

30° Bevel-High Feed Cutter 13mm & 19mm IC Insert Sizes



Insert Series:

- SDES13
- SDMS13
- SDES19
- SDMS19

Face Mills:

- 5M5P (13mm IC)
- 5M6P (13mm IC)
- 5M5M (19mm IC)
- 5M6M (19mm IC)

Insert Grades:

- IN4005
- IN4030
- IN4035
- IN2505
- IN2530
- IN2535

Applications:

- Die & Mold
- Aerospace
- General Purpose



Tripled Your Productivity!

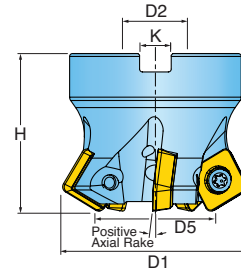
Features & Benefits include:

- Positive 30° bevel angle
- Greater DOC, higher productivity
- Ultra-strong, super free cutting geometries
- 4 indexes per insert
- Up to 7 different insert geometry styles
- Extremely strong insert screw design
- Premium milling grades
- Latest post coating treatment technology to ensure long lasting performance
- Application flexibility



HIQUAD^{XXX}™ 30° BEVEL HIGH FEED CUTTER

FACE MILLS, 13MM IC INSERT SERIES



5M6P-20R30 5M5P-20R30	D1 Max. Diameter	Number of Inserts 5M6P	Number of Inserts 5M5P	H Effective Extension	D5 Effective Diameter	Max. DOC	D2 Bore Diameter	K Keyway	Coolant
Insert Number									
SDES130516N-PF	2.000	5	6	1.625	1.218	0.198	0.75	0.312	Yes
SDES130516N-PF1	2.000	5	6	1.625	1.218	0.198	0.75	0.312	Yes
SDMS130516R-PP	2.000	5	6	1.625	1.218	0.198	0.75	0.312	Yes
SDES1305MPR	1.961	5	6	1.606	1.237	0.202	0.75	0.312	Yes
SDES1305MPR-001	1.961	5	6	1.606	1.237	0.202	0.75	0.312	Yes

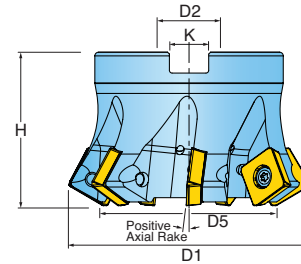
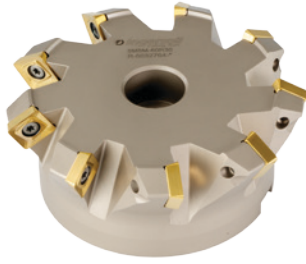
5M6P-25R30 5M5P-25R30	D1 Max. Diameter	Number of Inserts 5M6P	Number of Inserts 5M5P	H Effective Extension	D5 Effective Diameter	Max. DOC	D2 Bore Diameter	K Keyway	Coolant
Insert Number									
SDES130516N-PF	2.500	5	6	2.000	1.717	0.198	0.75	0.312	Yes
SDES130516N-PF1	2.500	5	6	2.000	1.717	0.196	0.75	0.312	Yes
SDMS130516R-PP	2.500	5	6	2.000	1.717	0.198	0.75	0.312	Yes
SDES1305MPR	2.461	5	6	1.981	1.737	0.202	0.75	0.312	Yes
SDES1305MPR-001	2.461	5	6	1.981	1.737	0.202	0.75	0.312	Yes

5M6P-30R30 5M5P-30R30	D1 Max. Diameter	Number of Inserts 5M6P	Number of Inserts 5M5P	H Effective Extension	D5 Effective Diameter	Max. DOC	D2 Bore Diameter	K Keyway	Coolant
Insert Number									
SDES130516N-PF	3.000	6	7	2.000	2.217	0.198	1.00	0.375	Yes
SDES130516N-PF1	3.000	6	7	2.000	2.217	0.198	1.00	0.375	Yes
SDMS130516R-PP	3.000	6	7	2.000	2.217	0.198	1.00	0.375	Yes
SDES1305MPR	2.9621	6	7	1.981	2.237	0.202	1.00	0.375	Yes
SDES1305MPR-001	2.962	6	7	1.981	2.237	0.202	1.00	0.375	Yes

