

➤ Dodeka™ Series

Leader in Advanced Face Milling Applications

Primary Application

Dodeka Mini, Dodeka, and Dodeka MAX™ platforms are the most comprehensive face milling boosters on the market today. Twelve true cutting edges per insert mean low cost-per-edge and high productivity. With Beyond™ premium milling grades, achieve up to 30% higher metal removal rates (MRR), 25% lower cutting forces due to soft cutting action, and up to 35% better tool life in light to heavy machining.

Features and Benefits

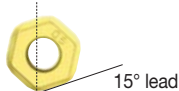
Dodeka Series • Most comprehensive face milling platform on the market. Providing an excellent cost-per-cutting edge with market leading performance. The Dodeka Series platform will cover all your face milling application needs.

All cutter body variations can be loaded with one insert style.

**Dodeka Mini High-Feed 15°
Dodeka High-Feed 15°**



12 True
Cutting
Edges



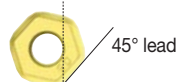
Dodeka Mini Ap1 max = 1,6mm
Dodeka Ap1 max = 2,2mm

Dodeka Mini HF and Dodeka HF can be loaded with all Dodeka Mini standard inserts, except wiper inserts.

**Dodeka Mini 45°
Dodeka 45°
Dodeka MAX 45°**



12 True
Cutting
Edges



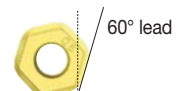
Dodeka Mini Ap1 max = 3,2mm
Dodeka Ap1 max = 4,5mm
Dodeka MAX Ap1 max = 8,0mm

Best-in-class leader in face milling up to Ap1 max = 8mm.

Dodeka Mini 60°



12 True
Cutting
Edges



Dodeka Mini Ap1 max = 4,4mm

Achieve a higher axial depth-of-cut capability up to Ap1 = 4,4mm with standard Dodeka Mini inserts.



Dodeka™ Mini Series

insert size HN.J06
Ap1 max = 4,4mm
pages S4–S16



Dodeka

insert size HN.J0905
Ap1 max = 4,5mm
pages S17–S24



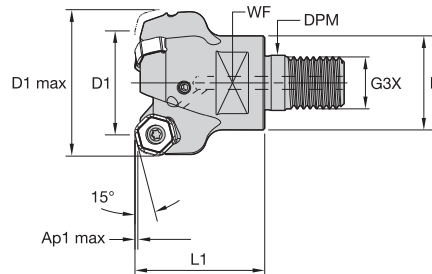
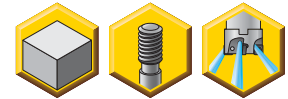
Dodeka MAX™

insert size HN.J1307
Ap1 max = 8mm
pages S25–S27



Applicable in most material groups • Excellent results in machining titanium

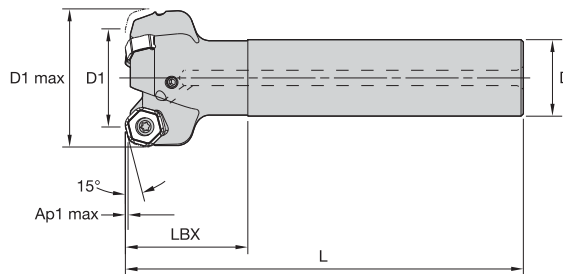
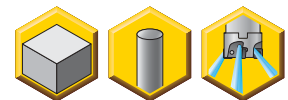
- Twelve cutting edges per insert.
- High-feed capability.



■ Dodeka Mini High-Feed 15° • Screw-On End Mills

order number	catalogue number	D1	D1 max	D	DPM	G3X	L1	WF	Ap1 max	Z	kg	max RPM
4153687	KSHRHF025D03M16HN06	25	38,2	29	17,0	M16	32,0	22	1,6	3	0,16	20000
4153689	KSHRHF032D04M16HN06	32	45,2	29	17,0	M16	40,0	22	1,6	4	0,25	17600

- Twelve cutting edges per insert.
- High-feed capability.



■ Dodeka Mini High-Feed 15° • Cylindrical End Mills

order number	catalogue number	D1	D1 max	D	L	LBX	Ap1 max	Z	kg	max RPM
4153703	KSHRHF025D03A20HN06L120	25	38,2	20	120	32	1,6	3	0,31	20000
4153704	KSHRHF032D03A25HN06L130	32	45,2	25	130	40	1,6	3	0,52	17600

■ Spare Parts

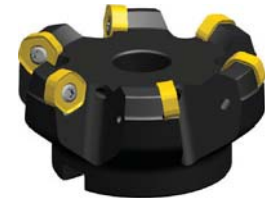
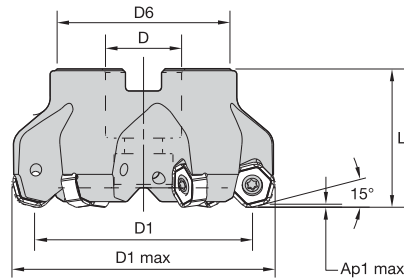


D1	insert screw	Nm	wrench
25	193.492	3,5	170.025
32	193.492	3,5	170.025



Face Milling

- Twelve cutting edges per insert.
- High-feed capability.



■ Dodeka Mini High-Feed 15° • Shell Mills

order number	catalogue number	D1	D1 max	D	D6	L	Ap1 max	Z	kg	max RPM
4153706	KSHRHF040A05RS15HN06	40	53,2	22	38	40	1,6	5	0,29	15800
4153707	KSHRHF050A05RS15HN06	50	63,1	22	38	40	1,6	5	0,39	12700
4153708	KSHRHF063A06RS15HN06	63	76,1	22	50	40	1,6	6	0,67	10100
4153709	KSHRHF080A08RS15HN06	80	93,1	27	60	50	1,6	8	1,26	7900

■ Spare Parts



D1	insert screw	Nm	wrench	socket-head cap screw
40	193.492	3,5	170.025	125.025
50	193.492	3,5	170.025	125.025
63	193.492	3,5	170.025	125.025
80	193.492	3,5	170.025	125.230



Dodeka Mini High-Feed

First choice for long reach face milling applications or light fixtures.

Chip thinning effect due to lead angle 14,5°. Tremendous enlargement of feed rate and metal removal rate (MRR).

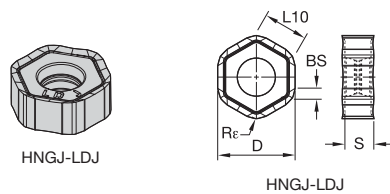
Up to 40% shorter machining cycle time versus conventional milling.

Insert Selection Guide

Material Group	Light Machining (Light geometry)		General Purpose		Heavy Machining (Strong geometry)	
	wear resistance				toughness	
	Geometry	Grade	Geometry	Grade	Geometry	Grade
P1-P2	.E..LD	KCPM40	.S..GD	KCPM40	.S..HD	KCPM40
P3-P4	.E..LD	KCPK30	.S..GD	KCPK30	.S..HD	KCPK30
P5-P6	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KCPK30
M1-M2	.E..LD	KC522M	.S..GD	KCSM40	.S..HD	KCSM40
M3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCPM40
K1-K2	.E..LD	KCK15	.S..GD	KCK15	.S..HD	KCK15
K3	.E..LD	KC520M	.S..GD	KC520M	.S..HD	KC520M
N1-N2	.F..LDJ	KC410M	.F..LDJ	KC410M	.E..LD	KC510M
N3	.F..LDJ	KC410M	.F..LDJ	KC410M	.E..LD	KC510M
S1-S2	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KC725M
S3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
S4	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
H1	.E..LD	KC510M	.E..LD	KC510M	.E..LD	KC510M

Indexable Inserts

- First choice for machining aluminium.



