

NEW

INNOTOOL

LOOK FORWARD



HIPOS DEKA^{MICRO}

FACE MILLS PP05D10/PP05E01

- *Highly productive face milling system*
- *10-edged indexable insert*
- *66° lead angle allows to work near existing contours*
- *Diameter range 16 - 80 mm*
- *For cutting depths up to 3.8 mm*

Product Description

Small, dynamic machine tools and minimal allowances increasingly determine the requirements for a modern face milling system for metal removal.

But also the trend toward complete machining on turning-milling centers often requires smaller tool dimensions than has hitherto been the case.

Ingersoll now covers this range of applications with the new face milling system **HiPosDekaMicro**.

Insert PNMU05

With a maximum cutting depth of **3.8 mm**, common allowances can be machined in one cut despite the small indexable insert.

Easy handling and process-reliable machining of the **PNMU05** insert is ensured by a sturdy M2.5 screw.

The insert itself is more robust than the compact size would suggest and manages feeds of up to **0.3 mm** per tooth.



Technical Features

The lead angle of **66°** allows to work very close to existing contours such as component geometries or clamping devices.

The face milling cutters are available in the diameter range from **16 to 80 mm** with screw-type adaption and as shell mills with adaptations according to DIN8030.

Advantages

- Highly productive face milling system
- 10-edged indexable insert
- 66° lead angle allows to work near existing contours
- Diameter range 16 - 80 mm
- For cutting depths up to 3.8 mm



Tips & Parameters



insert:

PNMU0503GNTR

average chip thickness:

hm = 0.10 mm

max. cutting depth:

ap = 3.8 mm

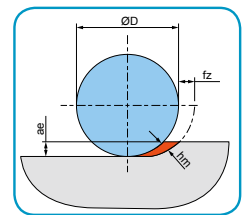
Recommended Cutting Data:

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		
unalloyed steel	IN2505	250 - 290	IN2530	200 - 240	0.10 - 0.25
alloyed steel 800 N/mm ²	IN2505	210 - 250	IN2530	160 - 200	0.10 - 0.20
alloyed steel 1100 N/mm ²	IN2505	160 - 180	IN2530	110 - 130	0.10
stainless steel	IN2035	120 - 180	IN2035	80 - 130	0.10 - 0.25
cast iron	IN2505	180 - 250	IN2530	150 - 200	0.10 - 0.30
nodular cast iron	IN2505	140 - 210	IN2530	110 - 160	0.10 - 0.20
high temperature alloys	IN2035	110 - 125	IN2530	60 - 80	0.10
titanium alloys	IN2505	40 - 50	IN2530	30 - 40	0.10

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 formular:

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



General Information:

insert screw:

SM25-064-00

torque:

1.1 Nm

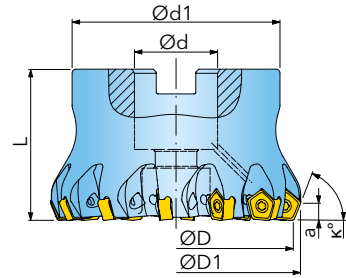
torque wrench:

DTN011S with bit DS-T08TB

Successful machining result depend on many factors, so cutting data recommendations can only be a rough guideline. Therefore in any case of doubt do not hesitate to contact your Innotool partner.

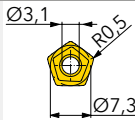
HIPOS DEKA MICRO FACE MILL PP05D10

ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	L	κ	a	Z		
PP.032.001	32	35,9	16	30	40	66	3,8	6	✓	0,14
PP.040.002	40	43,9	16	30	40	66	3,8	8	✓	0,19
PP.050.003	50	53,9	22	45	40	66	3,8	9	✓	0,36
PP.063.003	63	66,9	22	55	40	66	3,8	11	✓	0,62
PP.080.005	80	83,9	27	70	50	66	3,8	13	✓	1,31

PNMU0503GNTR



Designation	fz(min/max)	Design	Grade	IN2035	IN2505	IN2530				
PNMU0503GNTR	0,10/0,30	positive geometry								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

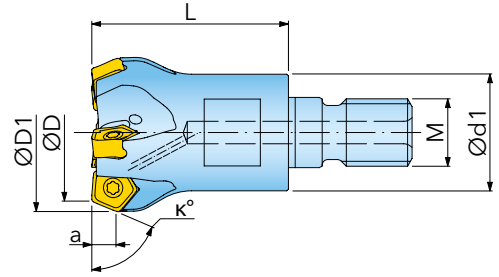


SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

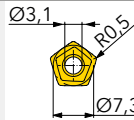


SCREW-IN TYPE ADAPTION



Designation	D	D1	d1	L	κ	a	M	Z		
PP.016.001	16	19,9	18	30	66	3,8	M10	3	✓	0,05
PP.020.001	20	23,9	21	35	66	3,8	M12	4	✓	0,09
PP.025.001	25	28,9	21	35	66	3,8	M12	5	✓	0,10
PP.032.002	32	35,9	29	43	66	3,8	M16	6	✓	0,23
PP.040.003	40	43,9	29	43	66	3,8	M16	8	✓	0,27

PNMU0503GNTR



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SPARE PARTS



SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

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