

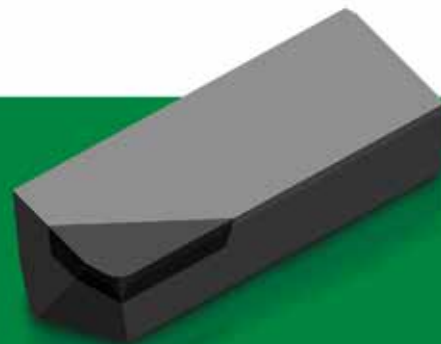
WIDIA™ SuperFeed™
ADVANCES 2015
Metric



Indexable Milling • **SuperFeed™**

The new SuperFeed face mills and end mills are the first choice platform for machining aluminium in the transportation and general engineering industries.

Our unique insert design delivers exceptional stability and performance. Reduced complexity with exceptional finishing capabilities make SuperFeed the go-to platform in aluminium and non-ferrous face and end milling applications.



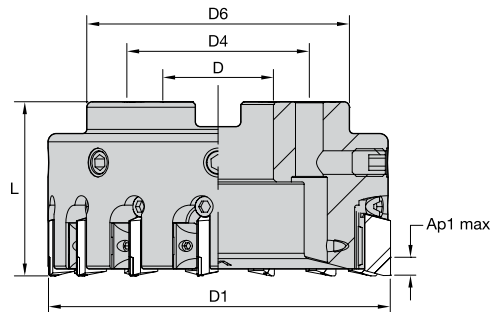
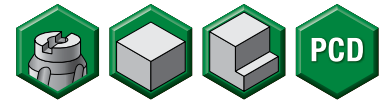
SuperFeed

Features

- Durable cutter body protection.
- Five PCD cartridge options for increased flexibility.
- User-friendly axial adjustment 0,3–0,8mm (.012–.030").
- Reduce overall tooling costs with reconditioning options.



- Through coolant capability.
- +/- 3 micron axial adjustment range.
- Balanced design.
- Easy setup in a simple system design.
- Modified standards available.

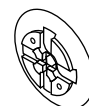


■ SuperFeed Series • Face Mills • Metric

order number	catalogue number	D1	D	D4	D6	L	Ap1 max	Z	Z ADJ	kg	max RPM
5363208	SF06306RH	63	22	—	60	40	6	6	6	0,45	20000
5363209	SF08008RH	80	27	—	77	50	6	8	8	0,63	20000
5363220	SF10012RH	100	32	—	97	50	6	12	12	1,13	17320
5363221	SF12515RH	125	40	—	122	63	6	15	15	2,30	15500
5363222	SF16018RH	160	40	—	157	63	6	18	18	3,20	14150
5363223	SF20024RH	200	60	102	197	63	6	24	24	4,21	12240

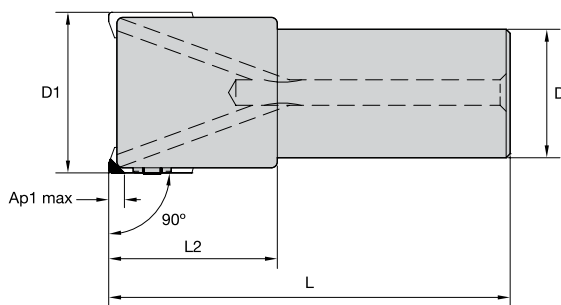
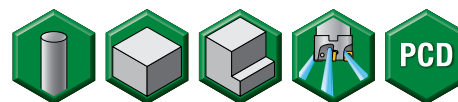
NOTE: Z = Number of cartridges
 Z ADJ = Number of adjustable cartridges

■ Spare Parts



D1	wedge screw	wrench size wedge screw	adjusting screw	wrench size-adjusting screw	coolant cap	coolant shower plate	wedge
63	LS103	3 mm	SWSM515	4 mm	SALS063	—	HDWM5EU4DD
80	LS103	3 mm	SWSM515	4 mm	SALS080	—	HDWM5EU4DD
100	LS103	3 mm	SWSM515	4 mm	SALS100	—	HDWM5EU4DD
125	LS103	3 mm	SWSM515	4 mm	SALS125	—	HDWM5EU4DD
160	LS103	3 mm	SWSM515	4 mm	SALS160	—	HDWM5EU4DD
200	LS103	3 mm	SWSM515	4 mm	—	SSP8	HDWM5EU4DD

- Through coolant capability.
- +/- 3 micron axial adjustment range.
- Easy setup in a simple system design.
- Modified standards available.



