

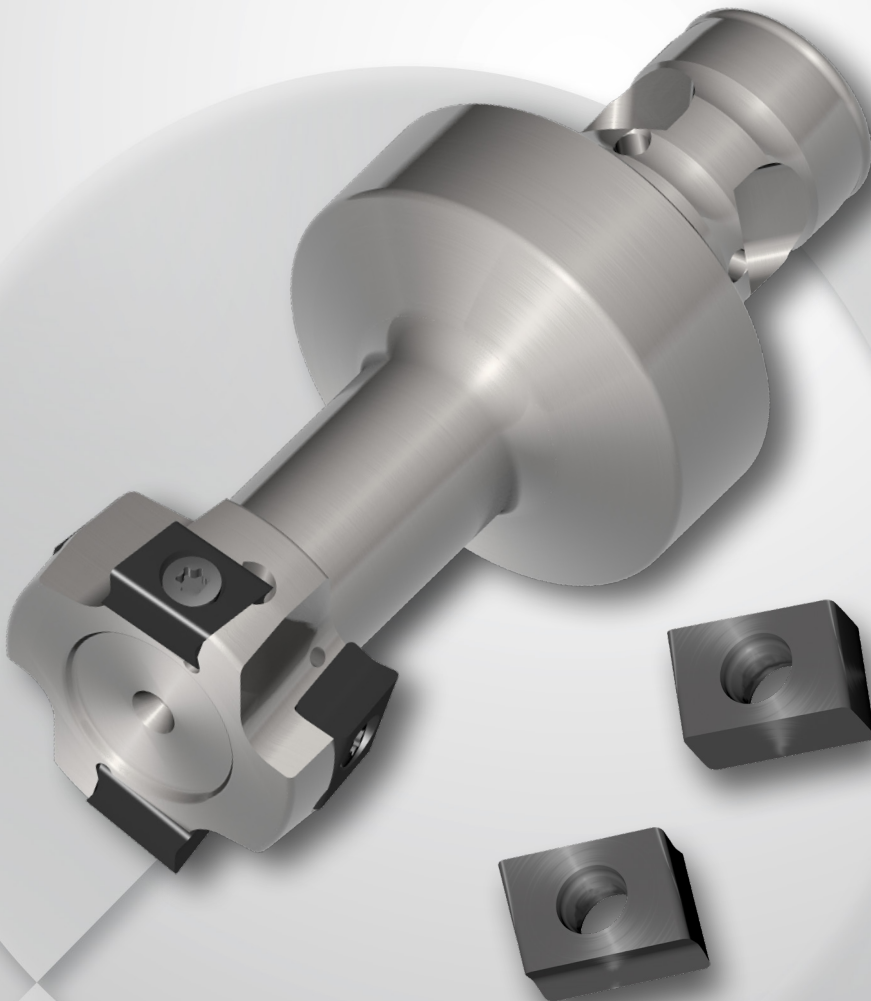


POWERMAX™

T-SLOT MILL 16T1A_Z WITH INNOFIT-ADAPTION

T-SLOT MILL 16T1A_Z WITH INNOFIT-ADAPTION

- 4-edged tangential insert
- Positive and negative geometry
- Square borehole for stable positioning
- Internal coolant supply
- No roof shape / 90° geometry
- Optimal tool life
- High process reliability



Product Overview

The new T-slot mills of series **16T1A_Z** combine stability and process-reliability of a tangential system with the option of smooth cut due to the double-positive (radial and axial) geometry.

The cutter series covers the T-slot sizes **T22**, **T28** and **T36** according to DIN 650 in the catalog standard. It is possible to cover further T-slot sizes with the existing selection of inserts.

