kennametal.com

KENNAMETAL®

Mill 4™

90° SHOULDER MILLING TO THE EXTREME

Buy 10 inserts per pocket, and get a Mill 4™ milling cutter for FREE!*

Call today and refer to promo code

BUY10GET1-MILL4

*Offer ends September 30, 2017. Offer void where prohibited by law. Also available through participating distributors.

90° SHOULDER MILLING TO THE

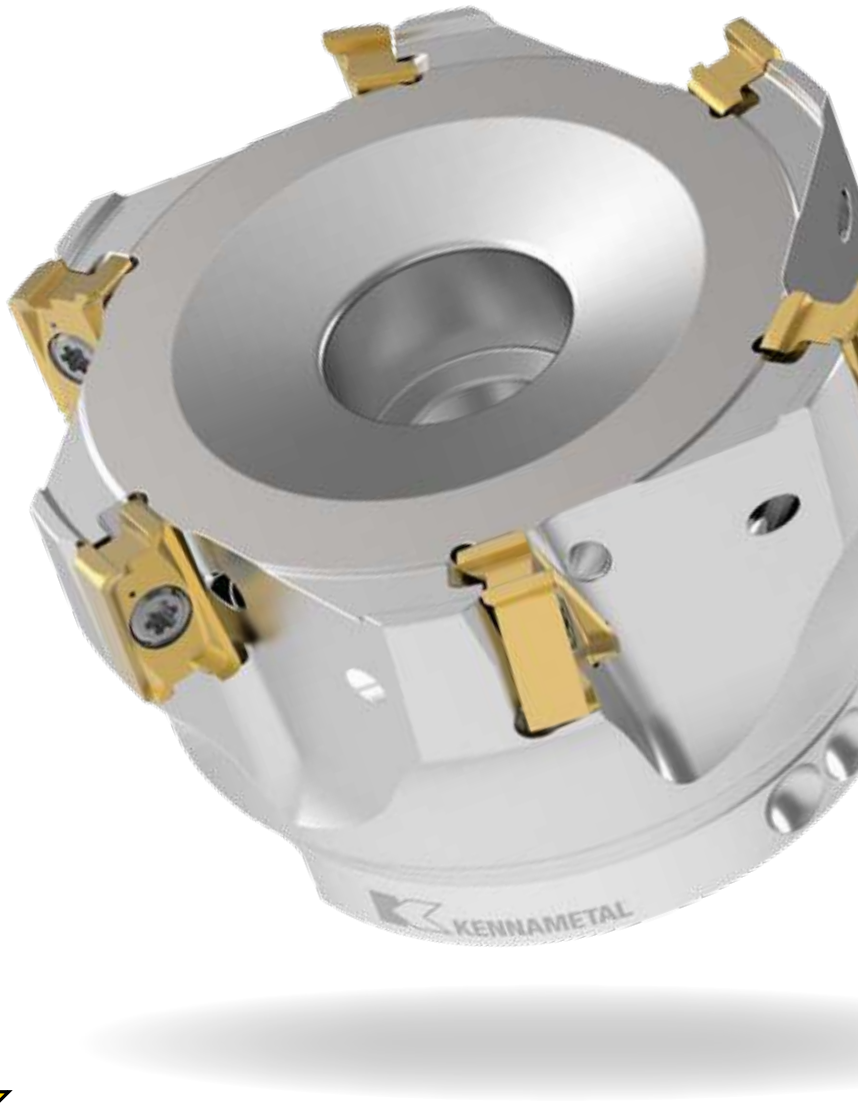
The Mill 4™ Series is specially engineered to achieve excellent performance in regards to surface quality as well as higher metal removal rates in shoulder milling applications.

Its unique design allows you to apply the tool in multiple passes (step down) with outstanding results. From roughing to finishing operations.

Mill 4-11™

Up to 11mm depth of cut

THE SOLUTION FOR LOW HORSEPOWER CONSUMPTION.



Superior wall and surface finish capabilities.

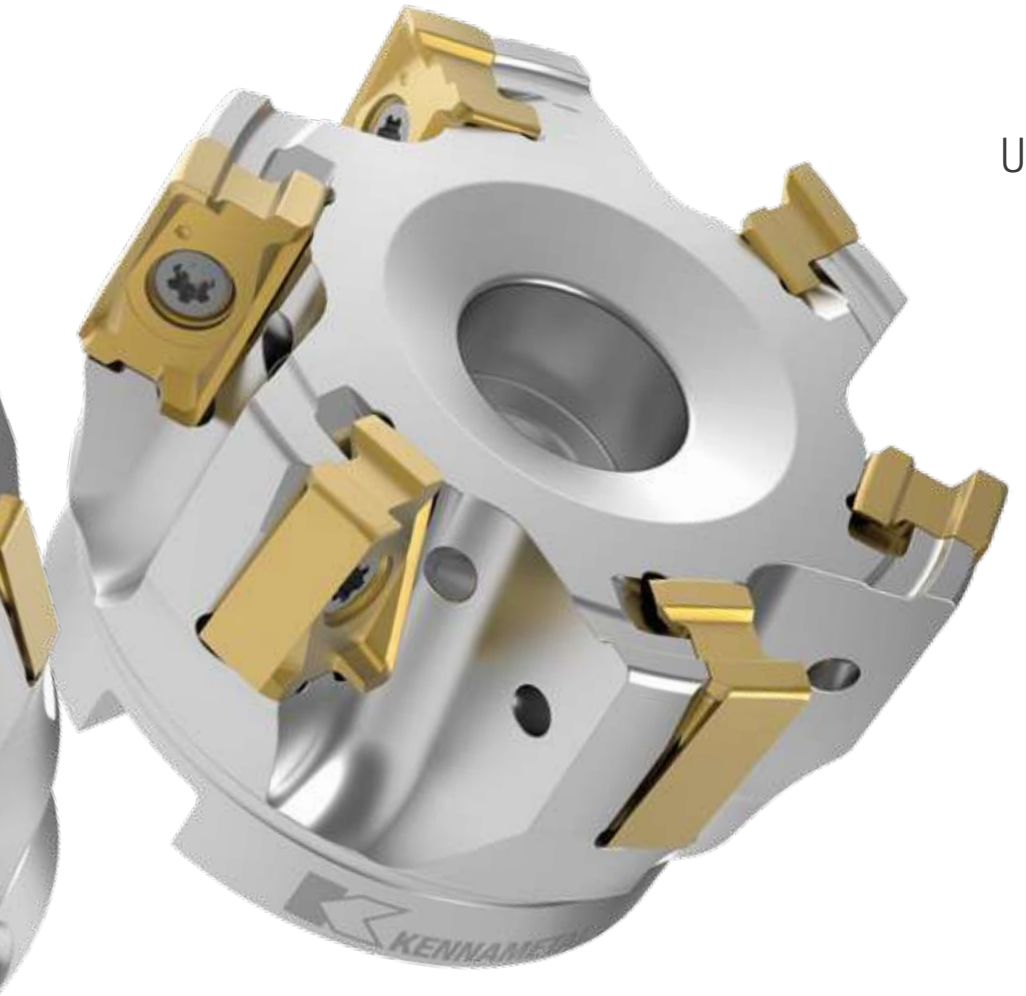
Double-sided strong insert with 4 cutting edges.

