

High feed cutting system THETAtec 25N	
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1. General	<p>In this product information, we provide information about the newly developed THETAtec 25N high-feed system tool, including toolholders, product range, application areas, and technical details.</p> <ul style="list-style-type: none">▪ In the initial phase of its market launch, the new product portfolio includes a version as face mill, end mill and screw-on types.

2. System

THETAtec 25N

- Hard facts
 - 13 face milling cutters
 - 3 end mill cutters
 - 7 screw on type cutter
 - System size SN09
 - 5 grades



3. THETAtec 25N
bodies

▪ bodies

	Aufsteckfräser 25° Face milling cutter 25°	Schaftfräser 25° End milling cutter 25°	Einschraubfräser 25° Screw on type 25°
Ausführung Execution			
Durchmesserbereich metrisch Diameter range metric	Ø 40 - 100 mm	Ø 25 - 32 mm	Ø 25 - 42 mm
Plattengröße Insert size	SN... 09	SN.. 09	SN.. 09

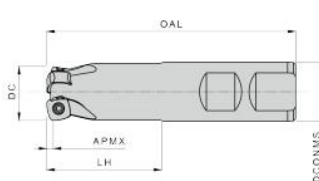


▪ Face milling cutter



Aufsteckfräser 25° / SN.. 09
Face milling cutter 25° / SN.. 09

Abmessungen [mm] Dimensions [mm]						Artikelbezeichnung Item code	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Ersatzteile Spare parts	
DC	DCONMS	DHUB	OAL	APMX HFC	ZEFFO					
40	16	34	40	1,4	4	BF25 SN09.040 Z04	5232282	●	 Spannschraube Fixation screw AP02-30083 5112357 MA = 1,4Nm	 Torx- Schlüssel Torque wrench IP9 5118124
40	16	34	40	1,4	5	BF25 SN09.040 Z05	5237733	○		
42	16	34	40	1,4	5	BF25 SN09.042 Z05	5237734	○		
50	22	43	40	1,4	5	BF25 SN09.050 Z05	5232283	●		
50	22	43	40	1,4	6	BF25 SN09.050 Z06	5232284	○		
52	22	43	40	1,4	6	BF25 SN09.052 Z06	5232285	●		
63	22	48	40	1,4	6	BF25 SN09.063 Z06	5232286	●		
63	27	51	50	1,4	7	BF25 SN09.063 Z07 DA27	5232287	●		
66	22	52	40	1,4	5	BF25 SN09.066 Z05	5232288	○		
66	27	54	50	1,4	7	BF25 SN09.066 Z07 DA27	5232289	●		
80	27	60	50	1,4	8	BF25 SN09.080 Z08	5232290	●		
80	27	60	50	1,4	10	BF25 SN09.080 Z10	5232291	○		
100	32	78	50	1,4	9	BF25 SN09.100 Z09	5237735	○		

End milling cutter

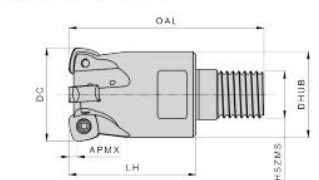


Schaftfräser 25° / SN.. 09
End milling cutter 25° / SN.. 09







Abmessungen [mm] Dimensions [mm]							Artikelbezeichnung Item code	Schaft Shank	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Ersatzteile Spare parts	
DC	DCONMS	LH	OAL	APMX HFC	ZEFO							
25	25	50	106	1,4	2	BE25 SN09.025 Z02	HB	5232292	○	 Spannschraube Fixation screw AP02-30083 5112357 MA = 1,4Nm	 Torx-Schlüssel Torque wrench IP9 5118124	
25	25	50	106	1,4	3	BE25 SN09.025 Z03	HB	5232293	○			
32	32	64	124	1,4	4	BE25 SN09.032 Z04	HB	5232294	○			

