

WOHLHAUPTER[®]**ALLIED MACHINE
& ENGINEERING**

Holemaking Solutions for Today's Manufacturing



Drilling



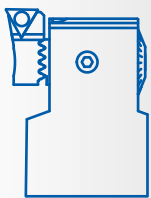
Reaming



Burnishing



Threading



Specials

NOVITECH**NOVITECH**

- ▶ Vibration dampened intermediate modules

www.wohlhaupter.com

NOVI^{TECH} vibration dampened intermediate modules



The new Wohlhaupter vibration dampened intermediate modules

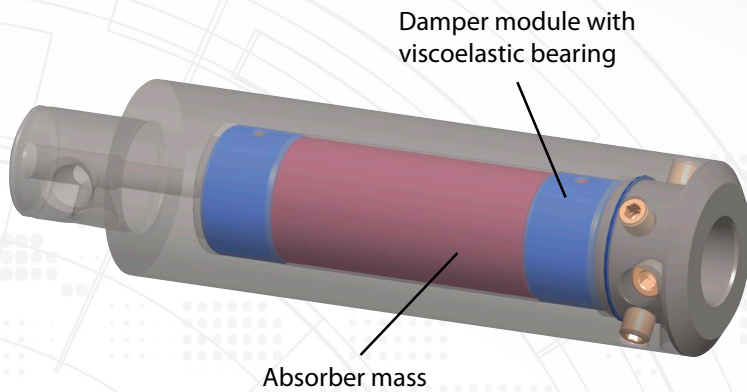
With the NOVI^{TECH} series, Wohlhaupter is now introducing intermediate modules for high-precision and economical boring operations up to 10xD. NOVI^{TECH} was developed to increase productivity, surface quality and process reliability of boring operations, as well as extending the life expectancy of the tool and spindle of the machining center.

- ▶ Machining-Ø up to 205 mm
- ▶ Patent pending

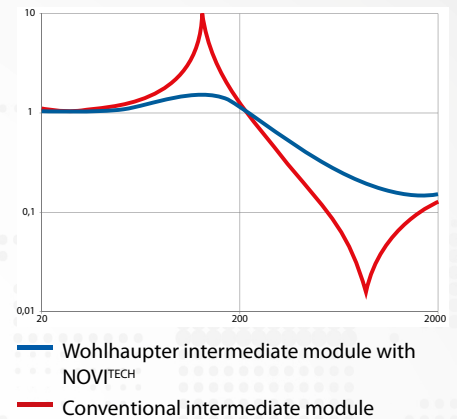
Our Highlights – Your Benefits

- ▶ Intermediate modules for machining up to 10xD
- ▶ Efficient machining results through the viscoelastically mounted damper module
- ▶ Modular construction with MVS connection
- ▶ Existing Wohlhaupter components can be used
- ▶ Increased productivity, surface quality and process reliability
- ▶ Extended range of the cutting data
- ▶ Increased tool and spindle life

NOVI^{TECH} vibration dampened intermediate modules



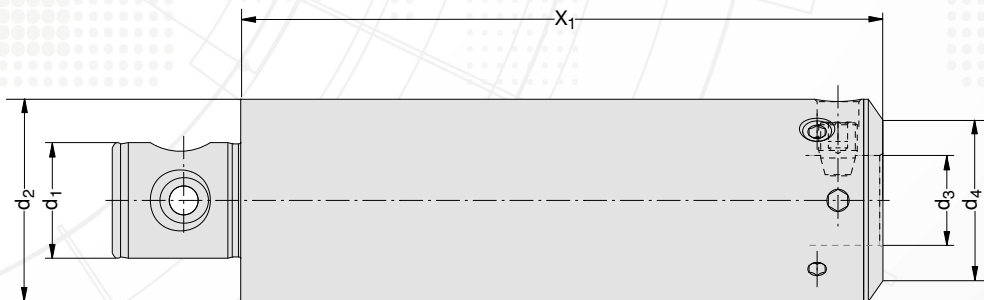
Vibration chart:



The Damper module

Long overhanging tools are indispensable for many boring operations; but these are often susceptible to vibration, which in turn has an effect on the processing quality. To ensure optimum machining results, Wohlhaupter has therefore developed new vibration-dampened intermediate modules with the new series NOVI^{TECH}. Inside the patent-pending NOVI^{TECH} system is a viscoelastically mounted damper module, which reduces vibrations during the machining of diameters up to 205 mm. Thus, the NOVI^{TECH} products are much more efficient than other commercially available systems, which are equipped with a pure vibration absorber made.

