

**WOHLHAUPTER®****ALLIED MACHINE  
& ENGINEERING**

Holemaking Solutions for Today's Manufacturing



Drilling



Reaming



Burnishing



Threading



Specials

**NOVITECH****NOVITECH**

- ▶ Vibration dampened intermediate modules

[www.wohlhaupter.com](http://www.wohlhaupter.com)

# NOVI<sup>TECH</sup> vibration dampened intermediate modules



## The new Wohlhaupter vibration dampened intermediate modules

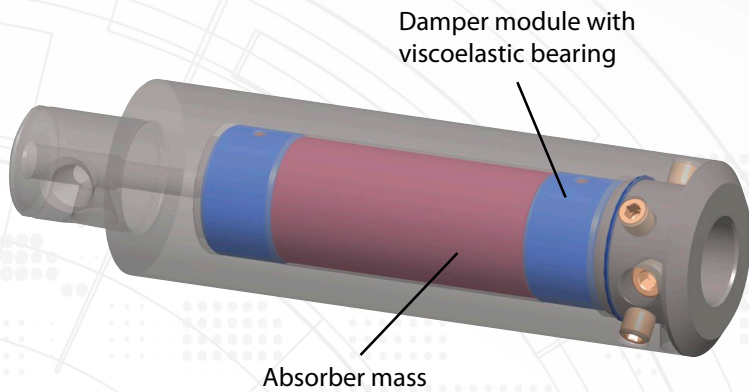
With the NOVI<sup>TECH</sup> series, Wohlhaupter is now introducing intermediate modules for high-precision and economical boring operations up to 10xD. NOVI<sup>TECH</sup> was developed to increase productivity, surface quality and process reliability of boring operations, as well as extending the life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

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

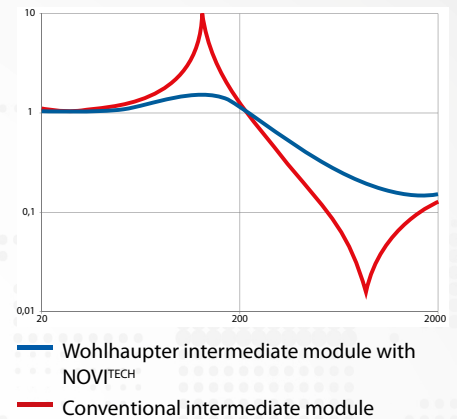
## Our Highlights – Your Benefits

- ▶ 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<sup>TECH</sup> vibration dampened intermediate modules



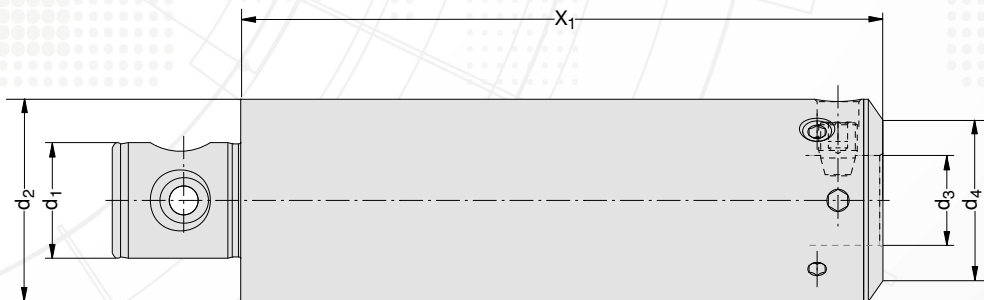
Vibration chart:



## 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<sup>TECH</sup>. Inside the patent-pending NOVI<sup>TECH</sup> system is a viscoelastically mounted damper module, which reduces vibrations during the machining of diameters up to 205 mm. Thus, the NOVI<sup>TECH</sup> products are much more efficient than other commercially available systems, which are equipped with a pure vibration absorber made.