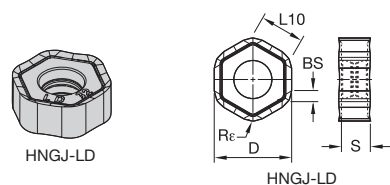
- first choice
- alternate choice

P	•				○	•	•	•	○
M	•				•	•	•	•	•
K	•			•	•	•	•	•	○
N	•	•	○						
S					•	•			•
H									

HNGJ-LDJ

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNGJ0604ANFNLDJ	12	1,54	6,44	1,0	4,48	0,02	12	•	•	-	-	-	-	-	-	-	-

- First choice for light machining.

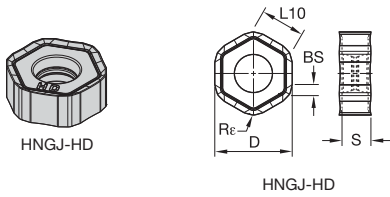


HNGJ-LD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNGJ0604ANENLD	12	1,54	6,44	1,0	4,48	0,04	12	-	-	•	•	•	•	•	•	•	•
HNGJ060432ANENLD	12	-	6,43	3,2	4,48	0,05	12	-	-	-	-	-	-	-	•	-	-

Face Milling

- First choice for high-performance heavy roughing.



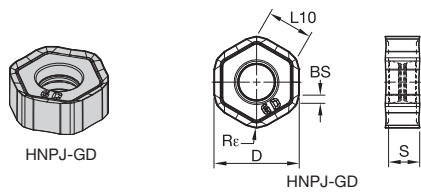
- first choice
- alternate choice

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

■ HNGJ-HD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNGJ0604ANSNHD	12	1,45	6,44	1,0	4,40	0,14	12	-	-	-	-	-	-	●	●	●	●

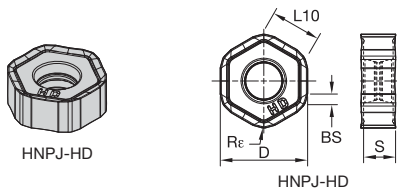
- First choice for general purpose.



■ HNPJ-GD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNPJ0604ANSNGD	12	1,45	6,44	1,0	4,45	0,08	12	-	-	-	●	●	●	●	●	●	●

- First choice for heavy roughing.



■ HNPJ-HD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNPJ0604ANSNHD	12	1,45	6,44	1,0	4,40	0,14	12	-	-	-	●	●	●	●	●	●	●
HNPJ060432ANSNHD	12	-	6,43	3,2	4,42	0,10	12	-	-	-	●	●	●	●	●	●	●



Recommended Starting Feeds

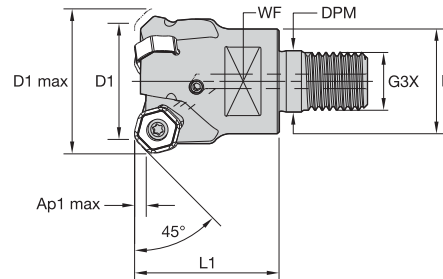
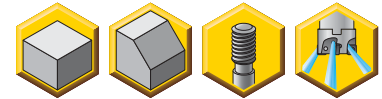
■ Recommended Starting Feeds [mm]

Light Machining	General Purpose	Heavy Machining
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Insert Geometry	Recommended Starting Feed per Tooth (Fz) in Relation to % of Radial Engagement (ae)												Insert Geometry			
	5%			10%			20%			30%				40%–100%		
.F..LDJ	0,45	1,27	2,22	0,33	0,91	1,57	0,25	0,68	1,17	0,21	0,59	1,01	0,20	0,54	0,93	.F..LDJ
.E..LD	0,51	1,65	2,81	0,37	1,17	1,97	0,27	0,87	1,46	0,24	0,76	1,27	0,22	0,70	1,16	.E..LD
.S..GD	0,92	2,22	3,41	0,66	1,57	2,38	0,49	1,17	1,75	0,43	1,01	1,52	0,39	0,93	1,39	.S..GD
.S..HD	0,92	2,35	3,89	0,66	1,67	2,70	0,49	1,23	1,98	0,43	1,07	1,72	0,39	0,98	1,57	.S..HD

NOTE: Use "Light Machining" values as starting feed rate.
Please see pages X22–X37 for recommended starting speeds.

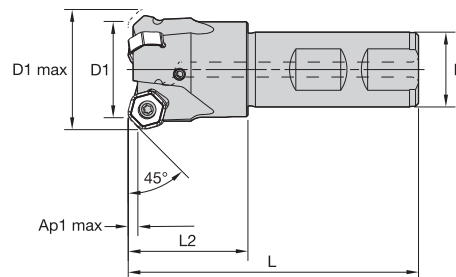
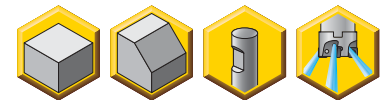
- Twelve cutting edges per insert.
- Maximum number of teeth per diameter.
- Productivity booster in all materials.



■ Dodeka Mini 45° • Screw-On End Mills

order number	catalogue number	D1	D1 max	D	DPM	G3X	L1	WF	Ap1 max	Z	kg	max RPM
4125882	KSHR025D03M16HN06	25	33,2	29	17,0	M16	32,0	22	3,2	3	0,13	20000
4126343	KSHR032D03M16HN06	32	40,2	29	17,0	M16	40,0	22	3,2	3	0,21	17600
4126344	KSHR032D04M16HN06	32	40,2	29	17,0	M16	40,0	22	3,2	4	0,21	17600

- Twelve cutting edges per insert.
- Maximum number of teeth per diameter.
- Productivity booster in all materials.



■ Dodeka Mini 45° • Weldon® End Mills

order number	catalogue number	D1	D1 max	D	L	L2	Ap1 max	Z	kg	max RPM
4126348	KSHR025D03B20HN06	25	33,2	20	82	32	3,2	3	0,21	20000
4126349	KSHR032D03B25HN06	32	40,2	25	97	40	3,2	3	0,40	17600
4126350	KSHR032D04B25HN06	32	40,2	25	97	40	3,2	4	0,41	17600

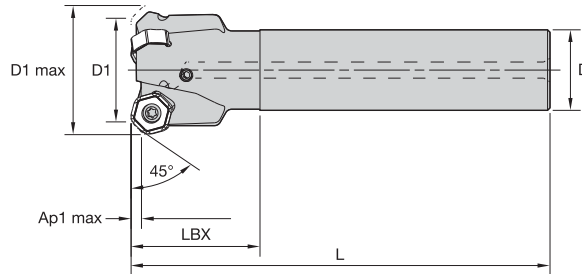
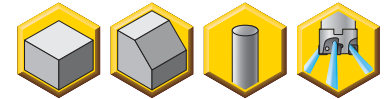
■ Spare Parts



D1	insert screw	Nm	wrench
25	193.492	3,5	170.025
32	193.492	3,5	170.025



- Twelve cutting edges per insert.
- Maximum number of teeth per diameter.
- Productivity booster in all materials.



