NEW

Member IMC Group
Ingersoll
Cutting Tools

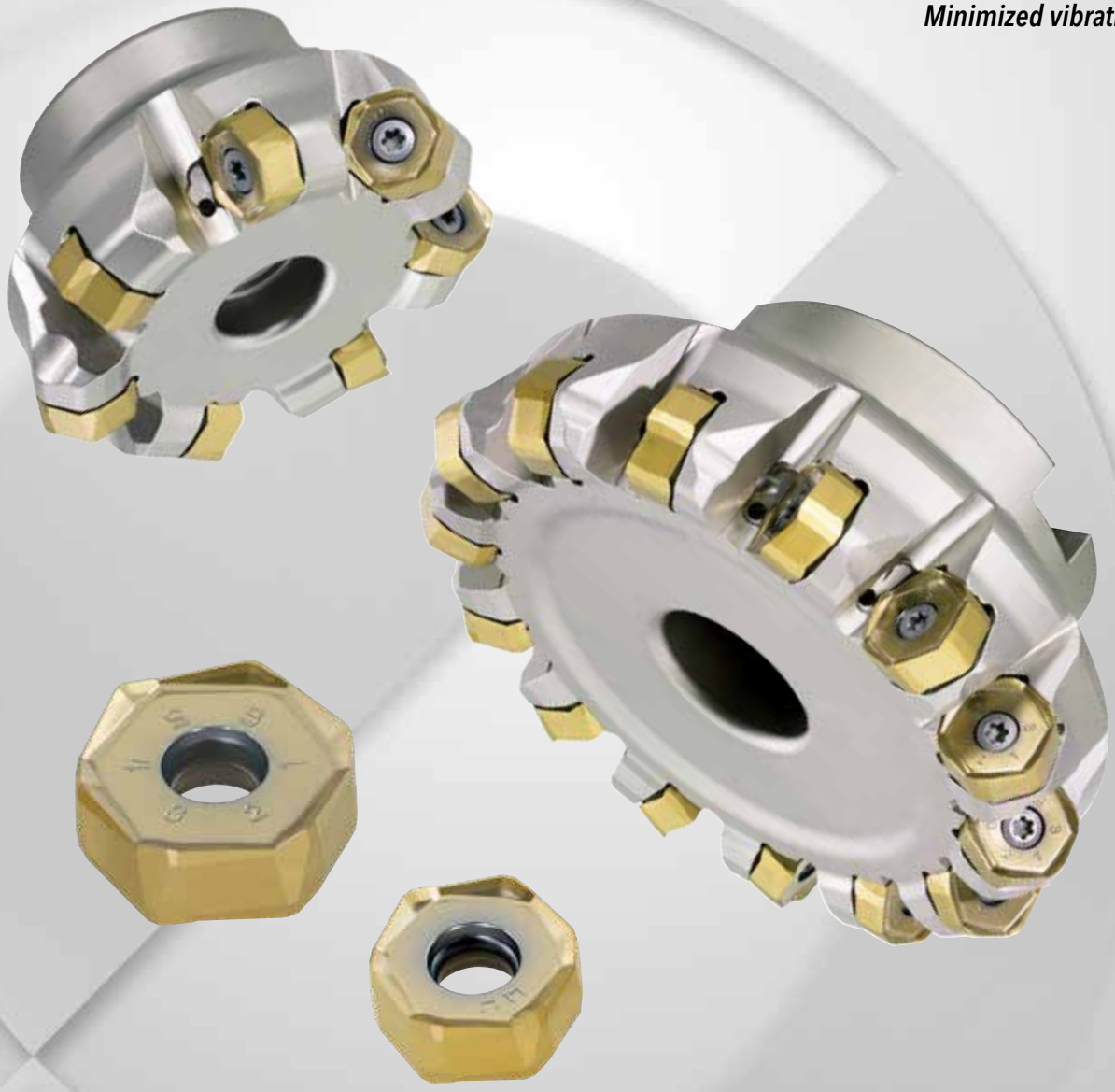
SFEEDUP
HIGH SPEED & FEED

DIPOSHEXA

45° FACE MILLS DN_H/G
WITH 12-EDGED INSERTS

A HIGH PRODUCTIVITY 45° CUTTER LINE WITH ECONOMICAL 12 CORNER INSERT

- *High productivity and reliability when machining at aggressive feeds*
- *Maximized cutter body stiffness and enhanced cutting edge*
- *Smooth machining and excellent chip evacuation*
- *Minimized vibrations*