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

Uneven pocket spacing.

EXTREME

Mill 4™ is applicable in a wide range of workpiece materials: steel, cast iron, stainless steel, non-ferrous materials, and high-temp alloys.



Mill 4-15™

Up to 15,5mm depth of cut

THE SOLUTION FOR POWERFUL MACHINES.

Superior wall and surface finish capabilities.

Double-sided strong insert with 4 cutting edges.

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

Uneven pocket spacing.

STEP DOWN TO THE EXTREME

Mill 4-11™

Superior wall finishes
at 6,5mm depth of cut

Mill 4-15™

Superior wall finishes
at 7,5mm depth of cut

WITH MILL 4™

A challenge with step down applications is, that most tools leave tool marks with every pass they take. Resulting in unsatisfactory or low quality wall finishes, requiring another finishing pass at the very end of the process.

Applying Mill 4™ delivers pristine wall finishes, and eliminates that finishing pass with an additional tool. That saves you time, and reduces your production cost.

Mill 4™

Others

Double-sided strong insert with 4 cutting edges.

Comprehensive offering to cover all applications in all material groups.

High positive geometry for lower cutting forces.

“Stepless” solution for multiple-pass operations.

SGE-Geometry

- SGE is the universal geometry for Mill 4™. First choice when machining steel, applicable in stainless steel, and high-temp alloys in heavy applications as well.
- Precision ground insert results in a great compromise for both roughing and finishing operations. Honed and negativ T-Land for strongest cutting edge.

EGE-Geometry

- EGE is the first choice for stainless steel and high-temp alloys.
- Use EGE-geometry for the highest finishing requirements in light machining for all materials. Honed for free cutting action.

SGEM-Geometry

- First choice for cast iron applications, applicable in steel as well.
- Precision ground insert with very strong cutting edge for roughing applications.
- For heavy machining applications.

EGEJ-Geometry

- Mill 4-15™ geometry for aluminum and other non ferrous materials.
- Precision ground, sharp cutting edge for semi finishing to finishing applications.
- For light to heavy machining applications.

ELEJ-Geometry

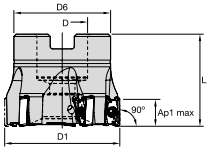
- Mill 4-11™ geometry for aluminum and other non ferrous materials.
- Precision ground insert with a sharp cutting edge for semi finishing to finishing applications.
- For light to heavy machining applications.

Get a FREE Mill 4™ Milling Cutter in 3 simple steps.

1. STEP

Select the tool 1 you need and determine the number of teeth (Z) 2

SHELL MILLS • MILL 4-11™



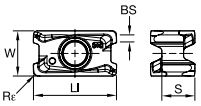
1 order number	catalog number	D1	D	D6	L	Ap1 max	2 Z	lbs	max RPM
6134188	M4D040Z04S16LN11	40	16	37	40	11,0	4	0,23	25400
6134189	M4D040Z06S16LN11	40	16	37	40	11,0	6	0,22	25400
6136796	M4D040Z07S16LN11	40	16	37	40	11,0	7	0,23	25400
6134190	M4D050Z05S22LN11	50	22	42	40	11,0	5	0,31	22300
6134231	M4D050Z07S22LN11	50	22	42	40	11,0	7	0,32	31500

2. STEP

Based on material and application 3, select the insert 4 required for your job.

3 Material Group	Light Machining (Light geometry) wear resistance Geometry		Grade	General Purpose toughness Geometry		Grade	Heavy Machining (Strong geometry) toughness Geometry		Grade
P1–P2	.E..GE	∇∇/∇∇∇	KCPM40	.S..GE	∇/∇∇	KCPM40	.S..GEM	∇	KCPM40
P3–P4	.E..GE	∇∇/∇∇∇	KCPM40	.S..GE	∇/∇∇	KCPM40	.S..GEM	∇	KCPM40
P5–P6	.E..GE	∇∇/∇∇∇	KC725M	.S..GE	∇/∇∇	KC725M	.S..GEM	∇	KCPM40
M1–M2	.E..GE	∇∇/∇∇∇	KCSM40	.S..GE	∇/∇∇	KCPM40	.S..GEM	∇	KCPM40
M3	.E..GE	∇∇/∇∇∇	KCPM40	.S..GE	∇/∇∇	KCPM40	.S..GEM	∇	KCPM40
K2–K3	S..GE	∇/∇∇	KC520M	.S..GE	∇/∇∇	KC725M	.S..GEM	∇	KC520M

● first choice
○ alternate choice



4 **LNGU-EGE**

catalog number	LI	S	W	BS	Rε	hm	KC422M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM30	KCSM40
LNGU110404ERGE	12,16	4,83	6,60	1,40	0,4	0,08	–	–	●	●	–	–	●	–	–
LNGU110408ERGE	12,16	4,83	6,60	1,00	0,8	0,08	–	–	●	●	–	–	●	●	●
LNGU110412ERGE	12,17	4,83	6,60	0,60	1,2	0,08	–	–	●	–	–	–	●	–	●