## NOVI<sup>TECH</sup> Dimensions and Order No.



MVS connection								Order No.
d <sub>2</sub>	d <sub>1</sub>	d <sub>4</sub>	d <sub>3</sub>	X <sub>1</sub>	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 *			

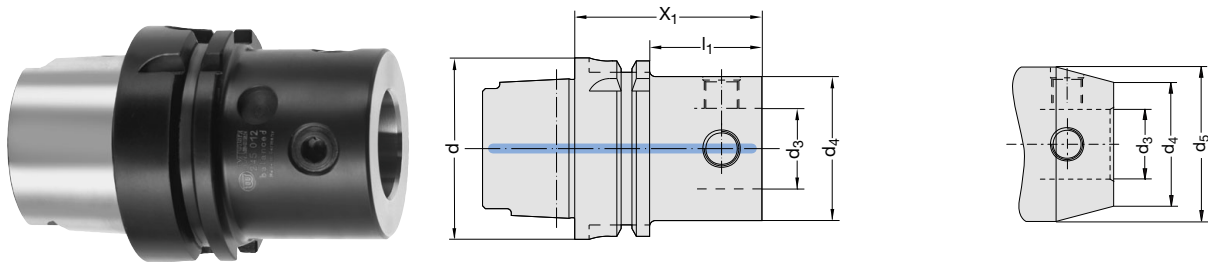
\* available in the first quarter of 2018

\*\* d<sub>2</sub> = 49,5 mm

## NOVI<sup>TECH</sup> Master shank with MVS

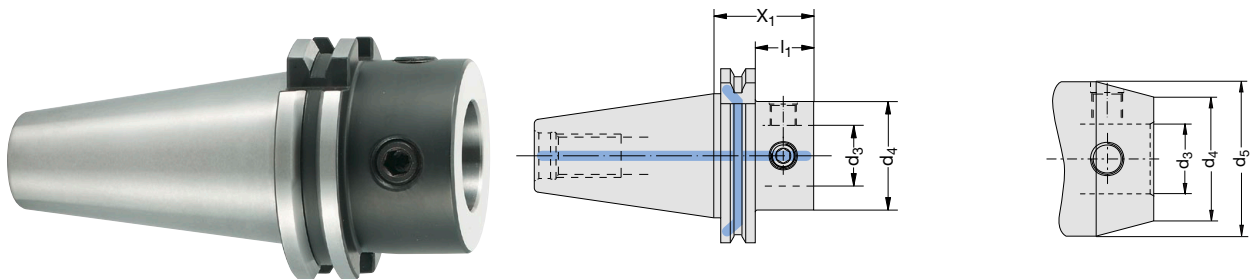
With data carrier drilling according to DIN 69873-E10

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



### DIN 69 893 HSK

HSK-A	MVS connection		X <sub>1</sub>	l <sub>1</sub>	d <sub>5</sub>	kg	Order No.	
	d <sub>4</sub>	d <sub>3</sub>						
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

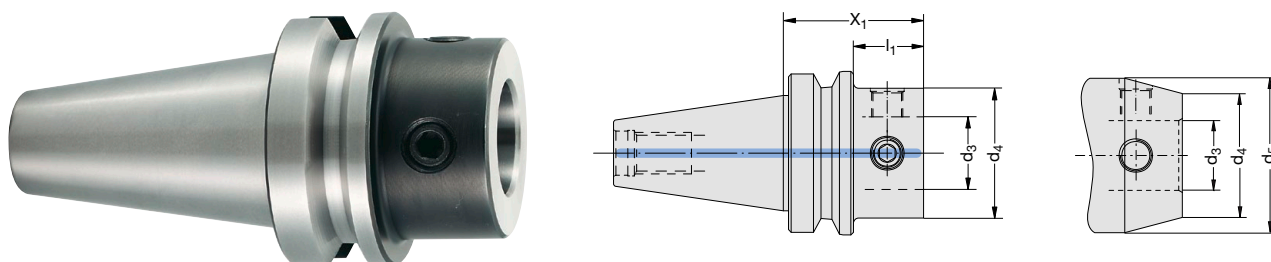


### DIN69871-AD/ B-D

Taper size	MVS connection		X <sub>1</sub>	l <sub>1</sub>	d <sub>5</sub>	kg	Order No.	
	d <sub>4</sub>	d <sub>3</sub>						
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