No.202 E / 3-2021 - V.3

Product Overview

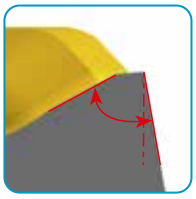
Ingersoll now offers a 45° entering angle cutter with economical double-sided 12 corner inserts to improve productivity in heavy machining and roughing applications.

The **DiPosHexa** series delivers high reliability and productivity when machining at high feeds with a reinforced cutting edge insert and optimized cutter design (semi-tangential positioning).

The high radially inclined angle provides excellent chip evacuation and minimizes vibration due to the increased cutter body's stiffness. This results in significant productivity gains in facing applications of general steels and cast iron.

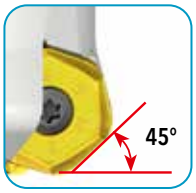
Technical Features & Advantages - Insert

- Enhanced cutting edge for stability at aggressive feed rates
- Acute cutter pocket design and inclined screws enable robust clamping
- Helical cutting edges for smooth machining
- Double-sided 12-edged insert

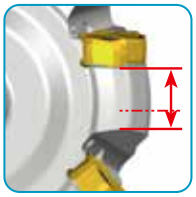


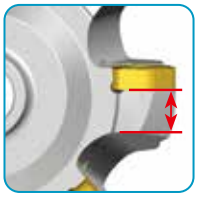
Technical Features & Advantages - Cutter

- High radially inclined insert arrangement enables smooth machining and excellent chip evacuation.

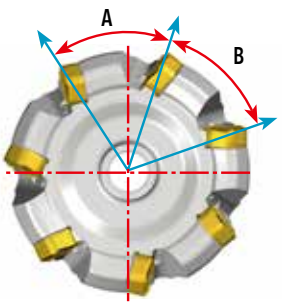


- Maximized cutter body stiffness
  Higher thickness cutter design when fitted with the same inserts:


DiPosHexa

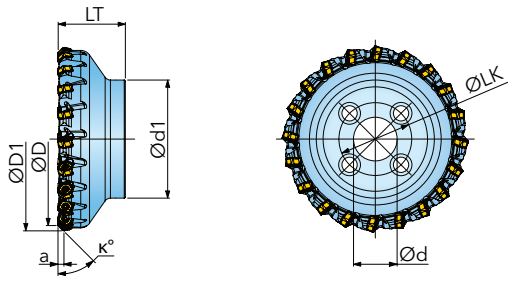

Current

- Inclined screw for rigid clamping
- High inclination angle and inclined screw means a finer pitch cutter



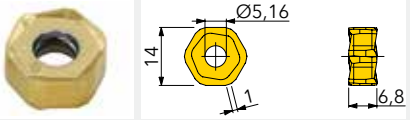
A ≠ B

ADAPTION ACC. TO DIN 8030

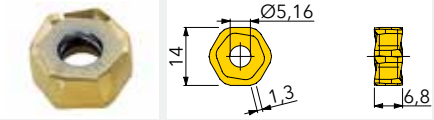


Designation	D	D1	d	d1	LT	LK	κ	a	Z		kg
HN6D040R00	40	50,9	16	38	40	-	45	3	4	✓	0,33
HN6D050R00	50	60,9	22	45	40	-	45	3	4	✓	0,45
HN5D050R00	50	60,9	22	45	40	-	45	3	6	✓	0,49
HN6D063R00	63	73,9	22	47	40	-	45	3	5	✓	0,64
HN5D063R00	63	73,9	22	47	40	-	45	3	7	✓	0,70
HN6D080R00	80	90,9	27	70	50	-	45	3	6	✓	1,46
HN5D080R00	80	90,9	27	70	50	-	45	3	10	✓	1,57
HN6D100R00	100	110,9	32	85	55	-	45	3	7	✓	2,50
HN5D100R00	100	110,9	32	85	55	-	45	3	12	✓	2,65
HN6D125R00	125	135,9	40	85	63	-	45	3	10	✓	3,94
HN5D125R00	125	135,9	40	85	63	-	45	3	16	✓	4,03