Inserts

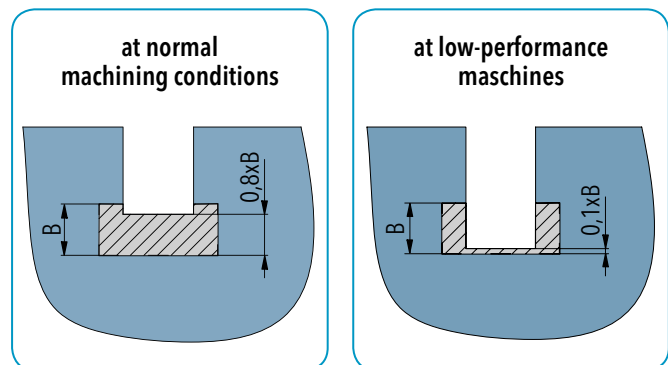
The tangential insert provided for this cutter series enables the use of positive and negative geometry in one insert seat.

This results in a high degree of flexibility with regard to machining materials as well as process reliability with non-optimal machine stiffness, unfavorable projecting length and clamping situation.

Application Range

Due to the option of using positive and negative geometry in one insert seat, the tool can be used in both short and long chipping materials, as well as in stable or unstable conditions.

Application example of PowerMax T-slot mill:



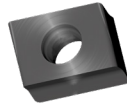
Ensure good chip flow by means of high coolant or compressed air supply!

Technical Features

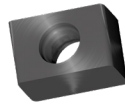
- 4-edged (2RH/ 2LH) insert
- 3-point clamping by InnoFit adaption enables precise concentricity and high stability
- Positive and negative geometry can be used in one insert seat
- No roof shape on the T-slot side faces of the bottom flange
- Highly economical, flexible and process-reliable

Advantages

The possibility of using positive and negative geometries in one single tool results in a high degree of flexibility in connection with process reliability and economy.



DPD_-S



DNE_-S

insert:

average chip thickness:

hm = 0.20 mm

hm = 0.25 mm

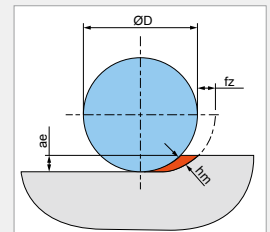
Recommended Cutting Data:

material	cutting speed Vc [m/min]				average chip thickness hm [mm]
	1st choice dry machining resp. wear resistant carbide		1st choice wet machining resp. tough carbide		
unalloyed steel	IN4005	140 - 200	IN4030	120 - 180	hm x 1.2
alloyed steel 800 N/mm²	IN4005	120 - 160	IN4030	100 - 140	hm x 1.0
alloyed steel 1100 N/mm²	IN4005	100 - 160	IN4030	100 - 140	hm x 0.9
stainless steel	IN4005	80 - 160	IN4030	80 - 140	hm x 1.0
gray cast iron	IN4005	150 - 200	IN4030	130 - 180	hm x 1.2
nodular cast iron	IN4015	120 - 160	IN4030	100 - 140	hm x 1.0
aluminum	-	-	-	-	-
high temperature alloys	IN4005	60 - 100	IN4030	40 - 80	hm x 0.8
titanium alloys	-	-	IN4003	30 - 60	hm x 0.8
hard machining < 54 HRC	-	-	-	-	-
hard machining < 63 HRC	-	-	-	-	-

Tips:

- The worse the 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 40% of cutting tool diameter, the feed per tooth should be calculated with the following formula:

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



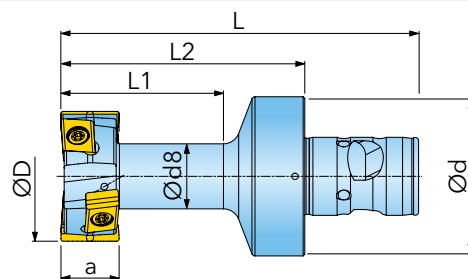
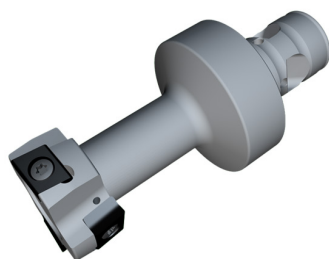
General Information:

insert screw: **SM40-100-R0**
 torque: **4.5 Nm**
 torque wrench: **DT40-01 with bit DS-T15B**

Successful machining results 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 Ingersoll partner.

