

Holemaking Solutions for Today's Manufacturing



Drilling



Reaming



Burnishing



Threading



Specials

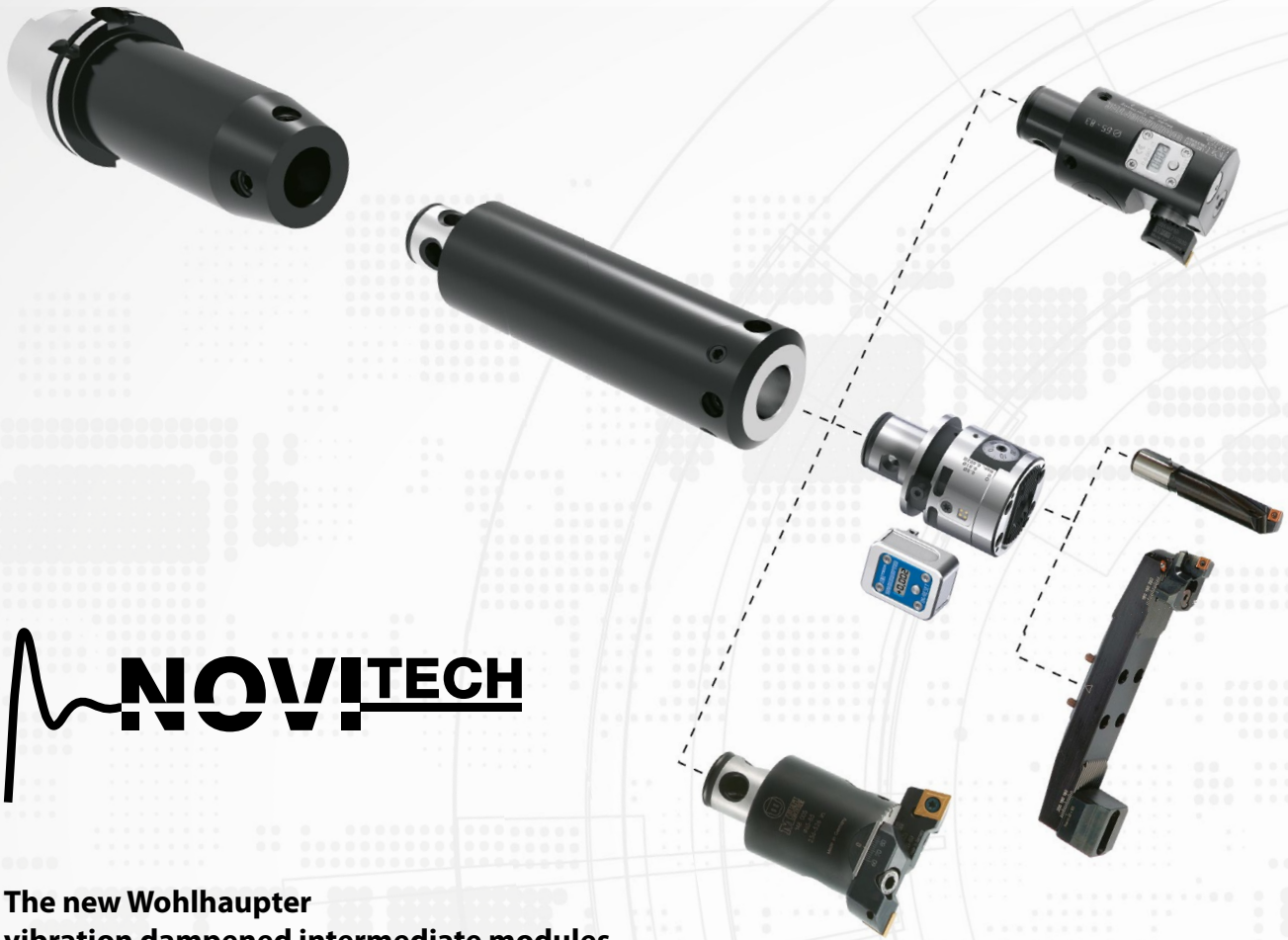
NOVITECH



NOVITECH

▶ Vibration dampened intermediate modules

NOVI^{TECH} vibration dampened intermediate modules



The new Wohlhaupter vibration dampened intermediate modules

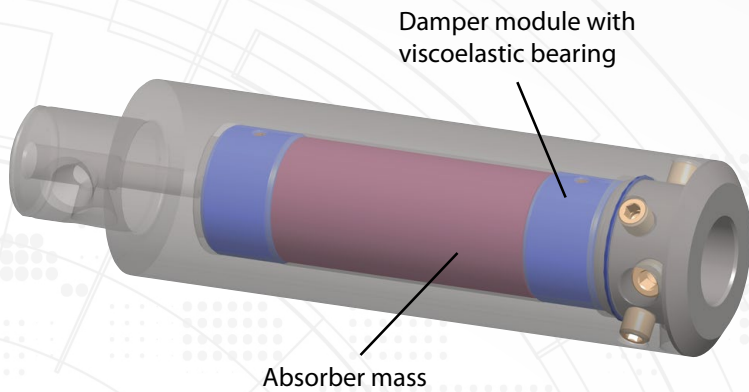
With the NOVI^{TECH} series, Wohlhaupter is now introducing intermediate modules for high-precision and economical boring operations up to 10xD. NOVI^{TECH} was developed to increase productivity, surface quality and process reliability of boring operations, as well as extending the life expectancy of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