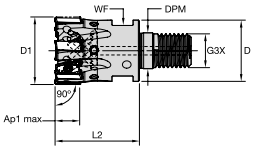
3. STEP

Place your order and get the milling cutter for **FREE!**

YOU BUY THIS	70x LNGU110404ERGE - KCPM40	YOU GET THIS FOR FREE	1x M4D040Z07S16LN11

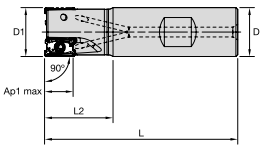
KENNAMETAL®

SCREW-ON END MILLS • MILL 4-11™



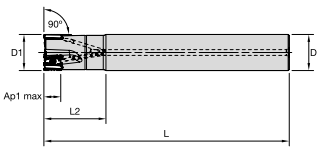
order number	catalogue number	D1	D	DPM	G3X	L2	WF	Ap1 max	Z	kg	max RPM
6136738	M4D016Z02M08LN11	16	13	8,5	M8	25	10	11,0	2	0,03	48000
6131682	M4D020Z03M10LN11	20	18	10,5	M10	28	15	11,0	3	0,06	40200
6131686	M4D025Z04M12LN11	25	21	12,5	M12	40	17	11,0	4	0,10	34300
6136793	M4D032Z05M16LN11	32	29	17,0	M16	40	24	11,0	5	0,20	29200
6134187	M4D032Z06M16LN11	32	29	17,0	M16	40	24	11,0	6	0,19	29200

WELDON® END MILLS • MILL 4-11™

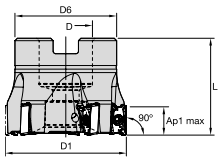


order number	catalogue number	D1	D	L	L2	Ap1 max	Z	kg	max RPM
6131628	M4D016Z02B16LN11	16	16	74	25	11,0	2	0,09	48000
6131630	M4D020Z02B20LN11	20	20	79	28	11,0	2	0,17	40200
6136740	M4D020Z03B20LN11	20	20	79	28	11,0	3	0,16	42000
6131684	M4D025Z03B25LN11	25	25	89	32	11,0	3	0,29	34300
6134185	M4D032Z04B32LN11	32	32	110	49	11,0	4	0,60	29200
6136795	M4D040Z05B32LN11	40	32	110	49	11,0	5	0,66	25400

CYLINDRICAL END MILLS • MILL 4-11™



order number	catalogue number	D1	D	L	L2	Ap1 max	Z	kg	max RPM
6131627	M4D016Z02A16LN11L090	16	16	90	25	11,0	2	0,12	48000
6136737	M4D016Z02A16LN11L150	16	16	150	25	11,0	2	0,21	48000
6131629	M4D020Z02A20LN11L150	20	20	150	28	11,0	2	0,33	40200
6131681	M4D020Z03A20LN11L090	20	20	90	28	11,0	3	0,21	40200
6136739	M4D020Z03A20LN11L150	20	20	150	28	11,0	3	0,33	40200
6131683	M4D025Z03A25LN11L170	25	25	170	43	11,0	3	0,63	34300
6131685	M4D025Z04A25LN11L100	25	25	100	43	11,0	4	0,33	34300
6136791	M4D025Z04A25LN11L170	25	25	170	43	11,0	4	0,59	34300
6134184	M4D032Z04A32LN11L200	32	32	200	49	11,0	4	1,16	29200
6134186	M4D032Z05A32LN11L110	32	32	110	49	11,0	5	0,61	29200
6136792	M4D032Z05A32LN11L200	32	32	200	49	11,0	5	1,17	29200
6136794	M4D040Z05A32LN11L200	40	32	200	49	11,0	5	1,22	25400



order number	catalogue number	D1	D	D6	L	Ap1 max	Z	kg	max RPM
6134188	**M4D040Z04S16LN11**	40	16	37	40	11,0	4	0,23	25400
6134189	**M4D040Z06S16LN11**	40	16	37	40	11,0	6	0,22	25400
6136796	**M4D040Z07S16LN11**	40	16	37	40	11,0	7	0,23	25400
6134190	**M4D050Z05S22LN11**	50	22	42	40	11,0	5	0,31	22300
6134231	**M4D050Z07S22LN11**	50	22	42	40	11,0	7	0,32	22300
6136797	**M4D050Z09S22LN11**	50	22	42	40	11,0	9	0,32	22300
6134232	**M4D063Z06S22LN11**	63	22	50	40	11,0	6	0,56	19500
6134233	**M4D063Z09S22LN11**	63	22	50	40	11,0	9	0,56	19500
6134234	**M4D080Z08S27LN11**	80	27	60	50	11,0	8	1,12	17100
6136798	**M4D080Z10S27LN11**	80	27	60	50	11,0	10	1,11	17100

EXAMPLE

BUY 60
INSERTS

GET THIS MILL 4-11™
MILLING CUTTER
FOR FREE

Call today and refer to promo code
BUY10GET1-MILL4

*Offer ends September 30, 2017.
Offer void where prohibited by law.
Also available through participating distributors.