POWERMAX™ T-SLOT MILL 16T1A...Z

MODULAR INNOFIT ADAPTION



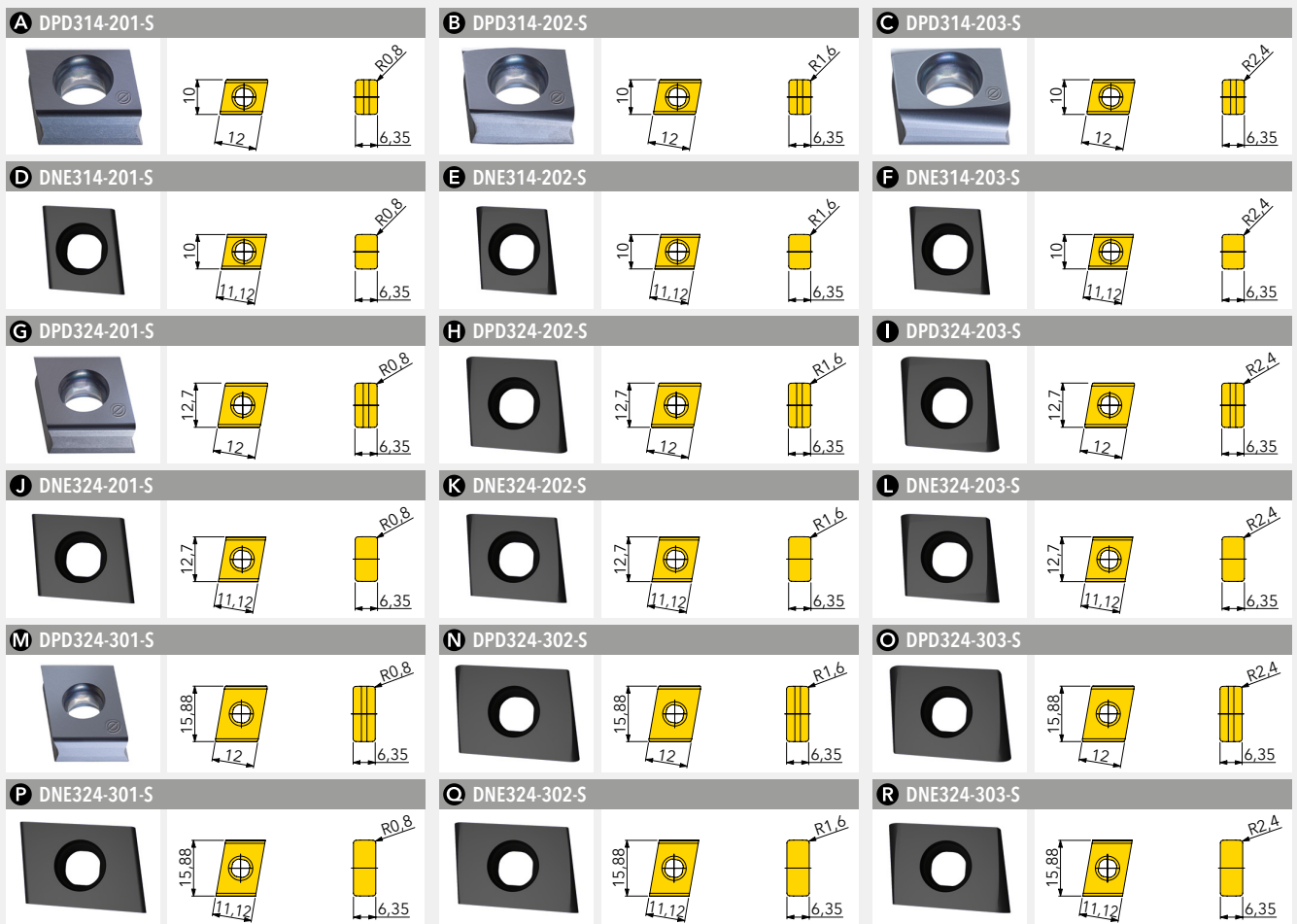
Designation	D	d	d8	L	L1	L2	a	MOD	Z	Zeff			related inserts
16T1A040018Z4R00	40	49	20	103	48	68	18	40	4	2	✓	0,52	A B C D E F
16T1A050022Z5R00	50	78	26	125	58	78	22	50	4	2	✓	1,23	G H I J K L
16T1A060028Z5R00	60	78	33	139	73	93	28	50	6	3	✓	1,64	M N O P Q R