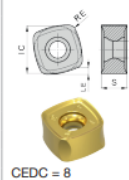
Screw on type cutter

Einschraubfräser 25° / SN.. 09
Screw on type 25° / SN.. 09

Abmessungen [mm] Dimensions [mm]							Artikelbezeichnung Item code	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Ersatzteile Spare parts		
DC	DHUB	LH	OAL	THSZMS	APMX HFC	ZEFO						
25	21	32	54	M12	1,4	2	BS25 SN09.025 Z02 M12	5232295	○	 Spannschraube Fixation screw AP02-30083 5112357 MA = 1,4Nm	 Torx-Schlüssel Torque wrench IP9 5118124	
25	21	32	54	M12	1,4	3	BS25 SN09.025 Z03 M12	5232296	●			
32	29	43	66	M16	1,4	4	BS25 SN09.032 Z04 M16	5232297	●			
35	29	43	66	M16	1,4	4	BS25 SN09.035 Z04 M16	5237736	○			
36	29	43	66	M16	1,4	4	BS25 SN09.036 Z04 M16	5237737	○			
40	29	43	66	M16	1,4	5	BS25 SN09.040 Z05 M16	5237738	○			
42	29	43	66	M16	1,4	5	BS25 SN09.042 Z05 M16	5237739	○			

4. Indexable inserts

CEDC = Anzahl der Schneidkanten CEDC = Number of cutting edges	Artikelbezeichnung Item code	Schneidstoffsorte Cutting materials	Bestell-Nr. Ordering No.	Verfügbarkeit Availability	Abmessungen [mm] Dimensions [mm]				
					LE	IC	S	D1	RE
 CEDC = 8	HFC Platten/HFC insert								
	SNMX 090416SR-MPH	BCP25M	5231263	●	1,4	9,52	4,76	3,4	1,6
	SNMX 090416SR-MMH	BCM35M	5231264	●	1,4	9,52	4,76	3,4	1,6
	SNMX 090416SR-MSH	BCS35M	5231266	●	1,4	9,52	4,76	3,4	1,6
	SNMX 090416SR-MHH	BCH10M	5231267	●	1,4	9,52	4,76	3,4	1,6
	SNMX 090416SR-MHH	BCH30M	5231268	●	1,4	9,52	4,76	3,4	1,6

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5. Cutting parameter, Ramping angles

HFC Hochvorschub Fräsparameter
HFC High feed cutting milling parameter

WSP Geometrie Insert geometry	SN.. 09	
	Schnitttiefe, Cutting depth, [mm] APMX _{max}	Vorschub, Feed, [mm] f _z
MPH	0,5 0,8 1,4	0,6 1,0 1,4
MMH	0,5 0,8 1,4	0,5 0,9 1,4
MSH	0,5 0,7 1,3	0,5 0,7 1,3
MHH	0,5 0,8 1,4	0,6 1,0 1,4

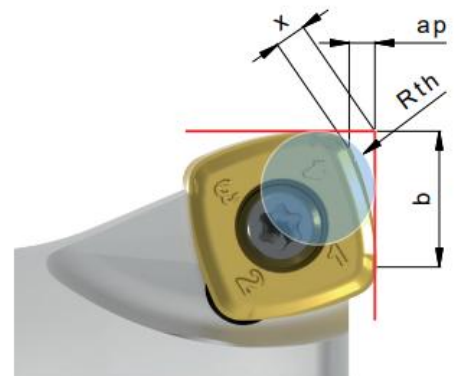
HFC Eintauchwinkel
HFC Ramping angle



Durchmesser Fräser Diameter Milling cutter	Eintauchwinkel HFC-Fräser α max. Ramping angle HFC milling cutter α max. SN.. 09
Ø 25	3,21°
Ø 32	2,51°
Ø 35	2,29°
Ø 36	2,2°
Ø 40	2,0°
Ø 42	1,9°
Ø 50	1,6°
Ø 52	1,54°
Ø 63	1,27°
Ø 66	1,22°
Ø 80	1,0°
Ø 100	0,8°

6. Application hints

Größe WSP Insert size	Abmessungen [mm] Dimensions [mm]		
SN..	R _{th}	x	b
09	3,0	0,7	7,18