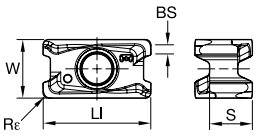
KENNAMETAL®

INSERT SELECTION GUIDE • MILL 4-11™

Material Group	Light Machining (Light geometry)			General Purpose			Heavy Machining (Strong geometry)		
	wear resistance			◄———	———	———►	toughness		
	Geometry		Grade	Geometry		Grade	Geometry		Grade
P1–P2	.E..GE	∇∇/∇∇∇	KCPM40	**.S..GE**	∇/∇∇	**KCPM40**	.S..GEM	∇	KCPM40
P3–P4	.E..GE	∇∇/∇∇∇	KCPM40	**.S..GE**	∇/∇∇	**KCPM40**	.S..GEM	∇	KCPM40
P5–P6	.E..GE	∇∇/∇∇∇	KC725M	**.S..GE**	∇/∇∇	**KC725M**	.S..GEM	∇	KCPM40
M1–M2	.E..GE	∇∇/∇∇∇	KCSM40	**.S..GE**	∇/∇∇	**KCSM40**	.S..GEM	∇	KCPM40
M3	.E..GE	∇∇/∇∇∇	KCPM40	**.S..GE**	∇/∇∇	**KCPM40**	.S..GEM	∇	KCPM40
K1–K2	.S..GE	∇/∇∇	KC520M	**.S..GE**	∇/∇∇	**KCK15**	.S..GEM	∇	KC520M
K3	.S..GE	∇/∇∇	KC520M	**.S..GE**	∇/∇∇	**KCK15**	.S..GEM	∇	KC520M
N1–N2	.E..LEJ	∇∇/∇∇∇	KC422M	**.E..LEJ**	∇∇/∇∇∇	**KC422M**	.E..LEJ	∇∇/∇∇∇	KC422M
N3	.E..LEJ	∇∇/∇∇∇	KC422M	**.E..LEJ**	∇∇/∇∇∇	**KC422M**	.E..LEJ	∇∇/∇∇∇	KC422M
S1–S2	.E..GE	∇∇/∇∇∇	KCSM40	**.S..GE**	∇/∇∇	**KC725M**	.S..GE	∇/∇∇	KCSM40
S3	.E..GE	∇∇/∇∇∇	KCSM40	**.S..GE**	∇/∇∇	**KCSM40**	.S..GE	∇/∇∇	KCSM40
S4	.E..GE	∇∇/∇∇∇	KCSM40	**.S..GE**	∇/∇∇	**KCSM40**	.S..GE	∇/∇∇	KCSM40
H1	–	–	–	–	–	–	–	–	–

Finishing: ∇∇∇ **Semi-Finishing:** ∇∇ **Roughing:** ∇

INDEXABLE INSERTS • MILL 4-11™



● first choice
○ alternate choice

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

	LI	S	W	BS	Rε	hm	KC422M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM30	KCSM40
LNGU-ELEJ catalogue number															
LNGU110404ERLEJ	12,16	4,83	6,60	1,40	0,4	0,04	●	–	–	–	–	–	–	–	–
LNGU110408ERLEJ	12,16	4,83	6,60	1,00	0,8	0,04	●	–	–	–	–	–	–	–	–
LNGU-EGE catalog number															
LNGU110404ERGE	12,16	4,83	6,60	1,40	0,4	0,08	–	–	●	●	–	–	●	–	–
LNGU110408ERGE	12,16	4,83	6,60	1,00	0,8	0,08	–	–	●	●	–	–	●	●	●
LNGU110412ERGE	12,17	4,83	6,60	0,60	1,2	0,08	–	–	●	–	–	–	●	–	●
LNGU-SGE catalog number															
LNGU110404SRGE	12,16	4,83	6,60	1,40	0,4	0,10	–	–	●	–	–	–	●	–	●
LNGU110408SRGE	12,16	4,83	6,60	1,00	0,8	0,10	–	–	●	●	●	●	●	–	●
LNPU-SGE catalog number															
LNPU110408SRGE	12,10	4,83	6,60	0,90	0,8	0,10	–	●	●	●	●	●	●	–	–
LNPU110412SRGE	12,10	4,83	6,60	0,50	1,2	0,10	–	●	●	●	●	●	●	–	–
LNPU110416SRGE	12,10	4,83	6,60	0,02	1,6	0,10	–	●	●	●	–	●	●	–	–
LNGU-SGEM catalog number															
LNGU110408SRGEM	12,16	4,83	6,60	0,90	0,8	0,10	–	●	●	–	●	●	●	–	–
LNGU110412SRGEM	12,16	4,83	6,60	0,60	1,2	0,10	–	●	–	–	●	●	●	–	–
LNGU110416SRGEM	12,16	4,83	6,60	0,10	1,6	0,10	–	●	–	–	●	●	●	–	–

RECOMMENDED STARTING FEEDS [MM] • MILL 4-11™

Light Machining	General Purpose	Heavy Machining

Insert Geometry	Recommended Starting Feed per Tooth (Fz) in Relation to % of Radial Engagement (ae)																Insert Geometry
	5%			10%			20%			30%			40–100%				
.E..LEJ	0,13	**0,35**	0,58	0,09	**0,25**	0,42	0,07	**0,19**	0,31	0,06	**0,17**	0,27	0,06	**0,15**	0,25		.E..LEJ
.E..GE	0,23	**0,43**	0,59	0,17	**0,31**	0,43	0,13	**0,23**	0,32	0,11	**0,20**	0,28	0,10	**0,18**	0,25		.E..GE
.S..GE	0,23	**0,46**	0,65	0,17	**0,33**	0,47	0,13	**0,25**	0,35	0,11	**0,22**	0,31	0,10	**0,20**	0,28		.S..GE
.S..GEM	0,23	**0,46**	0,71	0,17	**0,33**	0,51	0,13	**0,25**	0,38	0,11	**0,22**	0,33	0,10	**0,20**	0,30		.S..GEM

NOTE: Use “Light Machining” values as starting feed rate.