■ SuperFeed Series • End Mills • Metric

order number	catalogue number	D1	D	L2	L	Ap1 max	Z	Z ADJ	kg	max RPM
5363252	WSSEM02502RH	25	20	—	100	6,4	2	2	0,22	35800
5363253	WSSEM03203RH	32	32	42	100	6,4	3	3	0,54	31600
5363254	WSSEM04004RH	40	32	42	100	6,4	4	4	0,49	28300
5363255	WSSEM05005RH	50	32	—	100	6,4	5	5	0,79	25300

NOTE: Z = Number of cartridges
Z ADJ = Number of adjustable cartridges

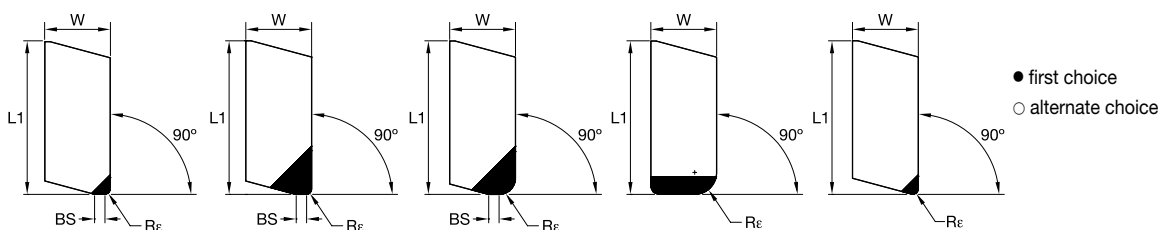
■ Spare Parts



D1	wedge screw	wrench size wedge screw	adjusting screw	wrench size-adjusting screw
25	DSM550	3 mm	SWSM5155	4 mm
32	DSM550	3 mm	SWSM5155	4 mm
40	DSM550	3 mm	SWSM5155	4 mm
50	DSM550	3 mm	SWSM5155	4 mm

Insert Selection Guide • SuperFeed • Metric

Material Group	Light Machining		General Purpose		Heavy Machining	
	Geometry	Grade	Geometry	Grade	Geometry	Grade
P1-P2	—	—	—	—	—	—
P3-P4	—	—	—	—	—	—
P5-P6	—	—	—	—	—	—
M1-M2	—	—	—	—	—	—
M3	—	—	—	—	—	—
K1-K2	—	—	—	—	—	—
K3	—	—	—	—	—	—
N1-N2	SDR.../EDR...	WDN00U	SDR.../EDR...	WDN00U	SDR.../EDR...	WDN00U
N3	SDR.../EDR...	WDN00U	SDR.../EDR...	WDN00U	SDR.../EDR...	WDN00U
S1-S2	—	—	—	—	—	—
S3	—	—	—	—	—	—
S4	—	—	—	—	—	—
H1	—	—	—	—	—	—



P	●
M	●
K	●
N	●
S	●
H	●

PCD Inserts • Face Mills • SDR

catalogue number	L1	BS	W	Rε	hm	cutting edges	WDN00U
SDR100031E0NW	22,23	—	9,53	0,79	0,02	1	●
SDR100031E0W4	22,23	1,52	9,53	0,79	0,02	1	●
SDR100031E1W4	22,23	1,52	9,53	0,79	0,02	1	●
SDR100093E1W4	22,23	1,52	9,53	2,36	0,02	1	●
SDR102	22,22	—	9,52	3,17	0,02	1	●

PCD Inserts • End Mills • EDR

catalogue number	L1	BS	W	Rε	hm	cutting edges	WDN00U
EDR100031E1W4	22,23	1,52	6,36	0,79	0,02	1	●

NOTE: hm = Average chip thickness
 BS = Wiper facet length

■ Recommended Starting Speeds [m/min]

