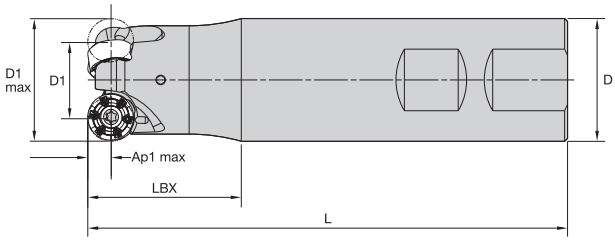
order number	catalogue number	D1 max	D1	D	DPM	G3X	L2	WF	Ap1 max	Z	max RPM	coolant supply	kg
4147560	**M200D32Z03M16RN12**	32	20	29	17,0	M16	40	24	3,00	3	39160	Yes	0,18
4147561	**M200D35Z03M16RN12**	35	23	29	17,0	M16	40	24	3,00	3	37440	Yes	0,19
4147562	**M200D42Z04M16RN12**	42	30	29	17,0	M16	40	24	3,00	4	34180	Yes	0,24

Spare Parts

D1 max	 insert screw	Nm	 Torx driver
32	**193.492**	4,0	**170.025**
35	**193.492**	4,0	**170.025**
42	**193.492**	4,0	**170.025**

- Double-sided, 12 cutting edges.
- Anti-rotation feature for better stability and higher feed rates.
- Pocketing and profiling capabilities.





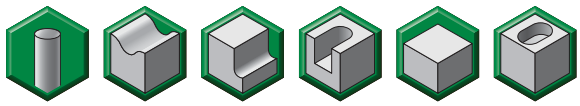
M200 • Weldon

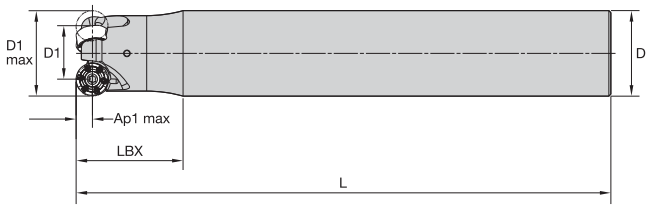
order number	catalogue number	D1 max	D1	D	L	LBX	Ap1 max	Z	max RPM	coolant supply	kg
4147564	**M200D32Z03B32RN12**	32	20	32	125	40	3,0	3	39160.0	Yes	0,65

Spare Parts

D1 max	 insert screw	Nm	 Torx driver
32	**193.492**	4,0	**170.025**

- Double-sided, 12 cutting edges.
- Anti-rotation feature for better stability and higher feed rates.
- Pocketing and profiling capabilities.





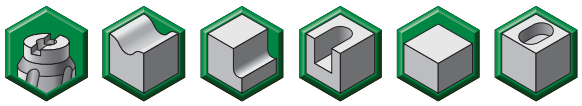
M200 • Cylindrical

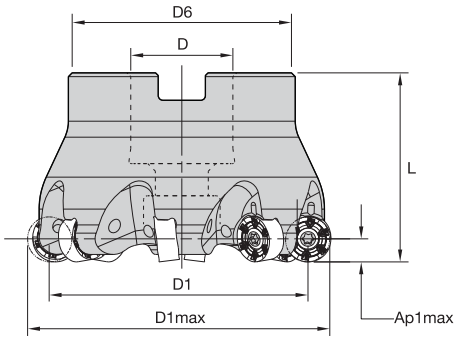
order number	catalogue number	D1 max	D1	D	L	LBX	Ap1 max	Z	max RPM	coolant supply	kg
4147566	**M200D32Z03A32RN12L200**	32	20	32	200	40	3,00	3	39160	Yes	1,10
4147567	**M200D32Z02A32RN12L250**	32	20	32	250	40	3,00	2	39160	Yes	1,41

Spare Parts

D1 max	 insert screw	Nm	 Torx driver
32	**193.492**	4,0	**170.025**

- Double-sided, 12 cutting edges.
- Anti-rotation feature for better stability and higher feed rates.
- Pocketing and profiling capabilities.