RECOMMENDED STARTING SPEEDS FOR DRY MACHINING

Material Group		KC520M			KC522M			KC725M			KCK15			KCPK30			KCPM40			KCSM30			KCSM40		
P	1	–	–	–	330	**285**	270	260	**230**	215	–	–	–	455	**395**	370	295	**260**	245	370	**320**	300	–	–	–
	2	–	–	–	275	**240**	200	220	**190**	160	–	–	–	280	**255**	230	250	**215**	180	305	**270**	220	–	–	–
	3	–	–	–	255	**215**	175	200	**170**	140	–	–	–	255	**230**	205	230	**195**	160	285	**240**	195	–	–	–
	4	–	–	–	225	**185**	150	180	**150**	120	–	–	–	190	**175**	160	205	**170**	135	250	**205**	165	–	–	–
	5	–	–	–	185	**170**	150	150	**135**	120	–	–	–	260	**230**	210	170	**155**	135	205	**190**	165	170	**145**	120
	6	–	–	–	165	**125**	100	130	**100**	80	–	–	–	160	**135**	–	150	**115**	90	185	**140**	110	150	**110**	80
M	1	–	–	–	205	180	165	170	150	135	–	–	–	205	**185**	155	195	**170**	155	225	**200**	185	210	**170**	140
	2	–	–	–	185	**160**	130	155	**130**	110	–	–	–	185	**160**	140	175	**150**	125	205	**180**	145	180	**145**	120
	3	–	–	–	140	**120**	95	115	**100**	80	–	–	–	145	**130**	115	130	**115**	90	155	**135**	105	145	**110**	85
K	1	270	**245**	215	230	**205**	185	–	–	–	420	**385**	340	295	**265**	240	–	–	–	–	–	–	–	–	–
	2	210	**190**	175	180	**160**	150	–	–	–	335	**295**	275	235	**210**	190	–	–	–	–	–	–	–	–	–
	3	175	**160**	145	150	**135**	120	–	–	–	280	**250**	230	195	**175**	160	–	–	–	–	–	–	–	–	–
N	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
S	1	–	–	–	40	**35**	25	35	**30**	25	–	–	–	–	–	–	40	**35**	30	45	**40**	30	40	**35**	25
	2	–	–	–	40	**35**	25	35	**30**	25	–	–	–	–	–	–	40	**35**	30	45	**40**	30	40	**35**	25
	3	–	–	–	50	**40**	25	45	**35**	25	–	–	–	–	–	–	50	**40**	30	55	**45**	30	50	**40**	25
	4	–	–	–	70	**50**	35	55	**45**	30	–	–	–	66	**50**	33	65	**50**	35	70	**60**	40	60	**50**	30
H	1	–	–	–	120	**90**	70	–	–	–	–	–	–	–	–	–	–	–	–	135	**100**	75	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

RECOMMENDED STARTING SPEEDS FOR WET MACHINING

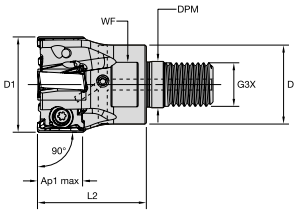
Material Group		KC422M			KC520M			KC522M			KC725M			KCK15			KCPK30			KCPM40			KCSM30			KCSM40		
P	1	–	–	–	–	–	–	265	**230**	215	210	**185**	170	–	–	–	365	**315**	295	235	**210**	195	295	**255**	240	–	–	–
	2	–	–	–	–	–	–	220	**190**	160	175	**150**	130	–	–	–	225	**205**	185	200	**170**	145	245	**215**	175	–	–	–
	3	–	–	–	–	–	–	205	**170**	140	160	**135**	110	–	–	–	205	**185**	165	185	**155**	130	230	**190**	155	–	–	–
	4	–	–	–	–	–	–	180	**150**	120	145	**120**	95	–	–	–	150	**140**	130	165	**135**	110	200	**165**	130	–	–	–
	5	–	–	–	–	–	–	150	**135**	120	120	**110**	95	–	–	–	210	**185**	170	135	**125**	110	165	**150**	130	135	**115**	95
	6	–	–	–	–	–	–	130	**100**	80	105	**80**	65	–	–	–	130	**110**	–	120	**90**	70	150	**110**	90	120	**90**	65
M	1	–	–	–	–	–	–	165	**145**	130	135	120	110	–	–	–	165	**150**	125	155	**135**	125	180	160	150	170	135	110
	2	–	–	–	–	–	–	150	**130**	105	125	**105**	90	–	–	–	150	**130**	110	140	**120**	100	165	**145**	115	145	**115**	95
	3	–	–	–	–	–	–	110	**95**	75	90	**80**	65	–	–	–	115	**105**	90	105	**90**	70	125	**110**	85	115	**90**	70
K	1	–	–	–	215	**195**	170	185	**165**	150	–	–	–	335	**310**	270	235	**210**	190	–	–	–	–	–	–	–	–	–
	2	–	–	–	170	**150**	140	145	**130**	120	–	–	–	270	**235**	220	190	**170**	150	–	–	–	–	–	–	–	–	–
	3	–	–	–	140	**130**	115	120	**110**	95	–	–	–	225	**200**	185	155	**140**	130	–	–	–	–	–	–	–	–	–
N	1	860	**755**	700	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	755	**700**	610	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	755	**700**	610	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
S	1	–	–	–	–	–	–	30	**30**	20	30	**25**	20	–	–	–	–	–	–	30	**30**	25	35	**30**	25	30	**30**	20
	2	–	–	–	–	–	–	30	**30**	20	30	**25**	20	–	–	–	–	–	–	30	**30**	25	35	**30**	25	30	**30**	20
	3	–	–	–	–	–	–	40	**30**	20	35	**30**	20	–	–	–	–	–	–	40	**30**	25	45	**35**	25	40	**30**	20
	4	–	–	–	–	–	–	55	**40**	30	45	**35**	25	–	–	–	55	**40**	25	50	**40**	30	55	**50**	30	50	**40**	25
H	1	–	–	–	–	–	–	95	**70**	55	–	–	–	–	–	–	–	–	–	–	–	–	110	**80**	60	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

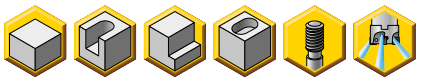
NOTE: FIRST choice starting speeds are in **bold** type.
As the average chip thickness increases, the speed should be decreased.

