



INNOVATIONS **CATALOGUE**

Mill 4™ Series

2015

www.kennametal.com

 **KENNAMETAL®**



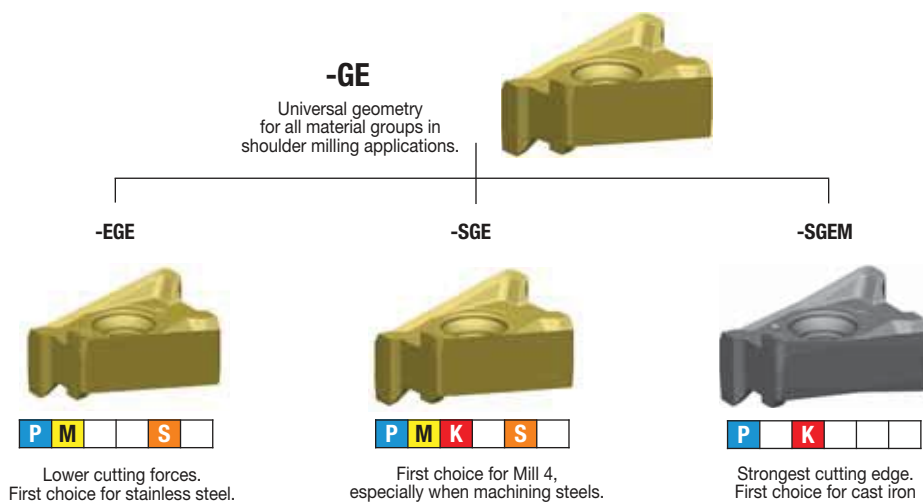
Mill 4-15™ • Double-Sided Shoulder Mill

Primary Application

The Mill 4™ Series is specially engineered to achieve excellent performance in surface quality as well as higher material removal rates in shoulder milling applications. Its unique design enables multiple passes (stepping down) with outstanding results. Mill 4 is applicable in a wide range of workpiece materials: steel, cast iron, stainless steel, and titanium, from roughing to finishing operations.

Features and Benefits

- Double-sided strong insert with 4 cutting edges.
- High positive geometry for lower cutting forces.
- Superior wall and surface finish capabilities.
- “Stepless” solution for multiple pass operations.



State-of-the-art stepping down capabilities – “stepless” solution!

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

Multiple corner nose radii available.

Up to 15,5mm depth-of-cut capabilities.

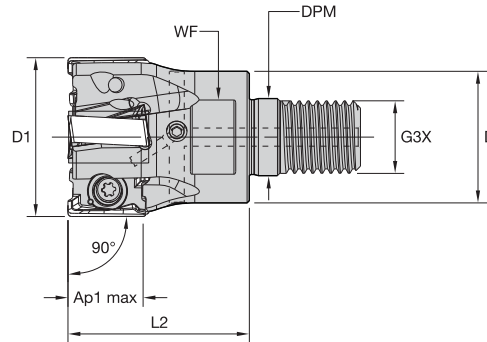
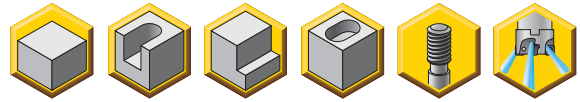
Integrated wiper facet for best-in-class floor finishing.

Innovative cutting geometry to provide superior wall and surface finish capabilities.

To learn more about Kennametal's Mill 4™ Series, use your smartphone or tablet to scan the QR code here.



- Superior wall and surface finish capabilities.
- True 90° capabilities. Stepless solution when using multiple steps.
- Engineered to run up to 15,5mm depth of cut.
- Effective internal coolant feature, reaching the cutting edge precisely.



■ **Screw-On End Mills**

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

■ **Spare Parts**



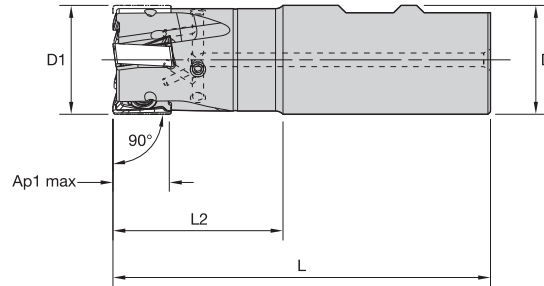
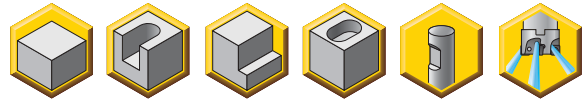
insert screw



Torx Plus driver

D1	insert screw	Nm	Torx Plus driver
25	MS-2071	3,5	DT15IP
32	MS-2071	3,5	DT15IP
35	MS-2071	3,5	DT15IP
40	MS-2071	3,5	DT15IP

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- True 90° capabilities. Stepless solution when using multiple steps.
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- Effective internal coolant feature, reaching the cutting edge precisely.