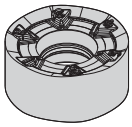


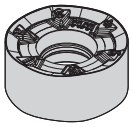
M200 • Shell Mills

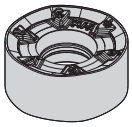
order number	catalogue number	D1 max	D1	D	D6	L	Ap1 max	Z	max RPM	coolant supply	kg
4147568	**M200D40Z04RN12**	40	28	16	38	40	3,00	4	35020	Yes	0,22
4147569	**M200D50Z04RN12**	50	38	22	42	40	3,00	4	31330	Yes	0,30
4147570	**M200D50Z05RN12**	50	38	22	42	40	3,00	5	31330	Yes	0,29
4147571	**M200D52Z05RN12**	52	40	22	49	50	3,00	5	30720	Yes	0,49
4147572	**M200D63Z05RN12**	63	51	22	49	50	3,00	5	27910	Yes	0,63
4147573	**M200D63Z07RN12**	63	51	22	49	50	3,00	7	27910	Yes	0,63
4147574	**M200D66Z07RN12**	66	54	27	60	50	3,00	7	27260	Yes	0,82
4147575	**M200D80Z06RN12**	80	68	27	60	50	3,00	6	24760	Yes	1,02
4147576	**M200D80Z08RN12**	80	68	27	60	50	3,00	8	24760	Yes	1,02
4147577	**M200D100Z07RN12**	100	88	32	78	50	3,00	7	22150	Yes	1,66
4147578	**M200D100Z09RN12**	100	88	32	78	50	3,00	9	22150	Yes	1,63

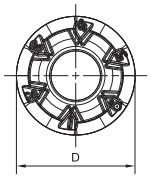
Spare Parts

D1 max	 insert screw	Nm	 Torx driver	 socket-head cap screw	 coolant lock screw assembly
40	**193.492**	4,0	**170.025**	**MS1294**	**–**
50	**193.492**	4,0	**170.025**	**MS1336**	**–**
52	**193.492**	4,0	**170.025**	**MS1242**	**–**
63	**193.492**	4,0	**170.025**	**MS1242**	**–**
66	**193.492**	4,0	**170.025**	**MS2038**	**–**
80	**193.492**	4,0	**170.025**	**MS2038**	**–**
100	**193.492**	4,0	**170.025**	**–**	**MS2195C**


RNGJ-ML


RNGJ-MM


RNGJ-MH



- -ML geometry is the first choice for stainless steel and high-temp alloys.
- -MM geometry is for general purpose, especially for steel.
- -MH geometry is the first choice for heavy applications, cast iron, and high-strength steels.

● first choice
○ alternate choice

P		●	●	●
M		●	●	○
K	●	○		○
N				
S		●	●	
H		○		

■ RNGJ-ML

catalogue number	cutting edges	D	S	WK15PM	WP25PM	WU35PM	WP35CM
RNGJ1204M0EML	12	12,00	4,75		●	●	●

■ RNGJ-MM

catalogue number	cutting edges	D	S	WK15PM	WP25PM	WU35PM	WP35CM
RNGJ1204M0SMM	12	12,00	4,75	●	●	●	●

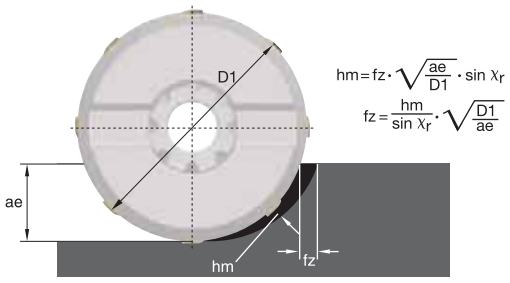
■ RNGJ-MH

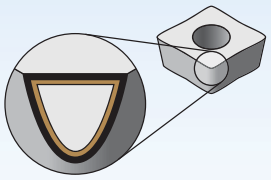
catalogue number	cutting edges	D	S	WK15PM	WP25PM	WU35PM	WP35CM
RNGJ1204M0SMH	12	12,00	4,75	●	●	●	●