NOVI^{TECH} Dimensions and Order No.



MVS connection								Order No.
d ₂	d ₁	d ₄	d ₃	X ₁	kg			
50 **	— 28	40 — 22	200	2,8			519002 *	
63	— 36	50 — 28	200	5,7			519003	
80	— 36	63 — 36	200	7,5			519004 *	
80	— 36	80 — 36	200	7,5			519005 *	

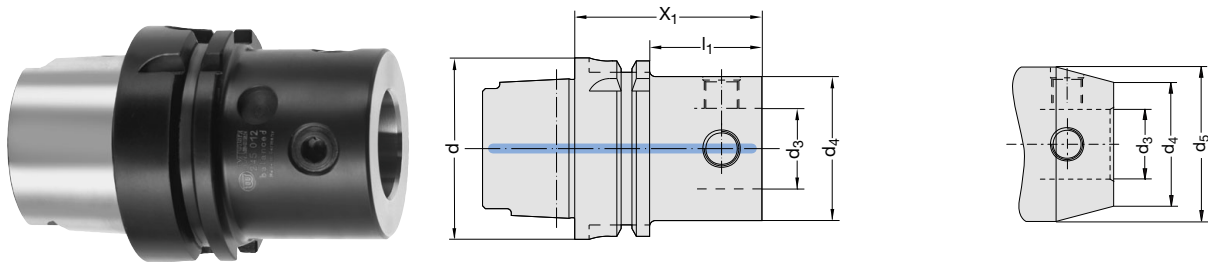
* available in the first quarter of 2018

** d₂ = 49,5 mm

NOVI^{TECH} Master shank with MVS

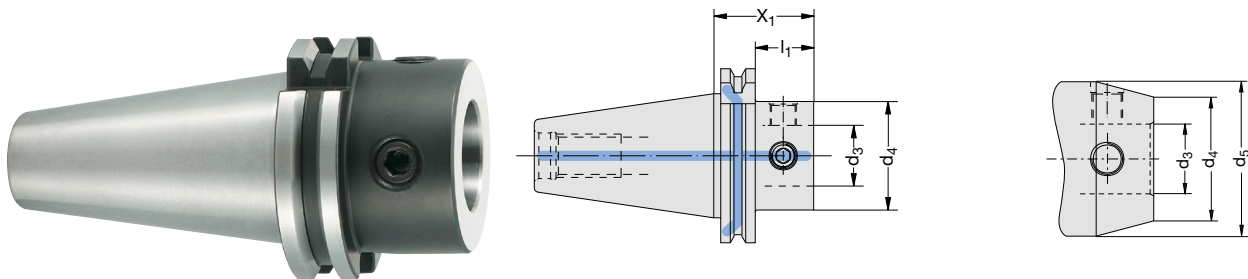
With data carrier drilling according to DIN 69873-E10

balanced Balance quality: G 6.3 at 15 000 rpm



DIN 69 893 HSK

HSK-A	MVS connection		X ₁	l ₁	d ₅	kg	Order No.	
	d ₄	d ₃						
63	50	28	65	39,00	-	1,1	245 012	
	63	36	80	-	-	1,5	245 013	
100	50	28	65	36,00	-	2,4	245 014	
	50	28	180	151,00	60,0	5,0	246 020	
	50	28	180	151,00	49,5	4,0	246 021	new
	63	36	80	51,00	-	2,9	245 015	
	63	36	205	176,00	78,0	7,8	246 019	
	63	36	205	176,00	-	5,9	246 022	new
	80	36	80	51,00	-	3,7	245 016	
	80	36	255	226,00	90,0	12,6	246 018	
	80	36	255	226,00	-	10,4	246 023	new