■ Dodeka Mini 45° • Cylindrical End Mills

order number	catalogue number	D1	D1 max	D	L	LBX	Ap1 max	Z	kg	max RPM
4126351	KSHR025D02A20HN06L120	25	33,2	20	120	32	3,2	2	0,28	20000
4126352	KSHR025D03A20HN06L120	25	33,2	20	120	32	3,2	3	0,28	20000
4126386	KSHR025D03A25HN06L200	25	33,2	25	200	32	3,2	3	0,71	20000
4126383	KSHR032D03A25HN06L130	32	40,2	25	130	40	3,2	3	0,50	17600
4126384	KSHR032D04A25HN06L130	32	40,2	25	130	40	3,2	4	0,50	17600

■ Spare Parts

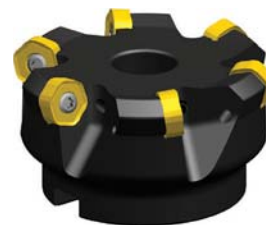
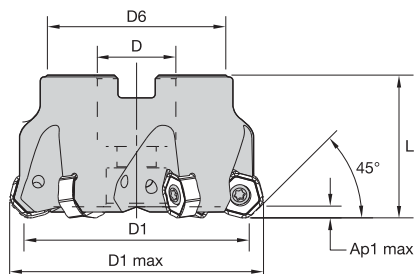
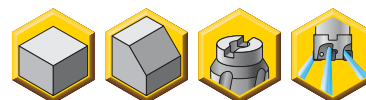


D1	insert screw	Nm	wrench
25	193.492	3,5	170.025
32	193.492	3,5	170.025



Face Milling

- Twelve cutting edges per insert.
- Maximum number of teeth per diameter.
- Productivity booster in all materials.



■ Dodeka Mini 45° • Shell Mills

order number	catalogue number	D1	D1 max	D	D6	L	Ap1 max	Z	kg	max RPM
4126387	KSHR040A04RS45HN06	40	48,2	22	38	40	3,2	4	0,25	15800
4124313	KSHR040A05RS45HN06	40	48,2	22	38	40	3,2	5	0,25	15800
4126388	KSHR050A04RS45HN06	50	58,2	22	38	40	3,2	4	0,36	12700
4122886	KSHR050A05RS45HN06	50	58,2	22	38	40	3,2	5	0,37	12700
4126389	KSHR050A06RS45HN06	50	58,2	22	38	40	3,2	6	0,36	12700
4122887	KSHR063A04RS45HN06	63	71,2	22	50	40	3,2	4	0,59	10100
4122889	KSHR063A06RS45HN06	63	71,2	22	50	40	3,2	6	0,65	10100
4126390	KSHR063A08RS45HN06	63	71,2	22	50	40	3,2	8	0,64	10100
4126391	KSHR080A05RS45HN06	80	88,1	27	60	50	3,2	5	1,13	7900
4126392	KSHR080A08RS45HN06	80	88,1	27	64	50	3,2	8	1,25	7900
4126403	KSHR080A10RS45HN06	80	88,1	27	60	50	3,2	10	1,19	7900
4126404	KSHR100B06RS45HN06	100	108,1	32	80	50	3,2	6	1,73	6300
4126405	KSHR100B09RS45HN06	100	108,1	32	80	50	3,2	9	1,84	6300
4126406	KSHR100B12RS45HN06	100	108,1	32	80	50	3,2	12	1,84	6300
4126407	KSHR125B08RS45HN06	125	133,1	40	90	63	3,2	8	2,87	5050
4126408	KSHR125B12RS45HN06	125	133,1	40	90	63	3,2	12	2,98	5050
4124262	KSHR125B16RS45HN06	125	133,1	40	90	63	3,2	16	3,05	5050



Face Milling

■ Spare Parts



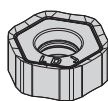
D1	insert screw	Nm	wrench	socket-head cap screw	coolant lock screw assembly	coolant lock screw	coolant shower plate
40	193.492	3,5	170.025	125.025	—	—	—
50	193.492	3,5	170.025	125.025	—	—	—
63	193.492	3,5	170.025	125.025	—	—	—
80	193.492	3,5	170.025	125.230	—	—	—
100	193.492	3,5	170.025	—	MS2189C	—	—
125	193.492	3,5	170.025	—	—	420.200	470.232

Insert Selection Guide

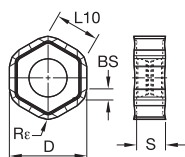
Material Group	Light Machining (Light geometry)		General Purpose		Heavy Machining (Strong geometry)	
	wear resistance ←————→ toughness					
	Geometry	Grade	Geometry	Grade	Geometry	Grade
P1-P2	.E..LD	KCPM40	.S..GD	KCPM40	.S..HD	KCPM40
P3-P4	.E..LD	KCPK30	.S..GD	KCPK30	.S..HD	KCPK30
P5-P6	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KCPK30
M1-M2	.E..LD	KC522M	.S..GD	KCSM40	.S..HD	KCSM40
M3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCPM40
K1-K2	.E..LD	KCK15	.S..GD	KCK15	.S..HD	KCK15
K3	.E..LD	KC520M	.S..GD	KC520M	.S..HD	KC520M
N1-N2	.F..LDJ	KC410M	.F..LDJ	KC410M	.E..LD	KC510M
N3	.F..LDJ	KC410M	.F..LDJ	KC410M	.E..LD	KC510M
S1-S2	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KC725M
S3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
S4	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
H1	.E..LD	KC510M	.E..LD	KC510M	.E..LD	KC510M

Indexable Inserts

- First choice for machining aluminium.



HNGJ-LDJ



HNGJ-LDJ

- first choice
- alternate choice

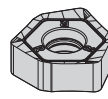
P	●				○	●	●	○
M	●				●	●	○	●
K	●		●	●	○	●	○	
N	●	●	○					
S					●	●		●
H								

HNGJ-LDJ

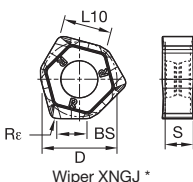
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HNGJ0604ANFNLDJ	12	1,54	6,44	1,0	4,48	0,02	12	●	●	-	-	-	-	-	-	-	-

Face Milling

- Wiper insert for fine finishing aluminium.



Wiper XNGJ*



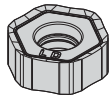
Wiper XNGJ*

XNGJ-LDJ3W

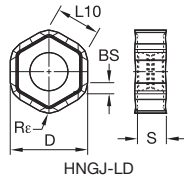
catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KG410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
XNGJ0604ANFNLDJ3W	12	4,80	7,20	1,6	4,51	0,02	3	-	●	-	-	-	-	-	-	-	-

* For wiper insert XNGJ, 3 left-hand (LH) and 3 right-hand (RH) wiper edges per insert.

- First choice for light machining.



HNGJ-LD



HNGJ-LD

- first choice
- alternate choice

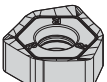
P						○																		
M																								
K																								
N																								
S																								
H																								

■ HNGJ-LD

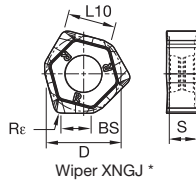
catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNGJ0604ANENLD	12	1,54	6,44	1,0	4,48	0,04	12	-	-	•	•	•	•	•	•	•	•
HNGJ060432ANENLD	12	-	6,43	3,2	4,48	0,05	12	-	-	-	-	-	-	-	•	-	-

* For wiper insert HNGJ-LD, 3 left-hand (LH) and 3 right-hand (RH) wiper edges per insert.

- Wiper insert for excellent floor finish.



Wiper XNGJ *



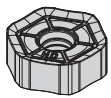
Wiper XNGJ *

■ XNGJ-LD3W

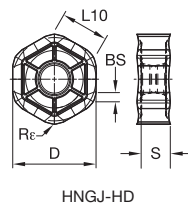
catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
XNGJ0604ANENLD3W	12	4,80	7,20	1,6	4,51	0,05	3	-	-	•	-	•	•	-	-	•	•

* For wiper insert XNGJ, 3 left-hand (LH) and 3 right-hand (RH) wiper edges per insert.