		WK15PM			WP25PM			WU35PM			WP35CM		
Edge Geometry		feed per tooth fz (mm)											
..-ML		0.05	**0.11**	0.17	0.05	**0.11**	0.17	0.06	**0.12**	0.20	0.06	**0.12**	0.20
..-MM		0.14	**0.24**	0.40	0.14	**0.24**	0.40	0.14	**0.24**	0.42	0.14	**0.24**	0.42
..-MH		0.23	**0.32**	0.50	0.23	**0.32**	0.52	0.23	**0.35**	0.52	0.23	**0.35**	0.52
Material Group		vc (m/min)											
P	1	—	—	—	325	**345**	395	255	**275**	315	545	**475**	440
	2	—	—	—	325	**345**	395	255	**275**	315	545	**475**	440
	3	—	—	—	325	**345**	395	255	**275**	315	545	**475**	440
	4	—	—	—	325	**345**	395	255	**275**	315	545	**475**	440
	5	—	—	—	325	**345**	395	255	**275**	315	545	**475**	440
	6	—	—	—	240	**290**	330	195	**230**	260	275	**305**	335
	7	—	—	—	240	**290**	330	195	**230**	260	275	**305**	335
	8	—	—	—	215	**255**	305	170	**205**	240	250	**275**	305
	9	—	—	—	215	**255**	305	170	**205**	240	250	**275**	305
	10	—	—	—	180	**225**	270	145	**180**	210	190	**210**	225
	11	—	—	—	180	**225**	270	145	**180**	210	190	**210**	225
	12	—	—	—	180	**200**	225	145	**160**	180	255	**275**	310
	13.1	—	—	—	120	**150**	200	95	**120**	160	—	**165**	190
	13.2	—	—	—	120	**150**	200	95	**120**	160	—	**165**	190
M	14.1	—	—	—	200	**215**	245	165	**180**	205	190	**220**	250
	14.2	—	—	—	115	**145**	170	95	**120**	140	140	**160**	175
	14.3	—	—	—	200	**215**	245	165	**180**	205	190	**220**	250
	14.4	—	—	—	160	**190**	225	130	**160**	185	170	**195**	225
K	15	260	**295**	325	220	**250**	275	—	—	—	285	**320**	355
	16	260	**295**	325	220	**250**	275	—	—	—	285	**320**	355
	17	215	**225**	255	180	**195**	215	—	—	—	230	**255**	280
	18	215	**225**	255	180	**195**	215	—	—	—	230	**255**	280
	19	170	**190**	215	145	**160**	180	—	—	—	195	**210**	235
	20	170	**190**	215	145	**160**	180	—	—	—	195	**210**	235
N	21	—	—	—	—	—	—	—	—	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—
S	31	—	—	—	35	**45**	50	30	**35**	45	—	—	—
	32	—	—	—	35	**45**	50	30	**35**	45	—	—	—
	33	—	—	—	35	**45**	50	30	**35**	45	—	—	—
	34	—	—	—	35	**50**	60	30	**45**	55	—	—	—
	35	—	—	—	35	**50**	60	30	**45**	55	—	—	—
	36	—	—	—	45	**60**	85	35	**55**	75	—	—	—
	37	—	—	—	45	**60**	85	35	**55**	75	—	—	—
H	38.1	—	—	—	85	**110**	145	—	—	—	—	—	—
	38.2	—	—	—	—	—	—	—	—	—	—	—	—
	39.1	—	—	—	—	—	—	—	—	—	—	—	—
	39.2	—	—	—	—	—	—	—	—	—	—	—	—

*First choice starting feed (fz) is in **bold** type.*
Use corresponding speed (vc).
fz and vc are valid for ae ≥0,4 D1.
For smaller ae, fz and vc should be multiplied by the factor given below:

ae/D1 =	0,2	0,3	0,4
fz-Factor	1,5	1,3	1,0
vc-Factor	1,3	1,2	1,1

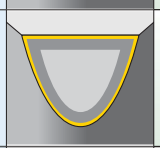
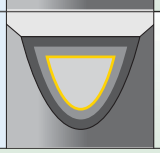




Coatings provide high-speed capability and are engineered for finishing to heavy roughing.

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous Materials
S	High-Temp Alloys
H	Hardened Materials

wear resistance ⟷ toughness

Coating	Grade Description	05	10	15	20	25	30	35	40	45
WK15PM 	A TiAlN-PVD-coated carbide grade developed specifically for general machining of ductile cast iron and can be used with or without coolant.	K								
WP25PM 	AlTiN-PVD-coated carbide grade engineered to provide better performance in general machining of high-temperature alloys and stainless steel. WP25PM resists breakage and offers improved wear resistance and increased strength.	P M K S								
WU35PM 	A high-performance TiAlN-PVD-coated carbide grade for milling steel, stainless steel and high-temp alloys. The good thermal shock resistance of the substrate makes this grade ideal for both wet and dry machining. WU35PM is primarily for use in general and heavy machining.	P M S								
WP35CM 	A multilayered TiN-TiCN-Al_2O_3-CVD-coated carbide grade with advanced Victory™ post-coat treatment and a very tough substrate. WP35CM has a wide application area in general and rough milling of steels and cast irons. It performs best dry but can also be used wet.	P K								

Today: **Victory™** — Win with WIDIA

WIDIA VICTORY

WIDIA™ Victory — the new standard for performance and productivity.

Now also for the M200 Series Copy Mills.

Victory is a guaranteed win.

INDEXABLE MILLING
M200 SERIES

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