■ **Weldon End Mills**

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

■ **Spare Parts**



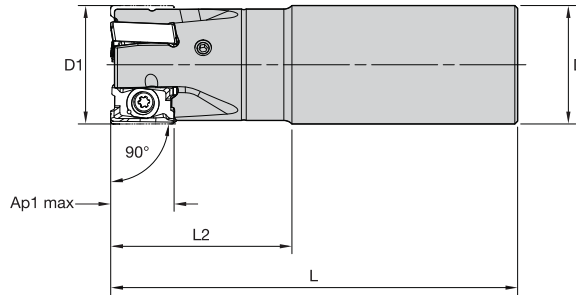
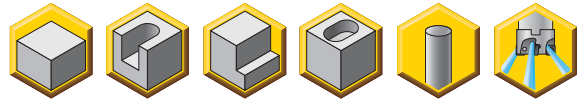
insert screw



Torx Plus driver

D1	insert screw	Nm	Torx Plus driver
25	MS-2071	3,5	DT15IP
32	MS-2071	3,5	DT15IP
40	MS-2071	3,5	DT15IP

- Superior wall and surface finish capabilities.
- True 90° capabilities. Stepless solution when using multiple steps.
- Engineered to run up to 15,5mm depth of cut.
- Effective internal coolant feature, reaching the cutting edge precisely.



■ Cylindrical End Mills

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
5555608	M4D032Z04A32LN15L110	32	32	110	49	15,5	4	0,58	22000
5531918	M4D032Z03A32LN15L200	32	32	200	50	15,5	3	1,14	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

■ Spare Parts



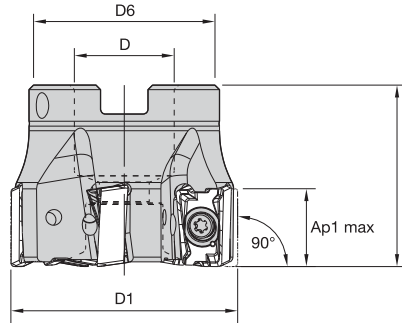
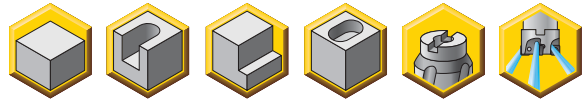
insert screw



Torx Plus driver

D1	insert screw	Nm	Torx Plus driver
25	MS-2071	3,5	DT15IP
32	MS-2071	3,5	DT15IP
40	MS-2071	3,5	DT15IP

- Superior wall and surface finish capabilities.
- True 90° capabilities. Stepless solution when using multiple steps.
- Engineered to run up to 15,5mm depth of cut.
- Effective internal coolant feature, reaching the cutting edge precisely.



■ Shell Mills

order number	catalog 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
5528633	M4D050Z05S22LN15	50	22	42	40	15,5	5	0,28	16300
5528634	M4D050Z06S22LN15	50	22	42	40	15,5	6	0,27	16300
5528635	M4D063Z06S22LN15	63	22	50	40	15,5	6	0,49	14200
5528636	M4D063Z07S22LN15	63	22	50	40	15,5	7	0,50	14200
5528637	M4D080Z07S27LN15	80	27	60	50	15,5	7	1,02	12300
5555802	M4D080Z09S27LN15	80	27	60	50	15,5	9	1,04	12300
5528638	M4D100Z08S32LN15	100	32	80	50	15,5	8	1,57	10900
5555803	M4D100Z11S32LN15	100	32	80	50	15,5	11	1,64	10900
5555804	M4D125Z09S40LN15	125	40	90	63	15,5	9	2,98	9600
5532000	M4D125Z12S40LN15	125	40	90	63	15,5	12	3,00	9600
5555805	M4D160Z12S40LN15	160	40	110	63	15,5	12	4,78	8400
5555806	M4D160Z16S40LN15	160	40	110	63	15,5	16	4,75	8400

