METRIC

M1600

16-Edged Face Mill

New Versatile -MH Geometry in PSTS for Face Milling in Steels, Alloy Steels, Stainless Steels, Cast Iron and Nodular Iron

WIDIA™

The **M1600** face milling series now has a more comprehensive offering with the addition of the new -MH geometry. Featuring 16 cutting edges, the M1600 with -MH geometry in PSTS offers the best cost-per-edge advantage in medium to heavy roughing face milling applications.

THE NEW 16-EDGE PSTS INSERT WITH VERSATILE GEOMETRY

- Improves reliability and provides consistent performance
- Produces a smooth cutting action due to low cutting forces and easy chip flow
- Delivers consistent performance and excellent cost-per-edge
- Pressed to size and precision sintered for better runout control and accuracy

The addition of -MH geometry inserts in various WIDIA VICTORY™ grades makes it easy to cover a wide range of face milling applications in different workpiece materials like steels, alloy steels, stainless steels, cast iron, nodular iron and high-temp alloys.

Industries

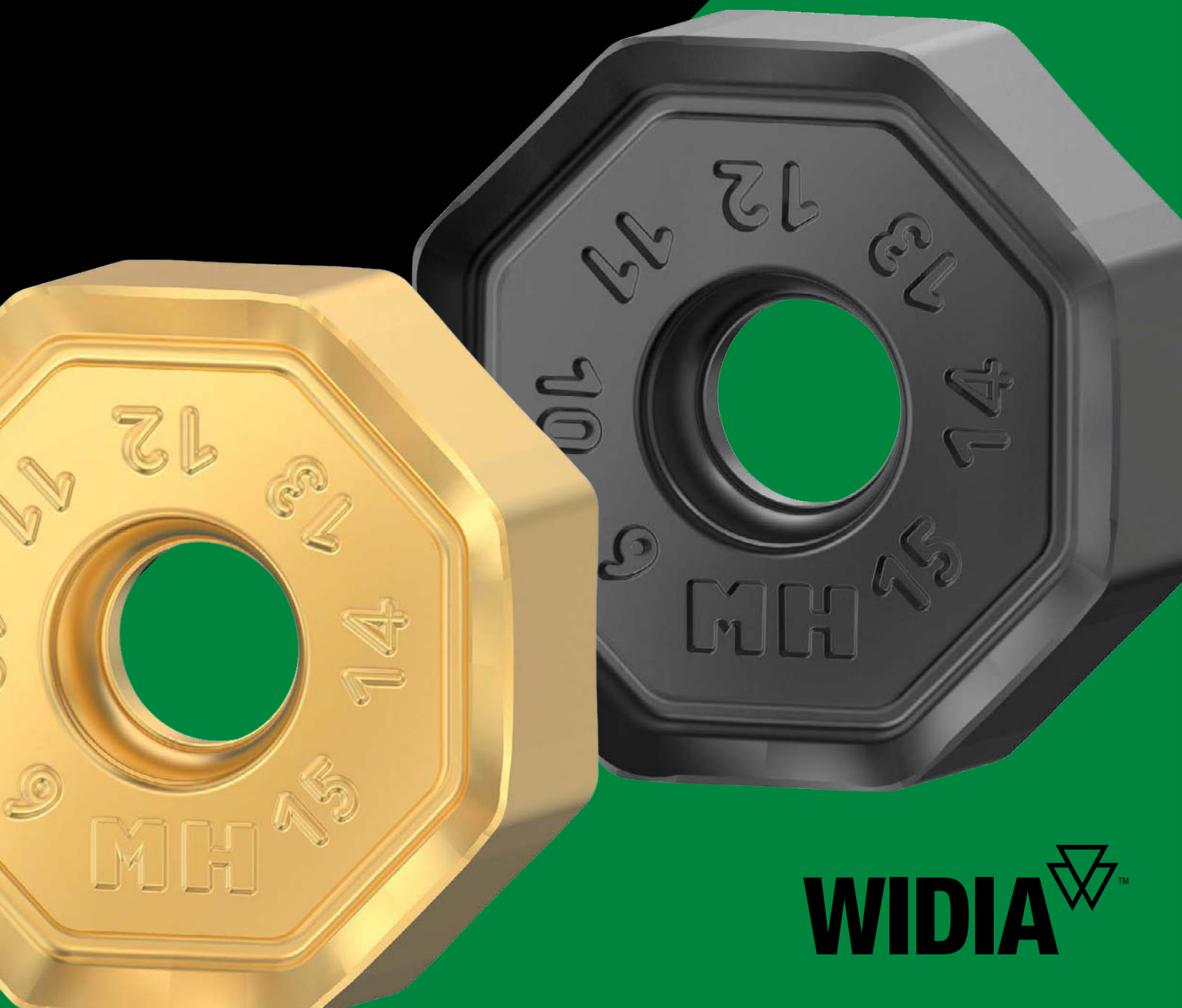
General Engineering | Automotive | Oil & Gas | Wind & Solar | Aerospace