NOTE: For detailed programming information refer to tech page

HIQUAD^{XXX}™ 30° BEVEL HIGH FEED CUTTER

FACE MILLS, 19MM IC INSERT SERIES



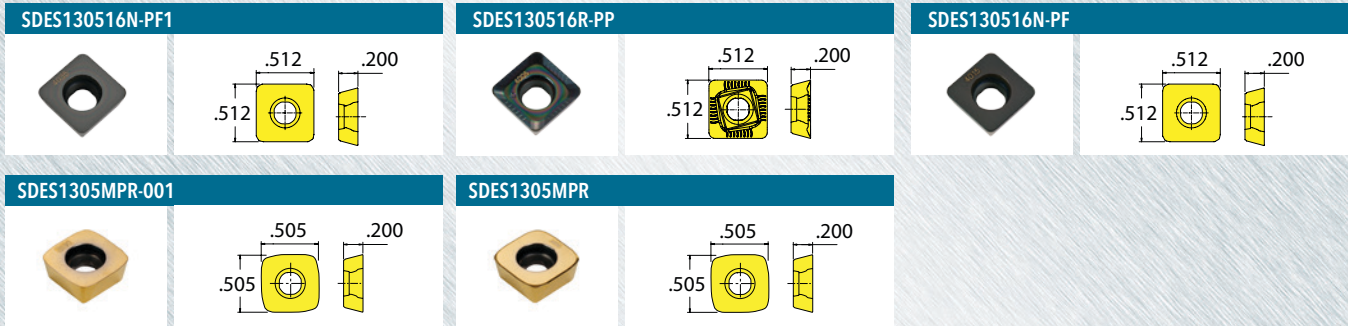
5M6M-40R30 5M5M-40R30	D1 Max. Diameter	Number of Inserts 5M6M	Number of Inserts 5M5M	H Effective Extension	D5 Effective Diameter	Max. DOC	Wiper Flat	D2 Bore Diameter	K Keyway	Coolant
Insert Number										
SDES1906ZPR-PF	4.000	6	7	2.500	2.89	0.31	0.053	1.5	0.625	Yes
SDMS1906ZPR-PP	4.000	6	7	2.500	2.89	0.31	0.053	1.5	0.625	Yes
SDMS190620R-PH	4.018	6	7	2.509	2.84	0.31	N/A	1.5	0.625	Yes
SDES190620N	4.018	6	7	2.509	2.84	0.31	N/A	1.5	0.625	Yes
SDES190620N-001	4.018	6	7	2.51	2.84	0.31	N/A	1.5	0.625	Yes
SDES1906MPR	3.949	6	7	2.475	2.89	0.31	N/A	1.5	0.625	Yes
SDES1906MPR-001	3.949	6	7	2.475	2.89	0.31	N/A	1.5	0.625	Yes

5M6M-50R30 5M5M-50R30	D1 Max. Diameter	Number of Inserts 5M6M	Number of Inserts 5M5M	H Effective Extension	D5 Effective Diameter	Max. DOC	Wiper Flat	D2 Bore Diameter	K Keyway	Coolant
Insert Number										
SDES1906ZPR-PF	5.000	7	8	2.500	3.89	0.31	0.053	1.5	0.625	Yes
SDMS1906ZPR-PP	5.000	7	8	2.500	3.89	0.31	0.053	1.5	0.625	Yes
SDMS190620R-PH	5.018	7	8	2.509	3.84	0.31	N/A	1.5	0.625	Yes
SDES190620N	5.018	7	8	2.509	3.84	0.31	N/A	1.5	0.625	Yes
SDES190620N-001	5.018	7	8	2.509	3.84	0.31	N/A	1.5	0.625	Yes
SDES1906MPR	4.949	7	8	2.475	3.89	0.31	N/A	1.5	0.625	Yes
SDES1906MPR-001	4.949	7	8	2.475	3.89	0.31	N/A	1.5	0.625	Yes

5M6M-60R30 5M5M-60R30	D1 Max. Diameter	Number of Inserts 5M6M	Number of Inserts 5M5M	H Effective Extension	D5 Effective Diameter	Max. DOC	Wiper Flat	D2 Bore Diameter	K Keyway	Coolant
Insert Number										
SDES1906ZPR-PF	6.000	8	9	2.500	4.89	0.31	0.053	1.5	0.625	No
SDMS1906ZPR-PP	6.000	8	9	2.500	4.89	0.31	0.053	1.5	0.625	No
SDMS190620R-PH	6.018	8	9	2.509	4.837	0.305	N/A	1.5	0.625	No
SDES190620N	6.018	8	9	2.509	4.837	0.305	N/A	1.5	0.625	No
SDES190620N-001	6.018	8	9	2.509	4.837	0.305	N/A	1.5	0.625	No
SDES1906MPR	5.949	8	9	2.475	4.89	0.31	N/A	1.5	0.625	No
SDES1906MPR-001	5.949	8	9	2.475	4.89	0.31	N/A	1.5	0.625	No