Dry

Wet

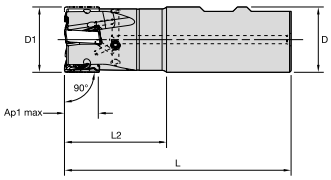
SCREW-ON END MILLS • MILL 4-15™

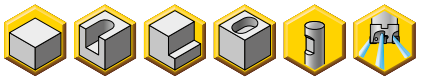




order number	catalogue number	D1	D	DPM	G3X	L2	WF	Ap1 max	Z	kg	max RPM
5531911	M4D025Z02M12LN15	25	21	12,5	M12	32	17	15,5	2	0,08	26700
5531912	M4D032Z03M16LN15	32	29	17,0	M16	40	24	15,5	3	0,18	22000
5555606	M4D032Z04M16LN15	32	29	17,0	M16	40	24	15,5	4	0,18	22000
5528599	M4D035Z04M16LN15	35	29	17,0	M16	40	24	15,5	4	0,19	20600
5531913	M4D040Z05M16LN15	40	29	17,0	M16	40	24	15,5	5	0,23	18800

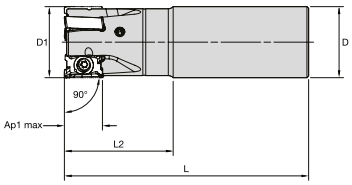
WELDON® END MILLS • MILL 4-15™

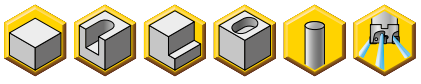




order number	catalogue number	D1	D	L	L2	Ap1 max	Z	kg	max RPM
5528630	M4D025Z02B25LN15	25	25	89	32	15,5	2	0,28	26700
5528631	M4D032Z03B32LN15	32	32	111	50	15,5	3	0,58	22000
5531914	M4D040Z03B32LN15	40	32	111	50	15,5	3	0,65	18800
5555607	M4D040Z04B32LN15	40	32	111	50	15,5	4	0,65	18800

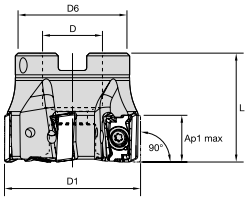
CYLINDRICAL END MILLS • MILL 4-15™

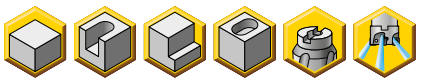




order number	catalogue number	D1	D	L	L2	Ap1 max	Z	kg	max RPM
5531915	M4D025Z02A25LN15L100	25	25	100	43	15,5	2	0,28	26700
5531916	M4D025Z02A25LN15L170	25	25	170	43	15,5	2	0,58	26700
5531917	M4D032Z03A32LN15L110	32	32	110	49	15,5	3	0,58	22000
5531918	M4D032Z03A32LN15L200	32	32	200	50	15,5	3	1,14	22000
5555608	M4D032Z04A32LN15L110	32	32	110	49	15,5	4	0,58	22000
5555609	M4D032Z04A32LN15L200	32	32	200	50	15,5	4	1,14	22000
5531919	M4D040Z03A32LN15L200	40	32	200	50	15,5	3	1,21	18800
5555800	M4D040Z04A32LN15L200	40	32	200	50	15,5	4	1,20	18800

SHELL MILLS • MILL 4-15™





order number	catalogue number	D1	D	D6	L	Ap1 max	Z	kg	max RPM
5528632	M4D040Z04S16LN15	40	16	37	40	15,5	4	0,20	18800
5555801	M4D040Z05S16LN15	40	16	37	40	15,5	5	0,19	18800
5698436	M4D050Z04S22LN15	50	22	42	40	15,5	4	0,28	16300
5528633	M4D050Z05S22LN15	50	22	42	40	15,5	5	0,28	16300
5528634	M4D050Z06S22LN15	50	22	42	40	15,5	6	0,27	16300
5698437	M4D063Z05S22LN15	63	22	50	40	15,5	5	0,50	14200
5528635	M4D063Z06S22LN15	63	22	50	40	15,5	6	0,49	14200
5528636	M4D063Z07S22LN15	63	22	50	40	15,5	7	0,50	14200
5698438	M4D080Z05S27LN15	80	27	60	50	15,5	5	1,03	12300
5528637	M4D080Z07S27LN15	80	27	60	50	15,5	7	1,02	12300
5555802	M4D080Z09S27LN15	80	27	60	50	15,5	9	1,04	12300
5698439	M4D100Z06S32LN15	100	32	80	50	15,5	6	1,58	10900
5528638	M4D100Z08S32LN15	100	32	80	50	15,5	8	1,57	10900
5555803	M4D100Z11S32LN15	100	32	80	50	15,5	11	1,64	10900
5698490	M4D125Z07S40LN15	125	40	90	63	15,5	7	2,96	9600
5555804	M4D125Z09S40LN15	125	40	90	63	15,5	9	2,98	9600
5532000	M4D125Z12S40LN15	125	40	90	63	15,5	12	3,00	9600
5698491	M4D160Z08S40LN15	160	40	110	63	15,5	8	4,67	8400
5555805	M4D160Z12S40LN15	160	40	110	63	15,5	12	4,78	8400
5555806	M4D160Z16S40LN15	160	40	110	63	15,5	16	4,75	8400

EXAMPLE

BUY 60
INSERTS

GET THIS MILL 4-15™
MILLING CUTTER
FOR FREE

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BUY10GET1-MILL4

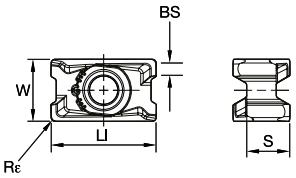
*Offer ends September 30, 2017.
Offer void where prohibited by law.
Also available through participating distributors.