■ Spare Parts



insert
screw



Torx Plus
driver

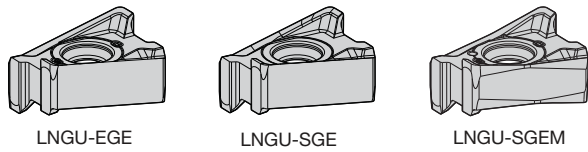
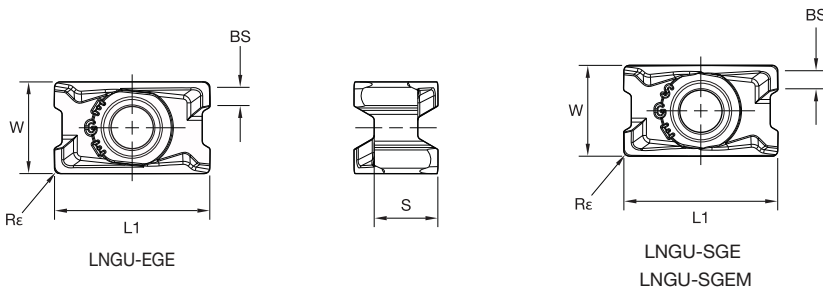
D1	insert screw	Nm	Torx Plus driver
40	MS-2071	3,5	DT15IP
50	MS-2071	3,5	DT15IP
63	MS-2071	3,5	DT15IP
80	MS-2071	3,5	DT15IP
100	MS-2071	3,5	DT15IP
125	MS-2071	3,5	DT15IP
160	MS-2071	3,5	DT15IP

■ Insert Selection Guide

Material Group	Light Machining		General Purpose		Heavy Machining	
	Geometry	Grade	Geometry	Grade	Geometry	Grade
P1-P2	.S..GE	KC522M	.S..GE	KC725M	.S..GE	KC725M
P3-P4	.S..GE	KC522M	.S..GE	KCPK30	.S..GE	KCPK30
P5-P6	.S..GE	KCPM20	.S..GE	KCPK30	.S..GE	KCPK30
M1-M2	.E..GE	KCSM30	.E..GE	KC725M	.S..GE	KC725M
M3	.E..GE	KCSM30	.E..GE	KC725M	.S..GE	KC725M
K1-K2	.S..GE	KCK15	.S..GEM	KCK15	.S..GEM	KCPM20
K3	.S..GE	KC520M	.S..GEM	KC520M	.S..GEM	KC520M
N1-N2	—	—	—	—	—	—
N3	—	—	—	—	—	—
S1-S2	.E..GE	KCSM30	.E..GE	KC725M	.S..GE	KC725M
S3	.E..GE	KCSM30	.E..GE	KC725M	.S..GE	KC725M
S4	.E..GE	KCSM30	.E..GE	KC725M	.E..GE	KC725M
H1	—	—	—	—	—	—

Indexable Inserts • Mill 4-15™

- -EGE is the first choice for stainless steel and high-temp alloys.
- -SGE is the universal geometry for Mill 4-15. First choice when machining steel, as well as stainless steel and high-temp alloys in heavy applications.
- -SGEM geometry is the first choice for cast iron machining in medium and heavy applications.



● first choice
○ alternate choice



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

■ LNG15-EGE

catalogue number	L1	W	S	BS	Re	hm	cutting edges	KC520M	KC522M	KC725M	KCK15	KCPM20	KCPK30	KCSM30	KCPM40
LNGU15T604ERGE	17,01	10,00	4,76	2,2	0,4	0,08	4	●	●	●	○	○	○	○	○
LNGU15T608ERGE	17,01	10,00	4,76	1,8	0,8	0,08	4	●	●	●	○	○	○	○	○
LNGU15T612ERGE	17,01	10,00	4,76	1,4	1,2	0,08	4	●	●	○	○	○	○	○	○