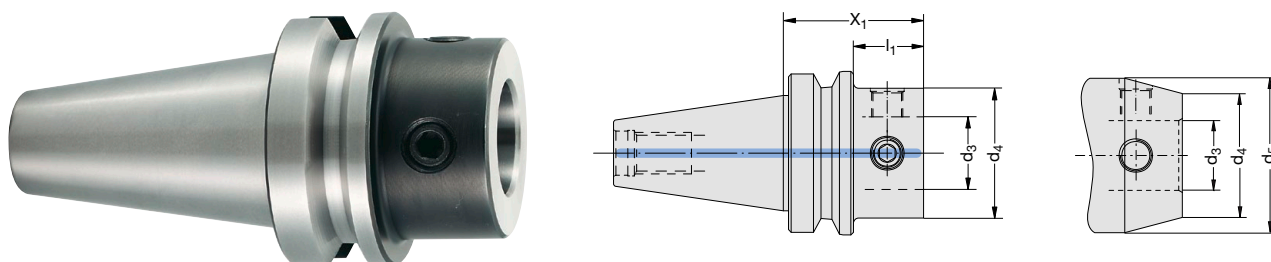


DIN69871-AD/ B-D

Taper size	MVS connection		X ₁	l ₁	d ₅	kg	Order No.	
	d ₄	d ₃						
40	50	28	46	26,90	-	1,1	327 005	
	63	36	66	46,90	-	1,4	327 006	
50	50	28	46	26,90	-	2,9	327 017	
	50	28	186	166,90	60,0	6,0	327 025	
	50	28	186	166,90	49,5	4,9	327 033	new
	63	36	56	36,90	-	3,2	327 018	
	63	36	206	186,90	78,0	8,9	327 026	
	63	36	206	186,90	-	6,7	327 034	new
	80	36	56	36,90	-	3,7	327 010	
	80	36	256	236,90	90,0	13,6	327 027	
	80	36	256	236,90	-	11,5	327 035	new

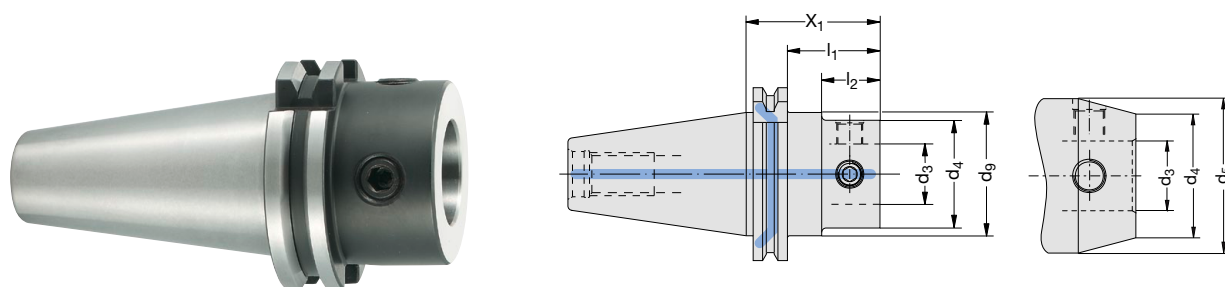
NOVI^{TECH} Master shank with MVS

With data carrier drilling according to DIN 69873-E10

balanced Balance quality: G 6.3 at 15 000 rpm**MAS BT**

Taper size	MVS connection		X_1	l_1	d_5	kg	Order No.
	d_4	d_3					
40	50	28	54	27,0	-	1,2	327 019
	63	36	64	37,0	-	1,5	327 020
50	50	28	65	26,8	-	3,9	327021
	50	28	205	166,8	60,0	7,0	327029*
	50	28	205	166,8	49,5	5,9	327036*
	63	36	75	36,8	-	4,2	327022
	63	36	225	186,8	78,0	9,9	327030*
	63	36	225	186,8	-	7,8	327037*
	80	36	75	36,8	-	4,7	327023
	80	36	275	236,8	90,0	14,8	327031*
	80	36	275	236,8	-	12,5	327038*