Material Group		WDN00U		
P	1	–	–	–
	2	–	–	–
	3	–	–	–
	4	–	–	–
	5	–	–	–
	6	–	–	–
M	1	–	–	–
	2	–	–	–
	3	–	–	–
K	1	–	–	–
	2	–	–	–
	3	–	–	–
N	1–2	910	1980	4880
	3	460	610	760
S	1	–	–	–
	2	–	–	–
	3	–	–	–
	4	–	–	–
H	1	–	–	–

Recommended Starting Feeds

■ 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%			
SDR...	0,08	0,17	0,33	0,06	0,13	0,25	0,06	0,11	0,22	0,05	0,10	0,20	0,05	0,10	0,20	SDR...
EDR...	0,08	0,17	0,33	0,06	0,13	0,25	0,06	0,11	0,22	0,05	0,10	0,20	0,05	0,10	0,20	EDR...

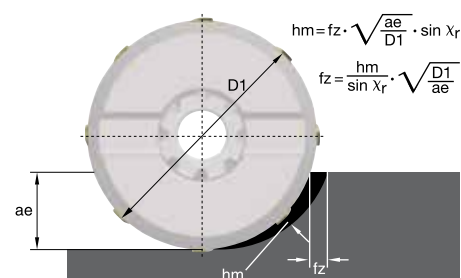
NOTE: First choice starting feed (fz) is in bold type.

Use corresponding speed (vc).

fz and vc are valid for $ae \geq 0,4 D1$.

For smaller ae, fz and vc should be multiplied by the factor given below:

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



■ General

- Non-contact gauges are preferred.
- Contact gauges can be used with the following precautions:
 - Indicator must be flat and parallel to the base.
 - Always approach the PCD cartridge from the relief angle under the PCD segment.
 - Do NOT let the indicator drop on the PCD segment.
- Remove all worn PCD cartridges.
- Clean the pockets of the cutter completely.

■ Face Mills

- Apply a small amount of lubricant to the following areas:
 - Pocket area where the wedge slides.
 - Threads of the cartridge locking screw.
 - Threads of the axial adjustment screw.
- Install cartridges applying light torque to the wedge assembly locking screw.
- Turn axial adjustment screw until the cartridge is 0,01–0,015mm below the final set height.
- Tighten the wedge assembly locking screw to 4 Nm.
- Turn the axial adjustment screw moving the PCD cartridge 0,005mm to the final set height position.
- Set all cartridges as above.

■ End Mills

- Apply a small amount of lubricant to the following areas:
 - Threads of the cartridge locking screw.
 - Threads of the axial adjustment screw.
- Install cartridges applying light torque to the locking screws.
- Turn axial adjustment screw until the cartridge is 0,01–0,015mm below the final set height.
- Tighten the locking screw (left hand threads) to 8 Nm leaving 0,005mm below the final set height.
- Turn the axial adjustment screw moving the PCD cartridge 0,005mm to the final set height position.
- Set all cartridges as above.

WIDIA™ SuperFeed™

ADVANCES 2015

World and Corporate Headquarters

Kennametal Inc.
WIDIA Products Group
1600 Technology Way
Latrobe, PA 15650 USA
Phone: 800 446 7738 (United States and Canada)
E-mail: w-na.service@widia.com

Asia-Pacific Headquarters

Kennametal Singapore Pte. Ltd.
WIDIA Products Group
3A International Business Park
Unit #01-02/03/05, ICON@BP
Singapore 609935
Phone: +65 6265 9222
E-mail: w-sg.service@widia.com

European Headquarters

Kennametal Europe GmbH
WIDIA Products Group
Rheingoldstrasse 50
CH 8212 Neuhausen am Rheinfall
Switzerland
Phone: +41 52 6750 100
E-mail: w-ch.service@widia.com

India Headquarters

Kennametal India Limited
WIDIA Products Group
CIN: L27109KA1964PLC001546
8/9th Mile, Tumkur Road
Bangalore - 560 073
Phone: +91 080 22198444 or +91 080 43281444
E-mail: w-in.service@widia.com

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