Materials

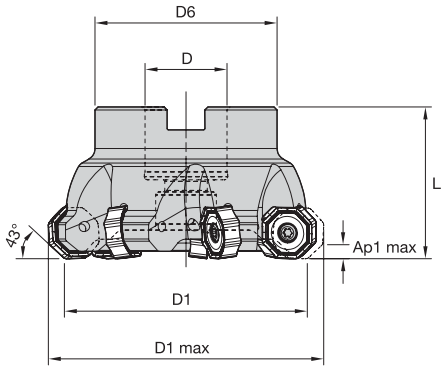
P Steels | S High-Temp Alloys | M Stainless Steels | K Cast Iron

Applications

Face Milling



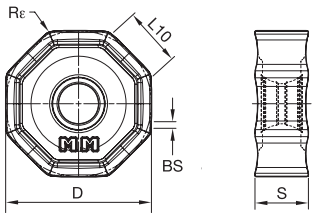
WIDIA™



M1600

43º • Shell Mills

Order Number	Catalog Number	D1	D1 Max	D	D6	L	Ap1 Max	Z	Max RPM	Coolant	kg
4002796	M1600D050Z04S22ON06	50	60,7	22	40	40	3,7	4	–	Yes	0,28
4002797	M1600D063Z05S22ON06	63	73,7	22	40	40	3,7	5	–	Yes	0,43
3837977	M1600D080Z07S27ON06	80	90,7	27	60	50	3,7	7	–	Yes	0,97
3860336	M1600D100Z09S32ON06	100	110,7	32	78	50	3,7	9	–	Yes	1,52
3837978	M1600D125Z11S40ON06	125	135,7	40	89	63	3,7	11	6900	Yes	2,70
4002798	M1600D160Z13S40ON06	160	170,7	40	90	63	3,7	13	–	Yes	3,83



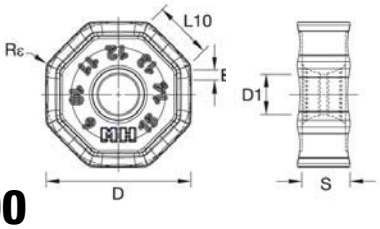
M1600

ONGX-MM

● Primary
○ Secondary

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

ISO Catalog Number	Cutting Edges	D	L10	S	BS	Rε	WK15CM	WP35CM	WU20PM
ONGX060512ANSNMM	16	16.88	6,87	5,47	0,77	1,20	6072424	6852431	3778942



NEW! M1600

ONPX-MH

● Primary
○ Secondary

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

ISO Catalog Number	Cutting Edges	D	D1	L10	S	BS	Rε	WK15CM	WP35CM	WU20PM	WP25PM	WS40PM	WU35PM
ONPX060512ANSNMH	16	16,88	4,65	6,87	5,47	0,91	1,20	7168461	7168339	7147037	7242713	7242667	7242664

WIDIA

Recommended Starting Speeds • [m/min]