Face Milling



HNGJ-HD

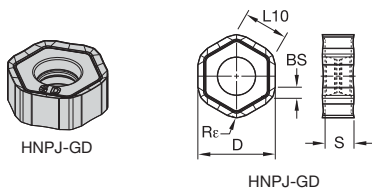


HNGJ-HD

■ HNGJ-HD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNGJ0604ANSNHD	12	1,45	6,44	1,0	4,40	0,14	12	-	-	-	-	-	-	•	•	•	•

- First choice for general purpose.



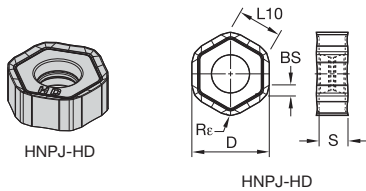
- first choice
- alternate choice

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

HNPJ-GD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	
HNPJ0604ANSNGD	12	1,45	6,44	1,0	4,45	0,08	12	-	-	-	●	●	●	●	●	●	●	●

- First choice for heavy roughing.



HNPJ-HD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNPJ0604ANSNHD	12	1,45	6,44	1,0	4,40	0,14	12	-	-	-	●	●	●	●	●	●	●
HNPJ060432ANSNHD	12	—	6,43	3,2	4,42	0,10	12	-	-	-	●	●	●	●	●	●	●

Recommended Starting Feeds

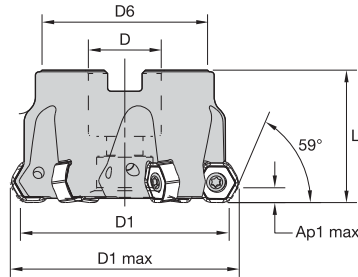
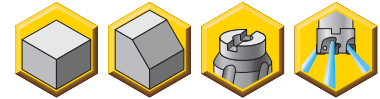
Recommended Starting Feeds [mm]

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%							
.F..LDJ	0,17	0,46	0,79	0,12	0,33	0,57	0,09	0,25	0,43	0,08	0,22	0,37	0,07	0,20	0,34	.F..LDJ
.E..LD	0,18	0,59	0,99	0,13	0,43	0,71	0,10	0,32	0,53	0,09	0,28	0,46	0,08	0,25	0,42	.E..LD
.S..GD	0,33	0,79	1,19	0,24	0,57	0,86	0,18	0,43	0,64	0,16	0,37	0,56	0,14	0,34	0,51	.S..GD
.S..HD	0,33	0,84	1,35	0,24	0,60	0,97	0,18	0,45	0,72	0,16	0,39	0,63	0,14	0,36	0,57	.S..HD

NOTE: Use "Light Machining" values as starting feed rate.
Please see pages X22–X37 for recommended starting speeds.

- Twelve cutting edges per insert.
- Higher A_{p1} max with standard inserts.
- Productivity booster in all materials.



■ Dodeka Mini 60° • Shell Mills

order number	catalogue number	D1	D1 max	D	D6	L	Ap1 max	Z	kg	max RPM
4147022	KSHR040A04RS60HN06	40	46,4	22	38	40	4,3	4	0,21	15800
4147713	KSHR040A05RS60HN06	40	46,4	22	38	40	4,3	5	0,21	15800
4147714	KSHR050A04RS60HN06	50	56,4	22	38	40	4,3	4	0,32	12700
4147715	KSHR050A05RS60HN06	50	56,4	22	38	40	4,3	5	0,32	12700
4147716	KSHR063A04RS60HN06	63	69,3	22	50	40	4,3	4	0,57	10100
4147717	KSHR063A06RS60HN06	63	69,3	22	50	40	4,3	6	0,59	10100
4147718	KSHR080A05RS60HN06	80	86,3	27	60	50	4,3	5	1,08	7900
4147719	KSHR080A08RS60HN06	80	86,3	27	60	50	4,3	8	1,15	7900
4147720	KSHR100B06RS60HN06	100	106,3	32	80	50	4,3	6	1,70	6300
4147721	KSHR100B09RS60HN06	100	106,3	32	80	50	4,3	9	1,78	6300
4147722	KSHR125B08RS60HN06	125	131,3	40	90	63	4,3	8	2,92	5050
4147723	KSHR125B12RS60HN06	125	131,3	40	90	63	4,3	12	2,96	5050

Face Milling

■ Spare Parts



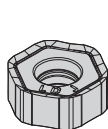
D1	insert screw	Nm	wrench	mounting screw	socket-head cap screw	coolant lock screw assembly	coolant lock screw	coolant shower plate
40	193.492	3,5	170.025	KLSSM22-39-CG	—	—	—	—
50	193.492	3,5	170.025	—	125.025	—	—	—
63	193.492	3,5	170.025	—	125.025	—	—	—
80	193.492	3,5	170.025	—	125.230	—	—	—
100	193.492	3,5	170.025	—	—	MS2189C	—	—
125	193.492	3,5	170.025	—	—	—	420.200	470.232

Insert Selection Guide

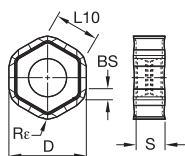
Material Group	Light Machining (Light geometry)		General Purpose		Heavy Machining (Strong geometry)	
	wear resistance				toughness	
	Geometry	Grade	Geometry	Grade	Geometry	Grade
P1-P2	.E..LD	KCPM40	.S..GD	KCPM40	.S..HD	KCPM40
P3-P4	.E..LD	KCPK30	.S..GD	KCPK30	.S..HD	KCPK30
P5-P6	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KCPK30
M1-M2	.E..LD	KC522M	.S..GD	KCSM40	.S..HD	KCSM40
M3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCPM40
K1-K2	.E..LD	KCK15	.S..GD	KCK15	.S..HD	KCK15
K3	.E..LD	KC520M	.S..GD	KC520M	.S..HD	KC520M
N1-N2	.F..LDJ	KC410M	.F..LDJ	KC410M	.E..LD	KC510M
N3	.F..LDJ	KC410M	.F..LDJ	KC410M	.E..LD	KC510M
S1-S2	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KC725M
S3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
S4	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
H1	.E..LD	KC510M	.E..LD	KC510M	.E..LD	KC510M

Indexable Inserts

- First choice for machining aluminium.



HNGJ-LDJ



HNGJ-LDJ

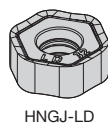
- first choice
- alternate choice

P	•					○	•	•	•	○
M	•						•	•	•	•
K	•					○	•	•	•	•
N	•	•	○							
S	•						•	•		•
H										

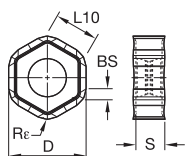
HNGJ-LDJ

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNGJ0604ANFNLDJ	12	1,54	6,44	1,0	4,48	0,02	12	•	•	-	-	-	-	-	-	-	-

- First choice for light machining.



HNGJ-LD

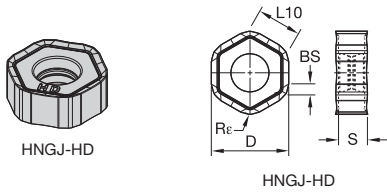


HNGJ-LD

HNGJ-LD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNGJ0604ANENLD	12	1,54	6,44	1,0	4,48	0,04	12	-	-	•	•	•	•	•	•	•	•
HNGJ060432ANENLD	12	-	6,43	3,2	4,48	0,05	12	-	-	-	-	-	-	-	•	-	-

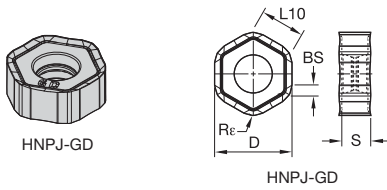
Face Milling



■ HNGJ-HD

catalogue number	D	BS	L10	Rε	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	
HNGJ0604ANSNHD	12	1,45	6,44	1,0	4,40	0,14	12	-	-	-	-	-	-	●	●	●	●	●

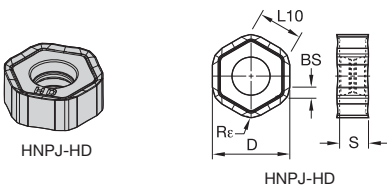
- First choice for general purpose.