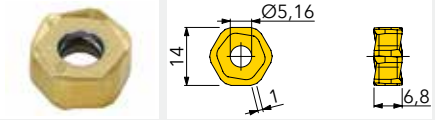
HNGU0605ANTR-M



HNGU0605ANTR-MM



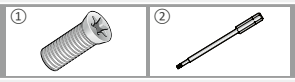
HNGU0605ANR-ML



Designation	fz(min/max)	Design	Grade	IN2505	IN2510	IN2530	IN6537
HNGU0605ANTR-M	0,20/0,35	positive geometry		●			●
HNGU0605ANTR-MM	0,15/0,30	high-positive geometry		●	◐		●
HNGU0605ANR-ML	0,08/0,30	sharp, high-positive geometry		●		●	

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

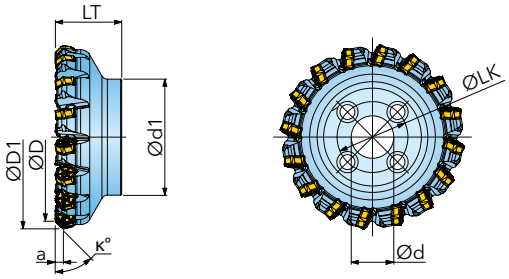


SM40-100-R0 (4,5Nm) TX15x90-B

① = Insert screw ② = Torx-bit

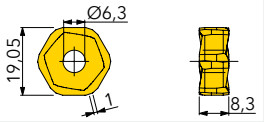
DIPOSHEXA FACE MILL HN_G

ADAPTION ACC. TO DIN 8030

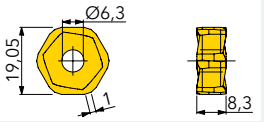


Designation	D	D1	d	d1	LT	LK	κ	a	Z	IK	kg
HN6G063R00	63	77,5	22	47	50	-	45	5	5	✓	0,85
HN5G063R00	63	77,5	22	47	50	-	45	5	7	✓	0,92
HN6G080R00	80	94,5	27	70	50	-	45	5	6	✓	1,45
HN5G080R00	80	94,5	27	70	50	-	45	5	9	✓	1,61
HN6G100R00	100	114,5	32	85	50	-	45	5	7	✓	2,51
HN5G100R00	100	114,5	32	85	50	-	45	5	11	✓	2,70
HN6G125R00	125	139,5	40	85	63	-	45	5	8	✓	4,02
HN5G125R00	125	139,5	40	85	63	-	45	5	14	✓	4,23

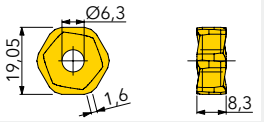
HNGU1007ANTR-HR



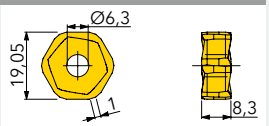
HNGU1007ANTR-M



HNGU1007ANTR-MM



HNGU1007ANR-ML



Designation	fz(min/max)	Design	Grade	IN2505	IN2510	IN2530	IN6537
HNGU1007ANTR-HR	0,30/0,60	Roughing geometry					●
HNGU1007ANTR-M	0,25/0,40	positive geometry		●			●
HNGU1007ANTR-MM	0,20/0,35	high-positive geometry			●		●
HNGU1007ANR-ML	0,08/0,35	sharp, high-positive geometry		●		●	

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

	SM50-130-R0 (6,0Nm)	TX20x90-B

① = Insert screw ② = Torx-bit

Member IMC Group Ingersoll Cutting Tools


Insert:	HNGU0605ANTR-M	HNGU0605ANTR-MM
Average chip thickness:	hm = 0,15 mm	hm = 0,20 mm
max. cutting depth:	ap = 3,0 mm	ap = 3,0 mm