Material Group		WP35CM			WK15CM			WU20PM			WP25PM			WS40PM			WU35PM		
P	1	455	**395**	370	—	—	—	330	**290**	270	330	**285**	270	—	—	—	260	**230**	215
	2	280	**255**	230	—	—	—	275	**250**	200	275	**240**	200	—	—	—	220	**190**	160
	3	255	**230**	205	—	—	—	255	**220**	175	255	**215**	175	—	—	—	200	**170**	140
	4	190	**175**	160	—	—	—	225	**190**	150	225	**185**	150	—	—	—	180	**150**	120
	5	260	**230**	210	—	—	—	185	**175**	150	185	**170**	150	170	**145**	120	150	**135**	120
	6	160	**135**	110	—	—	—	165	**130**	100	165	**125**	100	150	**110**	80	130	**100**	80
M	1	205	**185**	155	—	—	—	205	**180**	165	205	**180**	165	210	**170**	140	170	**150**	135
	2	185	**160**	140	—	—	—	185	**160**	130	185	**160**	130	180	**145**	120	155	**130**	110
	3	145	**130**	115	—	—	—	140	**120**	95	140	**120**	95	145	**110**	85	115	**100**	80
K	1	295	**265**	240	420	**385**	340	250	**220**	185	230	**205**	185	—	—	—	—	—	—
	2	235	**210**	190	335	**295**	275	200	**180**	150	180	**160**	150	—	—	—	—	—	—
	3	195	**175**	160	280	**250**	230	180	**150**	120	150	**135**	120	—	—	—	—	—	—
N	1	—	—	—	—	—	—	550	**470**	400	—	—	—	—	—	—	—	—	—
	2	—	—	—	—	—	—	550	**470**	400	—	—	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	400	**350**	300	—	—	—	—	—	—	—	—	—
S	1	—	—	—	—	—	—	40	**35**	25	40	**35**	25	40	**35**	25	35	**30**	25
	2	—	—	—	—	—	—	40	**35**	25	40	**35**	25	40	**35**	25	35	**30**	25
	3	—	—	—	—	—	—	50	**40**	25	50	**40**	25	50	**40**	25	45	**35**	25
	4	—	—	—	—	—	—	70	**50**	35	70	**50**	35	60	**50**	30	60	**45**	30
H	1	—	—	—	—	—	—	110	**80**	70	120	**90**	70	—	—	—	—	—	—

NOTE: First choice starting feed (fz) is in bold type.
As the average chip thickness increases, the speed should be decreased.

Recommended Starting Feeds • [mm]

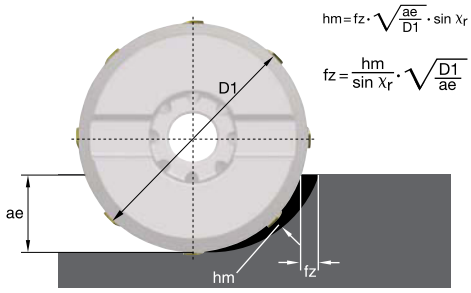
Light Machining	General Purpose	Heavy Machining

Insert Geometry	Programmed Feed per Tooth (fz) as a % of Radial Depth of Cut (ae)															Insert Geometry
	5%			10%			20%			30%			40–100%			
.S..MM	0,26	**0,85**	1,42	0,19	**0,62**	1,01	0,14	**0,46**	0,75	0,12	**0,40**	0,66	0,11	**0,37**	0,60	.S..MM
.S..MH	0,28	**0,93**	1,56	0,20	**0,68**	1,10	0,15	**0,50**	0,82	0,13	**0,44**	0,72	0,12	**0,40**	0,66	.S..MH

NOTE: 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:

$$hm = fz \cdot \sqrt{\frac{ae}{D1}} \cdot \sin \chi_r$$

$$fz = \frac{hm}{\sin \chi_r} \cdot \sqrt{\frac{D1}{ae}}$$



VERSATILE RELIABLE FACE MILL FOR VARIETY OF WORKPIECE MATERIALS

WIDIA

RELIABLE CUTTING TOOLS
FOR EVERY MACHINE SHOP

widia.com/**M1600**