■ HNPJ-GD

catalogue number	D	BS	L10	Rε	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNPJ0604ANSNGD	12	1,45	6,44	1,0	4,45	0,08	12	-	-	-	●	●	●	●	●	●	●

- First choice for heavy roughing.



■ HNPJ-HD

catalogue number	D	BS	L10	Rε	S	hm	cutting edges	K313	KC410M	KC510M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNPJ0604ANSNHD	12	1,45	6,44	1,0	4,40	0,14	12	-	-	-	●	●	●	●	●	●	●
HNPJ060432ANSNHD	12	-	6,43	3,2	4,42	0,10	12	-	-	-	-	●	●	●	●	●	●

P	●																
M																	
K																	
N																	
S																	
H																	

● first choice
○ alternate choice

Face Milling

Recommended Starting Feeds

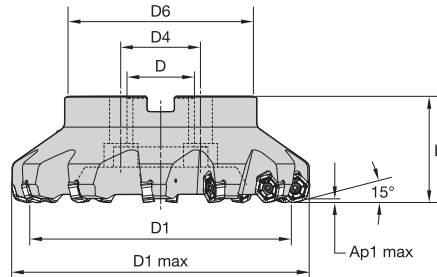
■ Recommended Starting Feeds [mm]

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%			
.F..LDJ	0,13	0,37	0,64	0,10	0,27	0,46	0,07	0,20	0,35	0,06	0,18	0,30	0,06	0,16	0,28	.F..LDJ
.E..LD	0,15	0,48	0,81	0,11	0,35	0,58	0,08	0,26	0,43	0,07	0,23	0,38	0,07	0,21	0,35	.E..LD
.S..GD	0,27	0,64	0,97	0,20	0,46	0,70	0,15	0,35	0,52	0,13	0,30	0,45	0,12	0,28	0,42	.S..GD
.S..HD	0,27	0,68	1,10	0,20	0,49	0,79	0,15	0,37	0,59	0,13	0,32	0,51	0,12	0,29	0,47	.S..HD

NOTE: Use "Light Machining" values as starting feed rate.
Please see pages X22-X37 for recommended starting speeds.

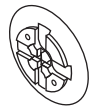
- High feed rates for rough face milling.
- 2mm depth-of-cut capability.
- Twelve cutting edges per insert.



■ Dodeka High-Feed 15° • Shell Mills

order number	catalogue number	D1	D1 max	D	D4	D6	L	Ap1 max	Z	kg	max RPM
4042332	KSHRHF50A04RS15HN09	50	67,9	22	—	38	40	2,2	4	0,41	11400
4042533	KSHRHF63A05RS15HN09	63	80,9	22	—	50	40	2,2	5	0,65	8950
4042534	KSHRHF80A06RS15HN09	80	97,9	27	—	60	50	2,2	6	1,24	7300
4042535	KSHRHF100B08RS15HN09	100	117,9	32	—	80	50	2,2	8	1,89	5900
4042536	KSHRHF125B09RS15HN09	125	142,9	40	—	90	63	2,2	9	3,23	4800
4042537	KSHRHF160C12RS15HN09	160	177,9	40	67	110	63	2,2	12	5,14	3900

■ Spare Parts



D1	insert screw	Nm	wrench	socket-head cap screw	coolant lock screw assembly	coolant lock screw	coolant shower plate
50	193.492	3,5	170.025	125.025	—	—	—
63	193.492	3,5	170.025	125.025	—	—	—
80	193.492	3,5	170.025	125.230	—	—	—
100	193.492	3,5	170.025	—	MS2189C	—	—
125	193.492	3,5	170.025	—	—	420.200	470.232
160	193.492	3,5	170.025	—	—	420.200	470.233



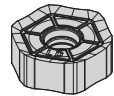
Face Milling

Insert Selection Guide

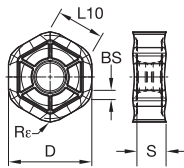
Material Group	Light Machining (Light geometry)		General Purpose		Heavy Machining (Strong geometry)	
	wear resistance		↔		toughness	
	Geometry	Grade	Geometry	Grade	Geometry	Grade
P1-P2	.E..LD	KCPK30	.S..GD	KCPM40	.S..HD	KCPM40
P3-P4	.E..LD	KCPK30	.S..GD	KCPK30	.S..HD	KCPK30
P5-P6	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KC725M
M1-M2	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
M3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
K1-K2	.E..LD	KCK15	.S..GD	KCK15	.S..HD	KC520M
K3	.E..LD	KC520M	.S..GD	KC520M	.S..HD	KC520M
N1-N2	.F..LDJ	KC410M	.F..LDJ	KC410M	.F..LDJ	KC410M
N3	.F..LDJ	KC410M	.F..LDJ	KC410M	.F..LDJ	KC410M
S1-S2	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KC725M
S3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
S4	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
H1	-	-	-	-	-	KC510M

Indexable Inserts

- First choice for light machining and aluminium.



HNGJ-LD
HNGJ-LDJ



HNGJ-LD
HNGJ-LDJ

- first choice
- alternate choice

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

HNGJ-LD and -LDJ

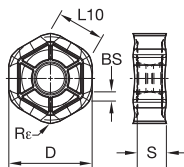
Face Milling

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNGJ0905ANFNLDJ	16	1,80	8,58	1,2	5,56	0,02	12	●	-	-	-	-	-	-	-	-
HNGJ0905ANENLD	16	1,80	8,58	1,2	5,56	0,05	12	-	●	●	●	●	●	-	●	-

- First choice for general purpose.



HNGJ-GD



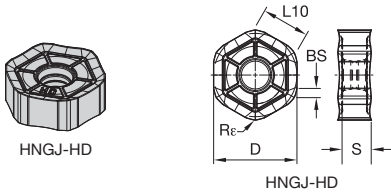
HNGJ-GD

HNGJ-GD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNGJ0905ANSNGD	16	1,80	8,58	1,2	5,56	0,10	12	-	-	-	-	●	●	●	●	-

- First choice for heavy roughing.

beyond



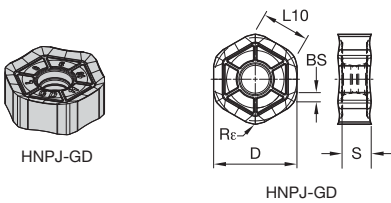
- first choice
- alternate choice

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

■ HNGJ-HD

catalogue number	D	BS	L10	Rε	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNGJ0905ANSNHD	16	1,66	8,59	1,2	5,46	0,17	12	○	●	○	○	○	○	○	○	○
HNGJ090543ANSNHD	16	—	8,50	4,4	5,44	0,20	12	○	●	○	○	○	○	○	○	○

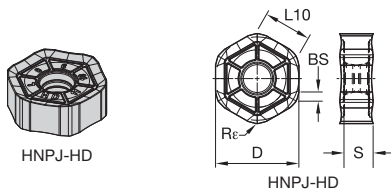
- First choice for general purpose.



■ HNPJ-GD

catalogue number	D	BS	L10	Rε	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNPJ0905ANSNGD	16	1,80	8,58	1,2	5,56	0,10	12	○	●	○	○	○	○	○	○	○

- First choice for heavy roughing.