■ LNGU-SGE

catalogue number	L1	W	S	BS	Re	hm	cutting edges	KC520M	KC522M	KC725M	KCK15	KCPM20	KCPK30	KCSM30	KCPM40
LNGU15T604SRGE	17,00	10,00	4,76	2,2	0,4	0,10	4	●	●	●	○	○	○	○	○
LNGU15T608SRGE	17,01	10,00	4,76	1,8	0,8	0,10	4	●	●	●	○	○	○	○	○
LNGU15T612SRGE	17,00	10,00	4,76	1,4	1,2	0,10	4	●	●	○	○	○	○	○	○

■ LNG15-SGEM

catalogue number	L1	W	S	BS	Re	hm	cutting edges	KC520M	KC522M	KC725M	KCK15	KCPM20	KCPK30	KCSM30	KCPM40
LNGU15T608SRGEM	17,01	10,00	4,76	1,7	0,8	0,10	4	●	○	○	○	○	○	○	○

■ Recommended Starting Speeds [m/min]

Material Group		KC520M			KC522M			KCSM30			KC725M		
P	1	—	—	—	330	285	270	370	320	300	260	230	215
	2	—	—	—	275	240	200	310	270	220	220	190	160
	3	—	—	—	255	215	175	290	240	200	200	170	140
	4	—	—	—	225	185	150	250	210	170	180	150	120
	5	—	—	—	185	170	150	210	190	170	150	135	120
	6	—	—	—	165	125	100	190	140	110	130	100	80
M	1	—	—	—	205	180	165	230	200	190	170	150	135
	2	—	—	—	185	160	130	210	180	150	155	130	110
	3	—	—	—	140	120	95	160	140	110	115	100	80
K	1	270	245	215	230	205	185	—	—	—	—	—	—
	2	210	190	175	180	160	150	—	—	—	—	—	—
	3	175	160	145	150	135	120	—	—	—	—	—	—
N	1-2	—	—	—	—	—	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—
S	1	—	—	—	40	35	25	50	40	30	35	30	25
	2	—	—	—	40	35	25	50	40	30	35	30	25
	3	—	—	—	50	40	25	60	50	30	45	35	25
	4	—	—	—	70	50	35	90	60	40	60	45	30
H	1	—	—	—	120	90	70	—	—	—	—	—	—

Material Group		KCPM40			KCK15			KCPM20			KCPK30		
P	1	300	260	250	—	—	—	550	485	450	455	395	370
	2	250	220	180	—	—	—	340	310	275	280	255	230
	3	230	200	160	—	—	—	310	275	255	255	230	205
	4	210	170	140	—	—	—	230	215	190	190	175	160
	5	170	160	140	—	—	—	275	250	230	260	230	210
	6	150	120	90	—	—	—	190	170	145	160	135	—
M	1	200	170	160	—	—	—	225	200	175	205	185	155
	2	180	150	130	—	—	—	205	175	160	185	160	140
	3	130	120	90	—	—	—	160	145	125	145	130	115
K	1	—	—	—	420	385	340	360	325	295	295	265	240
	2	—	—	—	335	295	275	285	255	235	235	210	190
	3	—	—	—	280	250	230	240	215	200	195	175	160
N	1-2	—	—	—	—	—	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—
S	1	40	40	30	—	—	—	—	—	—	—	—	—
	2	40	40	30	—	—	—	—	—	—	—	—	—
	3	50	40	30	—	—	—	—	—	—	—	—	—
	4	70	50	40	—	—	—	—	—	—	—	—	—
H	1	—	—	—	—	—	—	140	115	95	—	—	—

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

■ Recommended Starting Feeds [mm]

Light Machining	General Purpose	Heavy Machining
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Insert Geometry	Programmed Feed per Tooth (fz) as a % of Radial Depth of Cut (ae)															Insert Geometry
	10%			20%			30%			40%			50-100%			
.E..GE	0,13	0,24	0,33	0,10	0,18	0,25	0,09	0,16	0,22	0,08	0,15	0,20	0,08	0,14	0,20	.E..GE
.S..GE	0,17	0,30	0,45	0,13	0,23	0,34	0,11	0,20	0,29	0,10	0,18	0,28	0,10	0,18	0,27	.S..GE
.S..GEM	0,17	0,33	0,50	0,13	0,25	0,38	0,11	0,22	0,33	0,10	0,20	0,31	0,10	0,20	0,30	.S..GEM

NOTE: Use "Light Machining" values as starting feed rate.

INNOVATIONS CATALOGUE

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