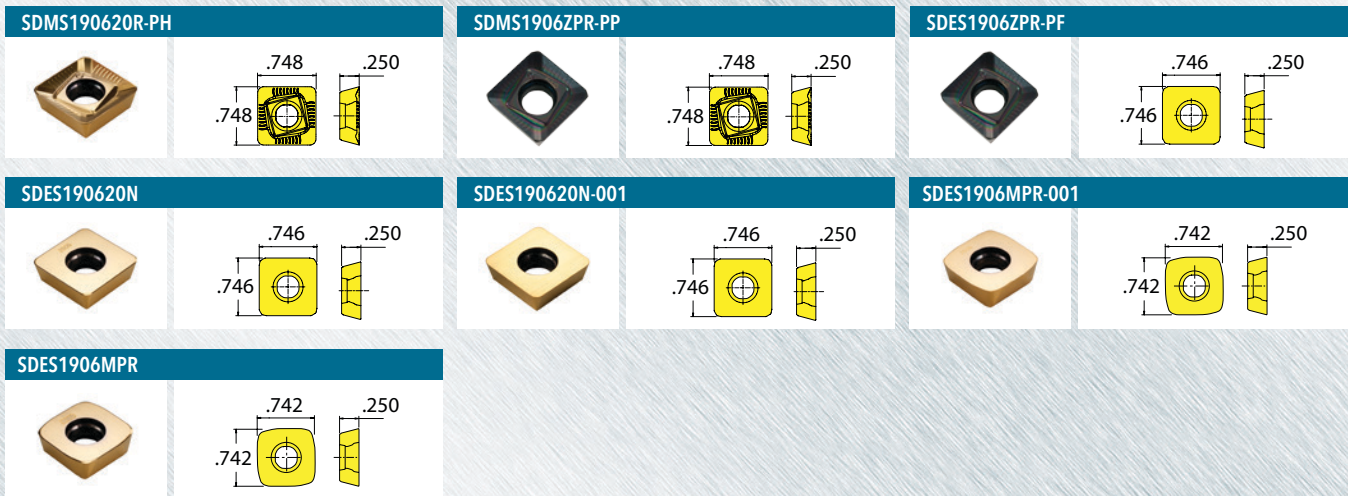
NOTE: For detailed programming information refer to tech page

HIQUAD^{XXX}™ 13MM INSERTS



Part Number	Applications	Max DOC	Grade					
			IN2505	IN2530	IN4005	IN4030	IN4035	IN2535
SDMS130516R-PP	Hi-feed, pos precision - corner radius	0.202		•	•	•	•	•
SDES130516N-PF	Hi-feed, flat face - corner radius	0.202			•	•		
SDES130516N-PF1	Hi-feed, flat face - precision	0.202				•	•	
SDES1305MPR	Hi-feed, flat face heavy duty - standard	0.198	•	•	•		•	
SDES1305MPR-001	Hi-feed, flat face heavy duty - precision	0.198	•	•	•	•	•	•

HIQUAD^{XXX}™ 19MM INSERTS



Part Number	Applications	Max DOC	Grade				
			IN2505	IN2530	IN4005	IN4030	IN4035
SDMS1906ZPR-PP	Hi-feed, pos precision - wiper	0.306			•	•	•
SDES1906ZPR-PF	Hi-feed, flat face - wiper	0.306			•	•	•
SDMS190620R-PH	Hi-feed, pos precision	0.306	•	•	•	•	
SDES190620N	Hi-feed, flat face - corner radius	0.305	•	•			
SDES190620N-001	Hi-feed, flat face - precision	0.305	•	•			
SDES1906MPR	Hi-feed, flat face heavy duty - standard	0.314	•	•	•		•
SDES1906MPR-001	Hi-feed, flat face heavy duty - precision	0.314	•	•	•	•	•

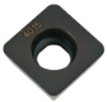
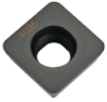
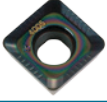
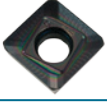
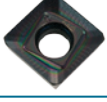