■ HNPJ-HD

catalogue number	D	BS	L10	Rε	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNPJ0905ANSNHD	16	1,66	8,59	1,2	5,46	0,18	12	○	●	○	○	○	○	○	○	○
HNPJ090543ANSNHD	16	—	8,50	4,3	5,44	0,13	12	○	●	○	○	○	○	○	○	○



Recommended Starting Feeds

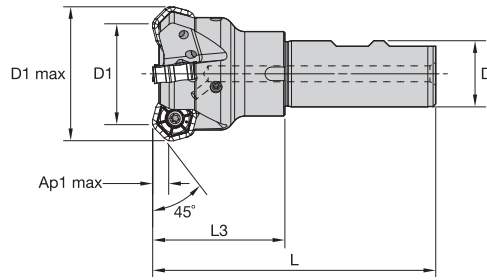
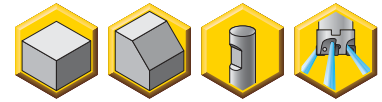
■ Recommended Starting Feeds [mm]

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%			
.F...LDJ	0.45	1.27	2.22	0.33	0.91	1.57	0.25	0.68	1.17	0.21	0.59	1.01	0.20	0.54	0.93	.F...LDJ
.E...LD	0.63	1.84	2.81	0.46	1.31	1.97	0.34	0.97	1.46	0.30	0.84	1.27	0.27	0.77	1.16	.E...LD
.S...GD	0.92	2.01	3.27	0.66	1.42	2.29	0.49	1.06	1.69	0.43	0.92	1.46	0.39	0.84	1.34	.S...GD
.S...HD	0.92	2.35	3.89	0.66	1.67	2.70	0.49	1.23	1.98	0.43	1.07	1.72	0.39	0.98	1.57	.S...HD

NOTE: Use "Light Machining" values as starting feed rate.
Please see pages X22–X37 for recommended starting speeds.

- Twelve cutting edges per insert.
- Soft cutting action.
- Through tool coolant.



■ Dodeka 45° • Weldon® End Mills

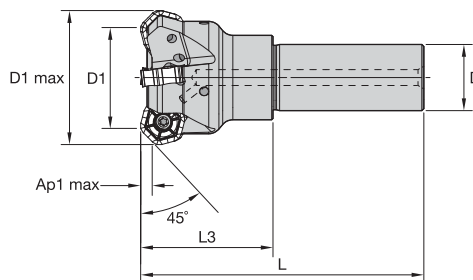
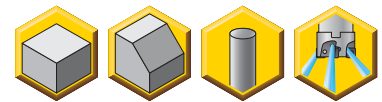
order number	catalogue number	D1	D1 max	D	L	L3	Ap1 max	Z	kg	max RPM
3324829	KSHR40D03R50B25SHN09	40	51,0	25	107	50,00	4,5	3	0,53	15800
3324830	KSHR40D04R50B25SHN09	40	51,0	25	107	50,00	4,5	4	0,52	15800

■ Spare Parts



D1	insert screw	Nm	wrench
40	193.492	3,5	170.025

- Twelve cutting edges per insert.
- Soft cutting action.
- Through tool coolant.



■ Dodeka 45° • Cylindrical End Mills

order number	catalogue number	D1	D1 max	D	L	L3	Ap1 max	Z	kg	max RPM
3644452	KSHR40D03R50A25SHN09	40	51,0	25	107	50	4,5	3	0,53	15800
3645083	KSHR40D04R50A25SHN09	40	51,0	25	107	50	4,5	4	0,53	15800

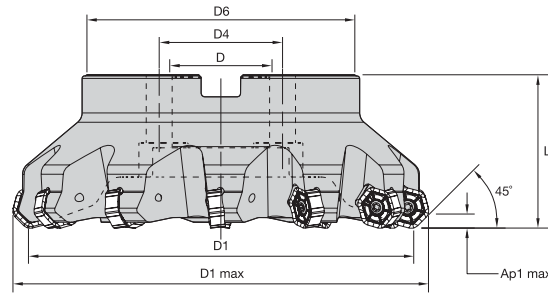
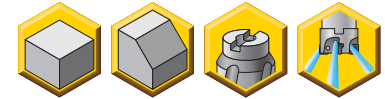
■ Spare Parts



D1	insert screw	Nm	wrench
40	193.492	3,5	170.025

Face Milling

- Twelve cutting edges per insert.
- Through coolant standard.
- Soft cutting action.

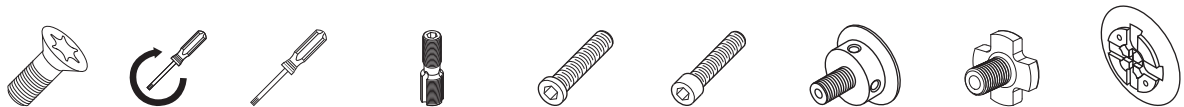


■ Dodeka 45° • Shell Mills

order number	catalogue number	D1	D1 max	D	D4	D41	D6	L	Ap1 max	Z	kg	max RPM
3647201	KSHR40A04RS45HN09	40	51,0	22	—	—	39	40	4,5	4	0,25	15800
3324831	KSHR50A04RS45HN09	50	61,0	22	—	—	38	40	4,5	4	0,32	12700
3324832	KSHR50A05RS45HN09	50	61,0	22	—	—	38	40	4,5	5	0,33	12700
3749959	KSHR63A05RS45HN09	63	74,0	22	—	—	50	40	4,5	5	0,60	10100
3325163	KSHR63A06RS45HN09	63	74,0	22	—	—	50	40	4,5	6	0,56	10100
3325164	KSHR63A07RS45HN09	63	74,0	22	—	—	50	40	4,5	7	0,57	10100
3749960	KSHR80A05RS45HN09	80	91,0	27	—	—	60	50	4,5	5	1,12	7900
3325165	KSHR80A06RS45HN09	80	91,0	27	—	—	60	50	4,5	6	1,07	7900
3325166	KSHR80A09RS45HN09	80	91,0	27	—	—	60	50	4,5	9	1,11	7900
3749961	KSHR100B06RS45HN09	100	111,0	32	—	—	80	50	4,5	6	1,73	6300
3325167	KSHR100B08RS45HN09	100	111,0	32	—	—	80	50	4,5	8	1,68	6300
3325168	KSHR100B11RS45HN09	100	111,0	32	—	—	80	50	4,5	11	1,73	6300
3749962	KSHR125B08RS45HN09	125	135,9	40	—	—	90	63	4,5	8	2,84	5050
3325169	KSHR125B10RS45HN09	125	135,9	40	—	—	90	63	4,5	10	2,77	5050
3325170	KSHR125B14RS45HN09	125	136,0	40	—	—	90	63	4,5	14	2,86	5050
3750013	KSHR160C10RS45HN09	160	171,0	40	67	—	110	63	4,5	10	4,75	3900
3325171	KSHR160C12RS45HN09	160	171,0	40	67	—	110	63	4,5	12	4,56	3900
3325172	KSHR160C16RS45HN09	160	171,0	40	67	—	110	63	4,5	16	4,70	3900
3587732	KSHR200C16RS45HN09	200	211,0	60	102	—	130	63	4,5	16	6,43	3180
3587753	KSHR250C20RS45HN09	250	261,0	60	102	—	130	63	4,5	20	9,93	2550
3587754	KSHR315C24RS45HN09	315	326,0	60	102	178	230	80	4,5	24	22,90	2020

Face Milling

■ Spare Parts



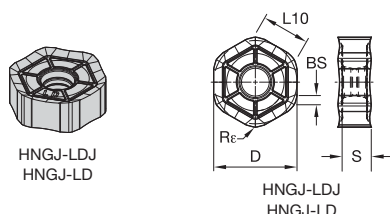
D1	insert screw	Nm	wrench	mounting screw with coolant grooves	low-head cap screw	socket-head cap screw	coolant lock screw assembly	coolant lock screw	coolant shower plate
40	193.492	3,5	170.025	KLSSM22-39-CG	—	—	—	—	—
50	193.492	3,5	170.025	MS2072CG	129.025	—	—	—	—
63	193.492	3,5	170.025	MS1234CG	—	125.025	—	—	—
80	193.492	3,5	170.025	MS2038CG	—	125.230	—	—	—
100	193.492	3,5	170.025	—	—	—	MS2189C	—	—
125	193.492	3,5	170.025	—	—	—	—	420.200	470.232
160	193.492	3,5	170.025	—	—	—	—	420.200	470.233
200	193.492	3,5	170.025	—	—	—	—	—	470.234
250	193.492	3,5	170.025	—	—	—	—	—	470.235
315	193.492	3,5	170.025	—	—	—	—	—	470.236

NOTE: Please order all spare parts separately.