* available in the first quarter of 2018

**CAT**

Taper size	MVS connection		X_1	l_1	l_2	d_5	d_9	kg	Order No.
	d_4	d_3							
40	50	28	62	42,9	-	-	44,55	1,3	353004
	63	36	82	62,9	-	-	44,55	1,8	353005
50	50	28	62	42,9	27	-	69,95	3,3	353007
	50	28	202	182,9	167	60,0	69,95	7,0	353019
	50	28	202	182,9	167	49,5	69,95	5,3	353025
	63	36	72	52,9	37	-	69,95	3,6	353008
	63	36	222	202,9	-	78,0	69,95	9,3	353020
	63	36	222	202,9	-	-	69,95	7,1	353023
	80	36	72	52,9	187	-	69,95	4,1	353009
	80	36	272	252,9	-	90,0	69,95	14,2	353021
	80	36	272	252,9	-	-	69,95	11,9	353024

STUDY CASE 1

Project: Cast iron wheel housing
Tooling Solution: Wohlhaupter NOVI^{TECH} with precision boring tool
564 045 Balance, Replaceable Insert F103 04 MN158 WHC79

The Application

- **Machining** = 80^{H7}
- **Tool length** = 472 mm
- **Material** = GG25

Boring tool running at the following parameters:

- 995 U/min
- V_c 250 m/min
- 0,08 mm/U
- 80 mm/min

Target:

Improved machining time and process reliability during machining with a D/L ratio of 7,5xD

The Result:

Improvement of the surface quality and reduction of the machining time by 100 % with a comparable tool design.



STUDY CASE 2

Projekt: Application test Wohlhaupter
Tooling Solution: Wohlhaupter NOVI^{TECH} with precision boring tool VarioBore Replaceable Insert F101 02 GN 112 WHT32

The Problem

A standard superstructure with steel extension was used.

- **Bearbeitung** = 14^{H7}
- **Auskraglänge** = 480 mm (9xD)
- **Werkstoff** = 16MnCr5

Boring tool running at the following parameters:

- 1800 U/min
- V_c 80 m/min
- 0,06 mm/U
- 109 mm/min

1

With the cantilever length with standard components, no reliable machining was possible.

The Solution:

Tool design with NOVI^{TECH}

Boring tool running at the following parameters:

- 4040 U/min
- V_c 180 m/min
- 0,06 mm/U
- 218 mm/min

2

Reliable machining with a achieved surface quality $R_a = 0,8$ / $R_z = 5,88$

The Advantages:

In the case of unfavorable tool designs, NOVI^{TECH} vibration damping helps to increase process reliability and reduce machining times.

Make sure that the NOVI^{TECH} reduction is mounted as close as possible to the machining tool.



Deutschland | Österreich | Schweiz

Wohlhaupter GmbH
Maybachstraße 4
72636 Frickenhausen
Germany

Telefon:
+49 (0) 7022 408-0
Email:
info@wohlhaupter.de
Web:
www.wohlhaupter.com

Europa

Allied Machine & Engineering Co. (Europe) Ltd.
93 Vantage Point
Pensnett Estate
Kingswinford
West Midlands
DY6 7FR England

Telefon:
+44 (0) 1384 400900
Email:
enquiries.eu@alliedmachine.com
Web:
www.alliedmachine.com

Vereinigte Staaten

Allied Machine & Engineering
120 Deeds Drive
Dover OH 44622
United States

Telefon:
+1 330 343 4283
Fax:
+1 330 602 3400

Allied Machine & Engineering
485 W Third Street
Dover OH 44622
United States

Telefon:
+1 330 343 4283
Fax:
+1 330 364 7666
(Engineering Dept.)

Asien

Wohlhaupter India Pvt. Ltd.
B-23, 2nd Floor
B Block Community Centre
Janakpuri, New Delhi - 110058
India

Telefon:
+91 11 41827044



台北: 02-27030193
台中: 04-24636890

Website: www.gcarbidgetool.com

www.wohlhaupter.com

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