INSERT SELECTION GUIDE • MILL 4-15™

Material Group	Light Machining (Light geometry)			General Purpose			Heavy Machining (Strong geometry)		
	wear resistance			◄———	———	———►	toughness		
	Geometry		Grade	Geometry		Grade	Geometry		Grade
P1–P2	.E..GE	∇∇/∇∇∇	KCPM40	**.S..GE**	∇/∇∇	**KCPM40**	.S..GEM	∇	KCPM40
P3–P4	.E..GE	∇∇/∇∇∇	KCPM40	**.S..GE**	∇/∇∇	**KCPM40**	.S..GEM	∇	KCPM40
P5–P6	.E..GE	∇∇/∇∇∇	KC725M	**.S..GE**	∇/∇∇	**KC725M**	.S..GEM	∇	KCPM40
M1–M2	.E..GE	∇∇/∇∇∇	KCSM40	**.S..GE**	∇/∇∇	**KCSM40**	.S..GEM	∇	KCPM40
M3	.E..GE	∇∇/∇∇∇	KCPM40	**.S..GE**	∇/∇∇	**KCPM40**	.S..GEM	∇	KCPM40
K1–K2	.S..GE	∇/∇∇	KC520M	**.S..GE**	∇/∇∇	**KCK15**	.S..GEM	∇	KC520M
K3	.S..GE	∇/∇∇	KC520M	**.S..GE**	∇/∇∇	**KCK15**	.S..GEM	∇	KC520M
N1–N2	.E..GEJ	∇∇/∇∇∇	KC422M	**.E..GEJ**	∇∇/∇∇∇	**KC422M**	.E..GEJ	∇∇/∇∇∇	KC422M
N3	.E..GEJ	∇∇/∇∇∇	KC422M	**.E..GEJ**	∇∇/∇∇∇	**KC422M**	.E..GEJ	∇∇/∇∇∇	KC422M
S1–S2	.E..GE	∇∇/∇∇∇	KCSM40	**.S..GE**	∇/∇∇	**KC725M**	.S..GE	∇/∇∇	KCSM40
S3	.E..GE	∇∇/∇∇∇	KCSM40	**.S..GE**	∇/∇∇	**KCSM40**	.S..GE	∇/∇∇	KCSM40
S4	.E..GE	∇∇/∇∇∇	KCSM40	**.S..GE**	∇/∇∇	**KCSM40**	.S..GE	∇/∇∇	KCSM40
H1	–	–	–	–	–	–	–	–	–

Finishing: ∇∇∇ **Semi-Finishing:** ∇∇ **Roughing:** ∇

INDEXABLE INSERTS • MILL 4-15™



● first choice
○ alternate choice

		KC422M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM30	KCSM40
P				○	●		●	●		○
M				●	●		○	●	○	●
K			●	○		●	○			
N		●								
S				●	●			○	●	●
H										

LNGU-EGEJ
catalogue number

	LI	S	W	BS	Rε	hm	KC422M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM30	KCSM40
LNGU15T604ERGEJ	17,00	6,96	10,00	2,20	0,4	0,03	●	–	–	–	–	–	–	–	–
LNGU15T608ERGEJ	17,00	6,96	10,00	1,80	0,8	0,03	●	–	–	–	–	–	–	–	–

LNGU-EGE
catalog number

LNGU15T604ERGE	17,01	6,96	10,00	2,20	0,4	0,08	–	–	●	●	–	–	●	●	–
LNGU15T608ERGE	17,01	6,96	10,00	1,80	0,8	0,08	–	–	●	●	–	–	●	●	●
LNGU15T612ERGE	17,01	6,96	10,00	1,40	1,2	0,08	–	–	●	●	–	–	●	●	●
LNGU15T616ERGE	17,01	6,96	10,00	1,07	1,6	0,08	–	–	–	●	–	–	●	●	–

LNGU-SGE
catalog number

LNGU15T604SRGE	17,00	6,96	10,00	2,20	0,4	0,10	–	●	●	●	●	●	–	–	–
LNGU15T608SRGE	17,01	6,96	10,00	1,80	0,8	0,10	–	●	●	●	●	●	–	–	●
LNGU15T612SRGE	17,01	6,96	10,00	1,40	1,2	0,10	–	●	●	●	●	●	–	–	●
LNGU15T616SRGE	17,01	6,96	10,00	1,07	1,6	0,10	–	●	●	●	●	●	–	–	–

LNPU-SGE
catalog number

LNPU15T604SRGE	16,90	6,96	10,00	2,20	0,4	0,10	–	●	●	●	●	●	–	–	–
LNPU15T608SRGE	16,90	6,96	10,00	1,80	0,8	0,10	–	●	●	●	●	●	●	–	–
LNPU15T612SRGE	16,90	6,96	10,00	1,50	1,2	0,10	–	●	●	●	–	●	●	–	–
LNPU15T616SRGE	16,90	6,96	10,00	1,10	1,6	0,10	–	–	–	–	–	–	●	–	–
LNPU15T620SRGE	16,92	6,96	10,00	0,70	2,0	0,10	–	–	●	●	●	●	●	–	–

LNGU-SGEM
catalog number

LNGU15T608SRGEM	17,01	6,96	10,00	1,70	0,8	0,10	–	●	–	–	●	●	●	–	–
LNGU15T612SRGEM	17,01	6,96	10,00	1,30	1,2	0,10	–	●	–	–	●	–	●	–	–
LNGU15T616SRGEM	17,01	6,96	10,00	0,95	1,6	0,10	–	●	–	–	●	●	●	–	–
LNGU15T620SRGEM	17,01	6,96	10,00	0,34	2,0	0,10	–	●	–	–	●	●	●	–	–

RECOMMENDED STARTING FEEDS [MM] • MILL 4-15™

Light Machining	General Purpose	Heavy Machining

Insert Geometry	Recommended Starting Feed per Tooth (Fz) in Relation to % of Radial Engagement (ae)															Insert Geometry
	5%			10%			20%			30%			40–100%			
.E..GEJ	0,12	**0,47**	0,84	0,08	**0,34**	0,60	0,06	**0,26**	0,45	0,06	**0,22**	0,39	0,05	**0,20**	0,36	.E..GEJ
.E..GE	0,23	**0,54**	0,93	0,17	**0,39**	0,67	0,13	**0,29**	0,50	0,11	**0,25**	0,44	0,10	**0,23**	0,40	.E..GE
.S..GE	0,23	**0,59**	0,95	0,17	**0,43**	0,68	0,13	**0,32**	0,51	0,11	**0,28**	0,44	0,10	**0,25**	0,41	.S..GE
.S..GEM	0,23	**0,59**	0,95	0,17	**0,43**	0,68	0,13	**0,32**	0,51	0,11	**0,28**	0,44	0,10	**0,25**	0,41	.S..GEM

NOTE: Use “Light Machining” values as starting feed rate.