SPARE PARTS



SM40-100-R0 (4,5Nm) DS-T15S

① = insert screw ② = screw driver



Designation	fz(min/max)	Design	Grade	IN4005	IN4015	IN4030					
DPD314-201-S	0,10/0,20	positive geometry R0.8		●	●	●					
DPD314-202-S	0,10/0,20	positive geometry R1.6		●	●	●					
DPD314-203-S	0,10/0,20	positive geometry R2.4		●	●	●					
DNE314-201-S ¹⁾	0,10/0,25	negative geometry R0.8		●	●	●					
DNE314-202-S ¹⁾	0,10/0,25	negative geometry R1.6		●	●	●					
DNE314-203-S ¹⁾	0,10/0,25	negative geometry R2.4		●	●	●					
DPD324-201-S	0,10/0,20	positive geometry R0.8		●	●	●					
DPD324-202-S	0,10/0,20	positive geometry R1.6		●	●	●					
DPD324-203-S	0,10/0,20	positive geometry R2.4		●	●	●					
DNE324-201-S ¹⁾	0,10/0,25	negative geometry R0.8		●	●	●					
DNE324-202-S ¹⁾	0,10/0,25	negative geometry R1.6		●	●	●					
DNE324-203-S ¹⁾	0,10/0,25	negative geometry R2.4		●	●	●					
DPD324-301-S	0,10/0,20	positive geometry R0.8		●	●	●					
DPD324-302-S	0,10/0,20	positive geometry R1.6		●	●	●					
DPD324-303-S	0,10/0,20	positive geometry R2.4		●	●	●					
DNE324-301-S ¹⁾	0,10/0,25	negative geometry R0.8		●	●	●					
DNE324-302-S ¹⁾	0,10/0,25	negative geometry R1.6		●	●	●					
DNE324-303-S ¹⁾	0,10/0,25	negative geometry R2.4		●	●	●					

¹⁾ on request

● = P ● = M ● = K ● = N ● = S ○ = H

Ingersoll Cutting Tools

Marketing & Technology

Germany

Ingersoll Werkzeuge GmbH

Main Office:

Kalteiche-Ring 21-25

35708 Haiger, Germany

Telefon: +49 (0)2773-742-0

Telefax: +49 (0)2773-742-812

E-Mail: info@ingersoll-imc.de

Internet: www.ingersoll-imc.de

Office South:

Florianstraße 13-17

71665 Vaihingen-Horrheim, Germany

Telefon: +49 (0)7042-8316-0

Telefax: +49 (0)7042-8316-26

E-Mail: horrheim@ingersoll-imc.de

Office Wulften:

Steinstraße 11

37199 Wulften

Telefon: +49 (0)556-99 55 98-0

Telefax: +49 (0)556-99 55 98-25

E-Mail: wulften@ingersoll-imc.de

USA

Ingersoll Cutting Tools

845 S. Lyford Road

Rockford, Illinois 61108-2749, USA

Telefon: +1-815-387-6600

Telefax: +1-815-387-6968

E-Mail: info@ingersoll-imc.com

Internet: www.ingersoll-imc.com

France

Ingersoll France

22, rue Albert Einstein

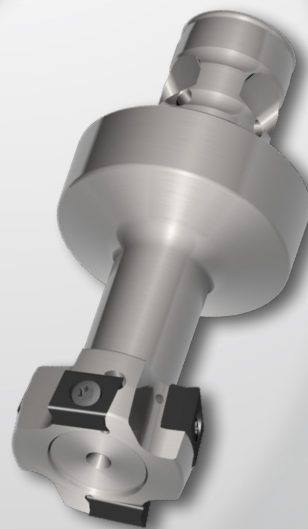
F-77420 CHAMPS-sur-MARNE

Telefon: +33 (0) 1 64 68 45 36

Telefax: +33 (0) 1 64 68 45 24

E-Mail: info@ingersoll-imc.fr

Internet: www.ingersoll-imc.fr



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