- Working width on plunging operation $ae_{\max}=6,0\text{mm}$
((b measurement) – safety)
- Helical ramping into full bloc
 - $D_{\max} = (Ds \times 2) - r$
 - $D_{\min} = (Ds - b (+ \text{safety})) \times 2$
Safety = 0,3mm

7. THETAtec 25N facts and advantages

- Full range of base body variants and pitches compared to Boehlerit's positive system tools
- Smooth cutting performance even with full wrap due to perfectly coordinated milling geometry
- Maximum stability, 8 usable cutting edges
- High metal removal rates achievable due to up to $1.4 \text{ mm DOC}_{\max}$

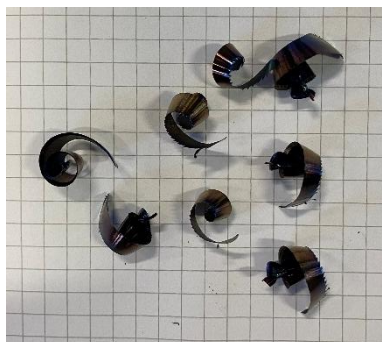
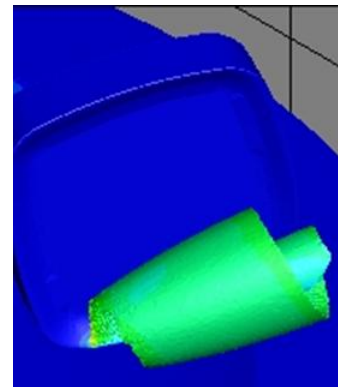
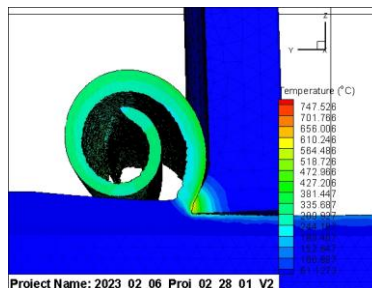
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- Modified axial and radial mounting positions specifically tailored to each diameter range to ensure optimal chip removal and minimize burr formation.
- Can be used on many common materials due to 5 well-positioned cutting material grades for P, M, H(K), and S
- Diameter-related unequal pitch of the tools for vibration-reduced machining
- Linear and helical plunging into the solid is possible thanks to specially defined flank portions

8. Technical product informations

- Chip growth

Comparison between simulation and real machining
Helixchip despite of axial negative mounting position



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9. Target customers /
applications / tests

- Applications at customer, where we were not able to offer something from our current system portfolio.
- Well placed products as DELTatec 90P feed should not be touched unless a competitor is going to attack
- Re-testing of old tests, where we failed on behalf of economic reasons
- Test tools are taken with application engineers to test if they are involved and attending the test. If no application engineers is at the customer, procedure for test tools as usual over Test-Tools with special conditions.
- Applications
 - Dynamical face milling
 - Reduction machining time → high removal rates and economic reasons
 - Short overhangs
 - Stable conditions in general
 - 3D machining (forms, cavities,)
 - Request on process security
 - Economic issues as cost/part, cost/edge

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10. Competitor

- Some competitor systems

Competitor	system designation	insert designation	insert size	diameter range	edges/ inserts	Appearance
Paul Horn	DAH82,DAH84	DAH.82....	7,1	Ø20-125mm	8	
Pramet	SSN11	SNGX110416SR	11	Ø32-125mm	8	
Hitachi	Moldino TD6N	WOMU140620ER	14	Ø50-125mm	6	
Dijet	EXSKS	WNMU09720ZER	9	Ø32-66mm	6	
Korloy	HRM Double	WNMX060312ZN WNMX09T316ZN ...	06,09,13, 16	Ø16-315mm	6	
Mitsubishi	WJX	Jonmu090512ZZE R	9	Ø25-66mm	6	
Widia	M370	WOEJ080412	8,12	Ø25-125mm	6	
SECO	High feed 6	218.230TR...	6	Ø40-160mm	6	

11. Discount group

- Discount group B61, B63

12. Sales information

- Prices acc. Pricelist europe
- Flyer as attachment at IPI
- Available and orderable from W41 onwards**

12. Contact

For technical questions please contact

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