Cutter Number	Screw	Driver	Driver Bit	Retention Bolt	Coolant Bolt (Optional)
5M5P-20R30	SM40-100-R0	DS-A00T	BLD T15/S7	SB-04-15	N/A
5M6P-20R30	SM40-100-R0	DS-A00T	BLD T15/S7	SB-04-15	N/A
5M5P-25R30	SM40-100-R0	DS-A00T	BLD T15/S7	SD-06-48	SD-06-A6
5M6P-25R30	SM40-100-R0	DS-A00T	BLD T15/S7	SD-06-48	SD-06-A6
5M5P-30R30	SM40-100-R0	DS-A00T	BLD T15/S7	SD-08-47	SD-08-92
5M6P-30R30	SM40-100-R0	DS-A00T	BLD T15/S7	SD-08-47	SD-08-92

Cutter Number	Screw	Driver	Driver Bit	Retention Bolt	Coolant Bolt (Optional)
5M5M-40R30	SM60-135-R0	DS-A00T	DS-T256B	SD-12-82	SD-12-99
5M6M-40R30	SM60-135-R0	DS-A00T	DS-T256B	SD-12-82	SD-12-99
5M5M-50R30	SM60-135-R0	DS-A00T	DS-T256B	SD-12-82	SD-12-99
5M6M-50R30	SM60-135-R0	DS-A00T	DS-T256B	SD-12-82	SD-12-99
5M5M-60R30	SM60-135-R0	DS-A00T	DS-T256B	SD-12-82	N/A
5M6M-60R30	SM60-135-R0	DS-A00T	DS-T256B	SD-12-82	N/A

Material		Brinnell Hardness	SFM	Feed per Insert	IN2505	IN2530	IN4005	IN4030	IN4035	Coolant
Steel	Mild 1018-1045	125-425	400-700	.010 - .046	2		1		3	NO
	Low Alloy 4140, 8629, 4340	150-425			2		1		3	NO
	Medium Alloy P20, S7, H13, O1, A2		300 - 650		2	3	1		3	NO
Stainless Steel	Free Machining 303, 416	150-425	200 - 600	.010 - .020	5	3	4	2	1	NO
	300 Series, 304, 310, 316				5	3	4	2	1	NO
	400 Series 410, 420, 15-5PH, 17-4PH				5	3	4	2	1	YES
	PH Series 13-8				5	3	4	2	1	NO
Hardened Steel	All	-	200-450	.006 - .020	2		1		3	YES
High Temp Alloy	6AL-4V	-	80-200	.006 - .010	5	3	4	2	1	YES

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.

INSERT DETAILS

Detail	Part Number	Hone	Corner	Description
	SDES130516N-PF	K	0.063 radius	MULTI-PURPOSE Strong, flat rake face insert for machining in standard steel
	SDES130516N-PF1	K	0.063 radius	MULTI-PURPOSE, KEEN EDGE Strong, flat rake face insert for machining standard steels and stainless steel
	SDMS130516R-PP	K	0.063 radius	HIGH POSITIVE, MULTI-PURPOSE Universal insert with landed edge for machining steels and hi-temp alloys. Good choice for most application
	SDES1906ZPR-PF	K	0.053 wiper	MULTI-PURPOSE, WIPER Faceted wiper insert for improved surface finishes. Strong, flat rake face insert for machining standard steels
	SDMS1906ZPR-PP	K	0.053 wiper	HIGH POSITIVE, MULTI-PURPOSE / WIPER Faceted wiper insert for improved surface finishes. Excels in standard steel and is the first choice in milling high temp alloys such as titanium and stainless steel
	SDMS190620R-PH	K	0.078 radius	HIGH POSITIVE, MULTI-PURPOSE Universal insert with landed edge for machining steels and hi-temp alloys. Good choice for most applications
	SDES190620N	K	0.078 radius	MULTI-PURPOSE Strong, flat rake face insert for general machining in standard steels and cast irons
	SDES190620N-001	K	0.078 radius	MULTI-PURPOSE, KEEN EDGE Strong, flat rake face insert for machining in standard steel and stainless steels
	SDES1305MPR	K	n/a	HEAVY DUTY Exceptionally strong, flat rake face insert for machining standard steels and cast materials. Larger insert radius profile allows for deeper DOC and aggressive operating parameters
	SDES1906MPR	K	n/a	
	SDES1305MPR-001	K	n/a	HEAVY DUTY, KEEN EDGE Exceptionally strong, flat rake face insert with sharp edge prep for machining hi-temp alloys or stainless steels. Larger insert radius profile allows for deeper DOC and aggressive operating parameters
	SDES1906MPR-001	K	n/a	