RECOMMENDED STARTING SPEEDS FOR DRY MACHINING

Material Group		KC520M			KC522M			KC725M			KCK15			KCPK30			KCPM40			KCSM30			KCSM40		
P	1	–	–	–	330	**285**	270	260	**230**	215	–	–	–	455	**395**	370	295	**260**	245	370	**320**	300	–	–	–
	2	–	–	–	275	**240**	200	220	**190**	160	–	–	–	280	**255**	230	250	**215**	180	305	**270**	220	–	–	–
	3	–	–	–	255	**215**	175	200	**170**	140	–	–	–	255	**230**	205	230	**195**	160	285	**240**	195	–	–	–
	4	–	–	–	225	**185**	150	180	**150**	120	–	–	–	190	**175**	160	205	**170**	135	250	**205**	165	–	–	–
	5	–	–	–	185	**170**	150	150	**135**	120	–	–	–	260	**230**	210	170	**155**	135	205	**190**	165	170	**145**	120
	6	–	–	–	165	**125**	100	130	**100**	80	–	–	–	160	**135**	–	150	**115**	90	185	**140**	110	150	**110**	80
M	1	–	–	–	205	180	165	170	150	135	–	–	–	205	**185**	155	195	**170**	155	225	**200**	185	210	**170**	140
	2	–	–	–	185	**160**	130	155	**130**	110	–	–	–	185	**160**	140	175	**150**	125	205	**180**	145	180	**145**	120
	3	–	–	–	140	**120**	95	115	**100**	80	–	–	–	145	**130**	115	130	**115**	90	155	**135**	105	145	**110**	85
K	1	270	**245**	215	230	**205**	185	–	–	–	420	**385**	340	295	**265**	240	–	–	–	–	–	–	–	–	–
	2	210	**190**	175	180	**160**	150	–	–	–	335	**295**	275	235	**210**	190	–	–	–	–	–	–	–	–	–
	3	175	**160**	145	150	**135**	120	–	–	–	280	**250**	230	195	**175**	160	–	–	–	–	–	–	–	–	–
N	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
S	1	–	–	–	40	**35**	25	35	**30**	25	–	–	–	–	–	–	40	**35**	30	45	**40**	30	40	**35**	25
	2	–	–	–	40	**35**	25	35	**30**	25	–	–	–	–	–	–	40	**35**	30	45	**40**	30	40	**35**	25
	3	–	–	–	50	**40**	25	45	**35**	25	–	–	–	–	–	–	50	**40**	30	55	**45**	30	50	**40**	25
	4	–	–	–	70	**50**	35	55	**45**	30	–	–	–	66	**50**	33	65	**50**	35	70	**60**	40	60	**50**	30
H	1	–	–	–	120	**90**	70	–	–	–	–	–	–	–	–	–	–	–	–	135	**100**	75	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

RECOMMENDED STARTING SPEEDS FOR WET MACHINING

Material Group		KC422M			KC520M			KC522M			KC725M			KCK15			KCPK30			KCPM40			KCSM30			KCSM40		
P	1	–	–	–	–	–	–	265	**230**	215	210	**185**	170	–	–	–	365	**315**	295	235	**210**	195	295	**255**	240	–	–	–
	2	–	–	–	–	–	–	220	**190**	160	175	**150**	130	–	–	–	225	**205**	185	200	**170**	145	245	**215**	175	–	–	–
	3	–	–	–	–	–	–	205	**170**	140	160	**135**	110	–	–	–	205	**185**	165	185	**155**	130	230	**190**	155	–	–	–
	4	–	–	–	–	–	–	180	**150**	120	145	**120**	95	–	–	–	150	**140**	130	165	**135**	110	200	**165**	130	–	–	–
	5	–	–	–	–	–	–	150	**135**	120	120	**110**	95	–	–	–	210	**185**	170	135	**125**	110	165	**150**	130	135	**115**	95
	6	–	–	–	–	–	–	130	**100**	80	105	**80**	65	–	–	–	130	**110**	–	120	**90**	70	150	**110**	90	120	**90**	65
M	1	–	–	–	–	–	–	165	**145**	130	135	120	110	–	–	–	165	**150**	125	155	**135**	125	180	160	150	170	135	110
	2	–	–	–	–	–	–	150	**130**	105	125	**105**	90	–	–	–	150	**130**	110	140	**120**	100	165	**145**	115	145	**115**	95
	3	–	–	–	–	–	–	110	**95**	75	90	**80**	65	–	–	–	115	**105**	90	105	**90**	70	125	**110**	85	115	**90**	70
K	1	–	–	–	215	**195**	170	185	**165**	150	–	–	–	335	**310**	270	235	**210**	190	–	–	–	–	–	–	–	–	–
	2	–	–	–	170	**150**	140	145	**130**	120	–	–	–	270	**235**	220	190	**170**	150	–	–	–	–	–	–	–	–	–
	3	–	–	–	140	**130**	115	120	**110**	95	–	–	–	225	**200**	185	155	**140**	130	–	–	–	–	–	–	–	–	–
N	1	860	**755**	700	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	755	**700**	610	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	755	**700**	610	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
S	1	–	–	–	–	–	–	30	**30**	20	30	**25**	20	–	–	–	–	–	–	30	**30**	25	35	**30**	25	30	**30**	20
	2	–	–	–	–	–	–	30	**30**	20	30	**25**	20	–	–	–	–	–	–	30	**30**	25	35	**30**	25	30	**30**	20
	3	–	–	–	–	–	–	40	**30**	20	35	**30**	20	–	–	–	–	–	–	40	**30**	25	45	**35**	25	40	**30**	20
	4	–	–	–	–	–	–	55	**40**	30	45	**35**	25	–	–	–	55	**40**	25	50	**40**	30	55	**50**	30	50	**40**	25
H	1	–	–	–	–	–	–	95	**70**	55	–	–	–	–	–	–	–	–	–	–	–	–	110	**80**	60	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

NOTE: FIRST choice starting speeds are in **bold** type.
As the average chip thickness increases, the speed should be decreased.

Dry Wet

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