■ Insert Selection Guide

Material Group	Light Machining (Light geometry)		General Purpose		Heavy Machining (Strong geometry)	
	wear resistance ←————→ toughness					
	Geometry	Grade	Geometry	Grade	Geometry	Grade
P1-P2	.E..LD	KCPK30	.S..GD	KCPM40	.S..HD	KCPM40
P3-P4	.E..LD	KCPK30	.S..GD	KCPK30	.S..HD	KCPK30
P5-P6	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KC725M
M1-M2	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
M3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
K1-K2	.E..LD	KCK15	.S..GD	KCK15	.S..HD	KC520M
K3	.E..LD	KC520M	.S..GD	KC520M	.S..HD	KC520M
N1-N2	.F..LDJ	KC410M	.F..LDJ	KC410M	.F..LDJ	KC410M
N3	.F..LDJ	KC410M	.F..LDJ	KC410M	.F..LDJ	KC410M
S1-S2	.E..LD	KC725M	.S..GD	KC725M	.S..HD	KC725M
S3	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
S4	.E..LD	KCSM40	.S..GD	KCSM40	.S..HD	KCSM40
H1	-	-	-	-	-	-

- First choice for light machining and aluminium.



- first choice
- alternate choice

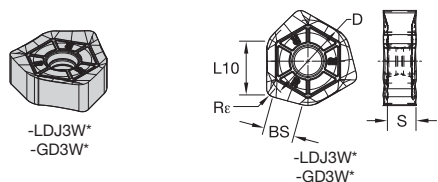
P	●	○	○	○	○	○	○
M	●	●	●	○	○	○	○
K	●	○	○	○	○	○	○
N	●	○	○	○	○	○	○
S	○	○	○	○	○	○	○
H	○	○	○	○	○	○	○

Face Milling

■ HNGJ-LDJ and -LD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNGJ0905ANFNLDJ	16	1,80	8,58	1,2	5,56	0,02	12	●	-	-	-	-	-	-	-	-
HNGJ0905ANENLD	16	1,80	8,58	1,2	5,56	0,05	12	-	●	●	●	●	●	-	●	-

- Wiper insert for excellent surface floor finish.

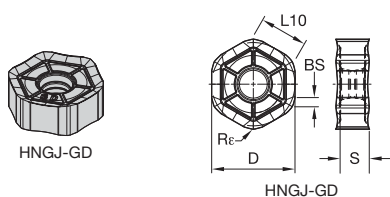


■ XNGJ-LDJ3W and -GD3W

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
XNGJ0905ANFNLDJ3W	16	6,00	9,60	1,6	5,51	0,02	3	●	-	-	-	-	-	-	-	-
XNGJ0905ANSNGD3W	16	6,00	9,60	1,6	5,51	0,09	3	-	-	●	●	●	-	-	●	-

*3 left-hand (LH) and 3 right-hand (RH) wiper edges per insert.

- First choice for general purpose.



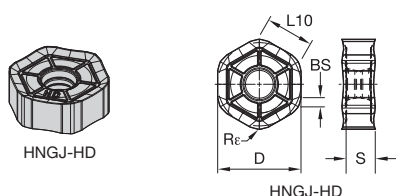
- first choice
- alternate choice

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

HNGJ-GD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNGJ0905ANSNGD	16	1,80	8,58	1,2	5,56	0,10	12	-	-	-	●	●	●	●	●	-

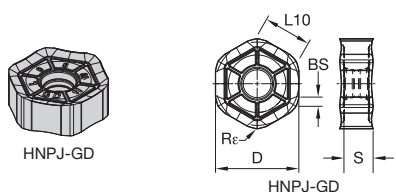
- First choice for heavy roughing.



HNGJ-HD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNGJ0905ANSNHD	16	1,66	8,59	1,2	5,46	0,17	12	-	●	-	●	●	●	●	●	-
HNGJ090543ANSNHD	16	-	8,50	4,4	5,44	0,20	12	-	●	-	●	●	●	●	●	-

- First choice for general purpose.



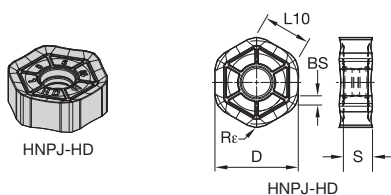
HNPJ-GD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNPJ0905ANSNGD	16	1,80	8,58	1,2	5,56	0,10	12	-	●	●	●	●	●	●	-	-



Face Milling

- First choice for heavy roughing.



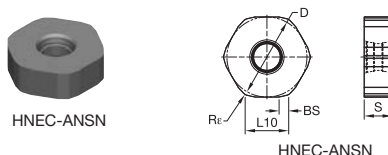
- first choice
- alternate choice

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

■ HNPJ-HD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNPJ0905ANSNHD	16	1,66	8,59	1,2	5,46	0,18	12	-	●	●	●	●	●	●	●	-
HNPJ090543ANSNHD	16	-	8,50	4,3	5,44	0,13	12	-	-	●	●	●	●	●	●	-

- Ceramic KYON 3500 for machining grey cast iron with high cutting speed.



■ HNEC-ANSN Ceramic Insert

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC410M	KC520M	KC522M	KC725M	KCK15	KCPK30	KCPM40	KCSM40	KY3500
HNEC0905ANSN	16	1,95	9,17	1,2	5,56	0,19	12	-	-	-	-	-	-	-	-	●

Face Milling

Recommended Starting Feeds

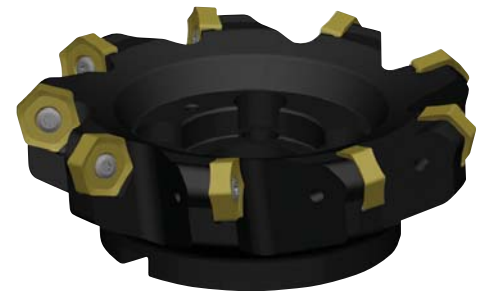
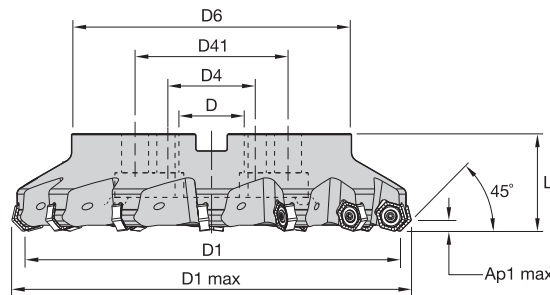
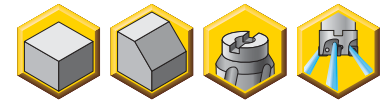
■ Recommended Starting Feeds [mm]

Light Machining	General Purpose	Heavy Machining
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Insert Geometry	Recommended Starting Feed per Tooth (Fz) in Relation to % of Radial Engagement (ae)														Insert Geometry	
	5%		10%		20%		30%		40-100%							
.F..LDJ	0,17	0,46	0,79	0,12	0,33	0,57	0,09	0,25	0,43	0,08	0,22	0,37	0,07	0,20	0,34	.F..LDJ
.E..LD	0,23	0,66	0,99	0,17	0,47	0,71	0,13	0,35	0,53	0,11	0,31	0,46	0,10	0,28	0,42	.E..LD
.S..GD	0,33	0,72	1,15	0,24	0,52	0,82	0,18	0,39	0,61	0,16	0,34	0,54	0,14	0,31	0,49	.S..GD
.S..HD	0,33	0,84	1,35	0,24	0,60	0,97	0,18	0,45	0,72	0,16	0,39	0,63	0,14	0,36	0,57	.S..HD

NOTE: Use "Light Machining" values as starting feed rate.
Please see pages X22-X37 for recommended starting speeds.