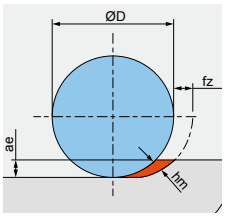
Recommended cutting data:

ISO	Material	Cutting speed Vc [m/min]				Feed per tooth fz [mm]
		1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. tough carbide		
P	unalloyed steel	IN2505	250 – 290	IN6537	200 – 240	0,15 – 0,35
	alloyed steel 800 N/mm²	IN2505	210 – 250	IN6537	160 – 200	0,15 – 0,20
	alloyed steel 1100 N/mm²	IN2505	160 – 180	IN6537	110 – 130	0,15
M	stainless steel	IN2505	120 – 180	IN6537	80 – 130	0,15 – 0,20
K	gray cast iron	IN2510	180 – 250	IN6537	150 – 200	0,15 – 0,35
	nodular cast iron	IN2510	140 – 210	IN6537	110 – 160	0,15 – 0,20
N	aluminum	–	–	–	–	–
S	high temperature alloys	IN2505	110 – 125	IN6537	60 – 80	0,15
	titanium alloys	IN2505	40 – 50	IN6537	30 – 40	0,15
H	hard machining < 54 HRC	–	–	–	–	–
	hard machining < 63 HRC	–	–	–	–	–

Tips:

- The worse the material machinability, the smaller the tool engagement should be chosen.
- The smaller the cutting tool diameter, the higher the cutting speed can be.
- If tool engagement is less than 1/3 of cutting tool diameter, the feed per tooth should be calculated with the following formula:

$$fz = hm \times \sqrt{\frac{D}{ae}}$$



General information:

insert screw: **SM40-100-R0** torque: **4.5 Nm** torque wrench: **DTN045F with bit DS-T15B1**



Insert:	HNGU1007ANTR-M	HNGU1007ANTR-MM	HNGU1007ANTR-HR
Average chip thickness:	hm = 0,20 mm	hm = 0,30 mm	hm = 0,45 mm
max. cutting depth:	ap = 5,0 mm	ap = 5,0 mm	ap = 5,0 mm

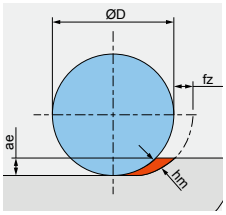
Recommended cutting data:

ISO	Material	Cutting speed Vc [m/min] 1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. tough carbide		Feed per tooth fz [mm]
P	unalloyed steel	IN2505	250 – 290	IN6537	200 – 240	0,20 – 0,30
	alloyed steel 800 N/mm²	IN2505	210 – 250	IN6537	160 – 200	0,20 – 0,25
	alloyed steel 1100 N/mm²	IN2505	160 – 180	IN6537	110 – 130	0,20
M	stainless steel	IN2505	120 – 180	IN6537	80 – 130	0,20 – 0,25
K	gray cast iron	IN6510	180 – 250	IN2010	150 – 200	0,20 – 0,70
	nodular cast iron	IN2510	140 – 210	IN2010	110 – 160	0,20 – 0,45
N	aluminum	–	–	–	–	–
S	high temperature alloys	IN2505	110 – 125	IN6537	60 – 80	0,20
	titanium alloys	IN2505	40 – 50	IN6537	30 – 40	0,20
H	hard machining < 54 HRC	–	–	–	–	–
	hard machining < 63 HRC	–	–	–	–	–

Tips:

- The worse the material machinability, the smaller the tool engagement should be chosen.
- The smaller the cutting tool diameter, the higher the cutting speed can be.
- If tool engagement is less than 1/3 of cutting tool diameter, the feed per tooth should be calculated with the following formula:

$$fz = hm \times \sqrt{\frac{D}{ae}}$$



General information:

insert screw: **SM50-130-R0** torque: **6,0 Nm** torque wrench: **DTNV00S with bit DS-T20TB**

Ingersoll Werkzeuge GmbH

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