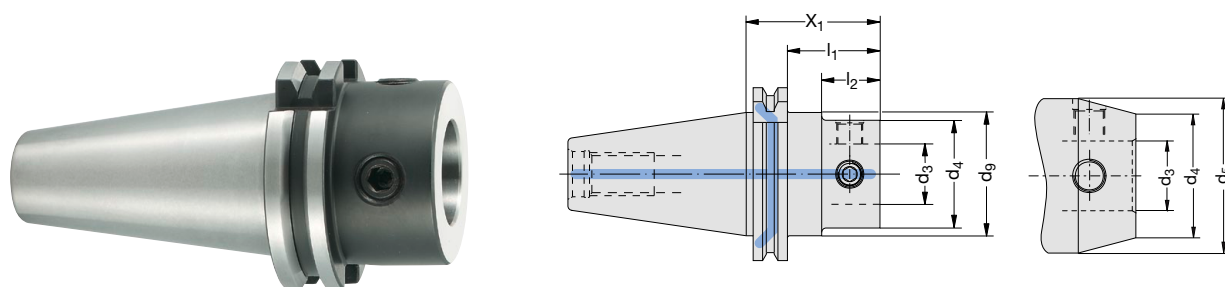
**NOVI<sup>TECH</sup> Master shank with MVS**

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	<b>327 019</b>	
	63	36	64	37,0	-	1,5	<b>327 020</b>	
50	50	28	65	26,8	-	3,9	<b>327021</b>	
	50	28	205	166,8	60,0	7,0	<b>327029*</b>	
	50	28	205	166,8	49,5	5,9	<b>327036*</b>	new
	63	36	75	36,8	-	4,2	<b>327022</b>	
	63	36	225	186,8	78,0	9,9	<b>327030*</b>	
	63	36	225	186,8	-	7,8	<b>327037*</b>	new
	80	36	75	36,8	-	4,7	<b>327023</b>	
	80	36	275	236,8	90,0	14,8	<b>327031*</b>	
	80	36	275	236,8	-	12,5	<b>327038*</b>	new

\* 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	<b>353004</b>	
	63	36	82	62,9	-	-	44,55	1,8	<b>353005</b>	
50	50	28	62	42,9	27	-	69,95	3,3	<b>353007</b>	
	50	28	202	182,9	167	60,0	69,95	7,0	<b>353019</b>	new
	50	28	202	182,9	167	49,5	69,95	5,3	<b>353025</b>	new
	63	36	72	52,9	37	-	69,95	3,6	<b>353008</b>	
	63	36	222	202,9	-	78,0	69,95	9,3	<b>353020</b>	new
	63	36	222	202,9	-	-	69,95	7,1	<b>353023</b>	new
	80	36	72	52,9	187	-	69,95	4,1	<b>353009</b>	
	80	36	272	252,9	-	90,0	69,95	14,2	<b>353021</b>	new
	80	36	272	252,9	-	-	69,95	11,9	<b>353024</b>	new



# STUDY CASE 1

**Project:** Cast iron wheel housing  
**Tooling Solution:** Wohlhaupter NOVI<sup>TECH</sup> with precision boring tool  
564 045 Balance, Replaceable Insert F103 04 MN158 WHC79

## The Application

- **Machining** = 80<sup>H7</sup>
- **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<sup>TECH</sup> with precision boring tool VarioBore Replaceable Insert F101 02 GN 112 WHT32

## The Problem

A standard superstructure with steel extension was used.

- **Bearbeitung** = 14<sup>H7</sup>
- **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<sup>TECH</sup>

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<sup>TECH</sup> vibration damping helps to increase process reliability and reduce machining times.

Make sure that the NOVI<sup>TECH</sup> reduction is mounted as close as possible to the machining tool.



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