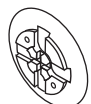
- Twelve cutting edges per insert.
- 25% lower cutting forces.
- Laser-hardened pocket seats.



■ Dodeka MAX 45° • Shell Mills

order number	catalogue number	D1	D1 max	D	D4	D41	D6	L	Ap1 max	Z	kg	max RPM
4059463	KSHR80A04RS45HN13	80	97,3	27	—	—	60	50	8,0	4	1,26	7900
4060935	KSHR100B05RS45HN13	100	117,3	32	—	—	80	50	8,0	5	1,81	6300
4060936	KSHR125B06RS45HN13	125	142,3	40	—	—	90	63	8,0	6	3,07	5050
4059485	KSHR160C09RS45HN13	160	177,3	40	66,7	—	110	63	8,0	9	4,34	3900
4060912	KSHR200C10RS45HN13	200	217,3	60	101,6	—	130	63	8,0	10	6,41	3180
4060937	KSHR200C12RS45HN13	200	217,3	60	101,6	—	130	63	8,0	12	6,48	3180
4060933	KSHR250C14RS45HN13	250	267,3	60	101,6	—	130	63	8,0	12	10,30	2550
4060938	KSHR250C14RS45HN13	250	267,3	60	101,6	—	130	63	8,0	14	10,27	2550
4060934	KSHR315C14RS45HN13	315	332,3	60	101,6	177,8	230	80	8,0	14	24,04	2020
4059486	KSHR315C18RS45HN13	315	332,3	60	101,6	177,8	230	80	8,0	18	24,62	2020

■ Spare Parts



D1	insert screw	Nm	Torx Plus wrench	socket-head cap screw	coolant lock screw assembly	coolant lock screw	coolant shower plate
80	193.531	8,0	TTP25	125.230	—	—	—
100	193.531	8,0	TTP25	—	MS2189C	—	—
125	193.531	8,0	TTP25	—	—	420.200	470.232
160	193.531	8,0	TTP25	—	—	420.200	470.233
200	193.531	8,0	TTP25	—	—	—	470.234
250	193.531	8,0	TTP25	—	—	—	470.235
315	193.531	8,0	TTP25	—	—	—	470.236

NOTE: Adjustable torque wrench (order number 6197561) and Torx Plus bit (order number 6205892 BTQTP25L90) may be purchased separately in order to ensure proper torque setting.



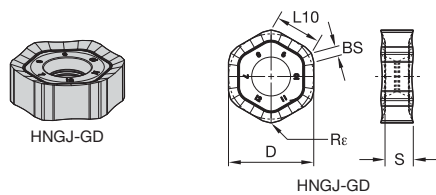
Face Milling

Insert Selection Guide

Material Group	Light Machining (Light geometry)		General Purpose		Heavy Machining (Strong geometry)	
	wear resistance ←————→ toughness					
	Geometry	Grade	Geometry	Grade	Geometry	Grade
P1-P2	.E..GD	KCPM40	.S..GD	KCPK30	.S..HD	KCPM40
P3-P4	.E..GD	KCPK30	.S..GD	KCPK30	.S..HD	KCPK30
P5-P6	.E..GD	KC725M	.S..GD	KC725M	.S..HD	KC725M
M1-M2	.E..GD	KC725M	.S..GD	KC725M	.S..HD	KCSM40
M3	.E..GD	KCPM40	.S..GD	KC725M	.S..HD	KCSM40
K1-K2	.E..GD	KCK15	.S..GD	KCK15	.S..HD	KCK15
K3	.E..GD	KCK15	.S..GD	KC520M	.S..HD	KC725M
N1-N2	-	-	-	-	-	-
N3	-	-	-	-	-	-
S1-S2	.E..GD	KC725M	.S..GD	KC725M	.S..HD	KCSM40
S3	.E..GD	KCPM40	.S..GD	KC725M	.S..HD	KCSM40
S4	.E..GD	KC725M	.S..GD	KC725M	.S..HD	KCSM40
H1	-	-	-	-	-	-

Indexable Inserts

- First choice for light machining.



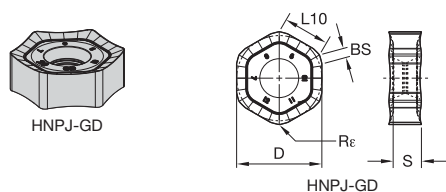
- first choice
- alternate choice

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

HNGJ-GD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC520M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNGJ1307ANENGD	22	1,88	12,83	1,2	7,41	0,05	12	-	●	-	●	●	-

- First choice for general purpose.

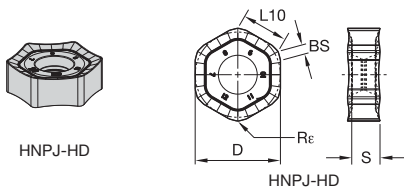


HNPJ-GD

catalogue number	D	L10	Re	S	hm	cutting edges	KC520M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNPJ130720ANSNGD	22	12,83	2,0	7,53	0,13	12	●	●	-	●	-	-

Face Milling

- First choice for heavy roughing.



- first choice
- alternate choice

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

■ HNPJ-HD

catalogue number	D	BS	L10	Re	S	hm	cutting edges	KC520M	KC725M	KCK15	KCPK30	KCPM40	KCSM40
HNPJ1307ANSNHD	22	1,88	12,83	1,2	7,31	0,25	12	—	●	●	●	●	●
HNPJ130720ANSNHD	22	—	12,83	2,0	7,42	0,23	12	—	●	—	●	●	—
HNPJ130735ANSNHD	22	—	12,83	3,5	7,33	0,23	12	●	—	●	●	—	—

Recommended Starting Feeds

■ Recommended Starting Feeds [mm]

Light Machining	General Purpose	Heavy Machining
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Insert Geometry	Recommended Starting Feed per Tooth (Fz) in Relation to % of Radial Engagement (ae)														Insert Geometry	
	5%		10%		20%		30%		40-100%							
.E..GD	0,23	0,66	1,16	0,17	0,47	0,83	0,13	0,35	0,62	0,11	0,31	0,54	0,10	0,28	0,49	.E..GD
.S..GD	0,33	0,74	1,27	0,24	0,53	0,91	0,18	0,40	0,68	0,16	0,35	0,59	0,14	0,32	0,54	.S..GD
.S..HD	0,33	0,84	1,35	0,24	0,60	0,97	0,18	0,45	0,72	0,16	0,39	0,63	0,14	0,36	0,57	.S..HD

NOTE: Use "Light Machining" values as starting feed rate.
Please see pages X22–X37 for recommended starting speeds.