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

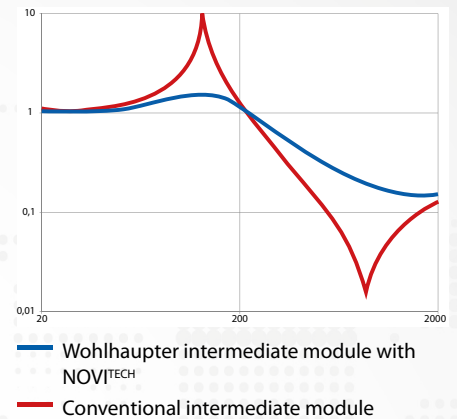
Our Highlights – Your Benefits

- ▶ 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



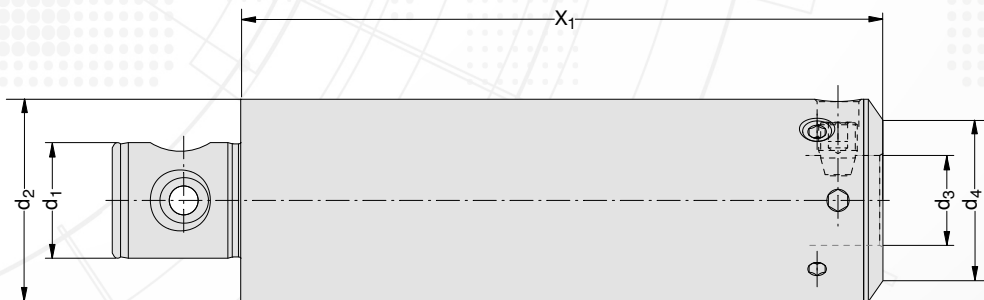
Vibration chart:



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 *	

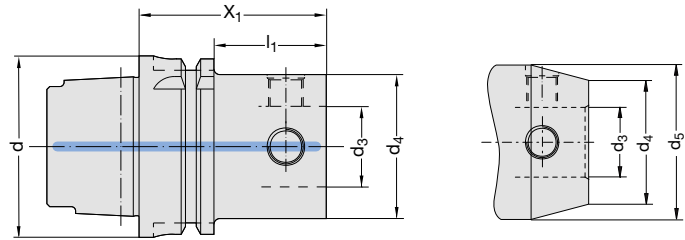
* available from the second half of 2018

** d₂ = 49,5 mm

NOVI^{TECH} Master shank with MVS

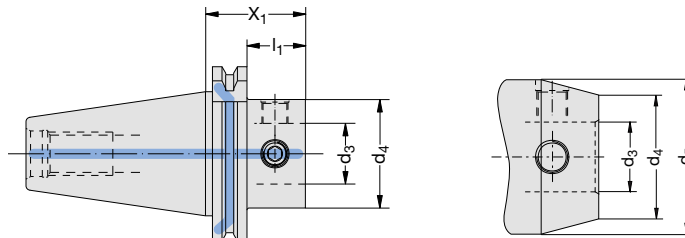
With data carrier drilling according to DIN 69873-E10

balanced Balance quality: G 6.3 at 15 000 rpm



DIN 69 893 HSK

HSK-A d	MVS connection		X ₁	l ₁	d ₅	kg	Order No.	
	d ₄	d ₃						
63	50	28	65	39,00	-	1,1	245012	
	63	36	80	-	-	1,5	245013	
100	50	28	65	36,00	-	2,4	245014	
	50	28	180	151,00	60,0	5,0	246020	
	50	28	180	151,00	49,5	4,0	246021	new
	63	36	80	51,00	-	2,9	245015	
	63	36	205	176,00	78,0	7,8	246019	new
	63	36	205	176,00	-	5,9	246022	new
	80	36	80	51,00	-	3,7	245016	
	80	36	255	226,00	90,0	12,6	246018	new
	80	36	255	226,00	-	10,4	246023	new

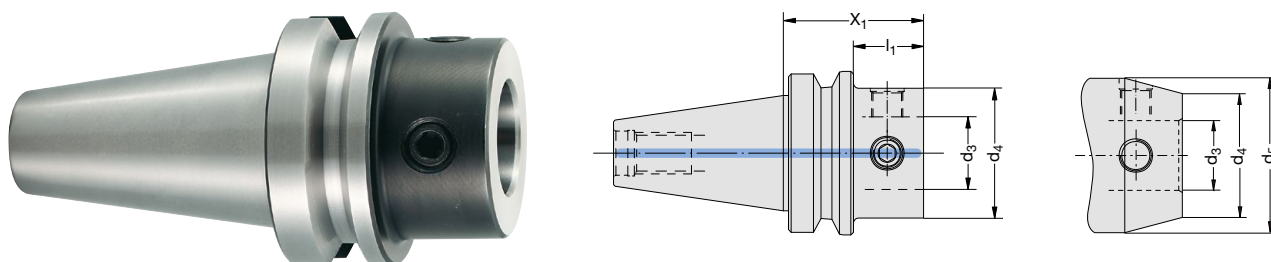


DIN69871-AD/ B-D

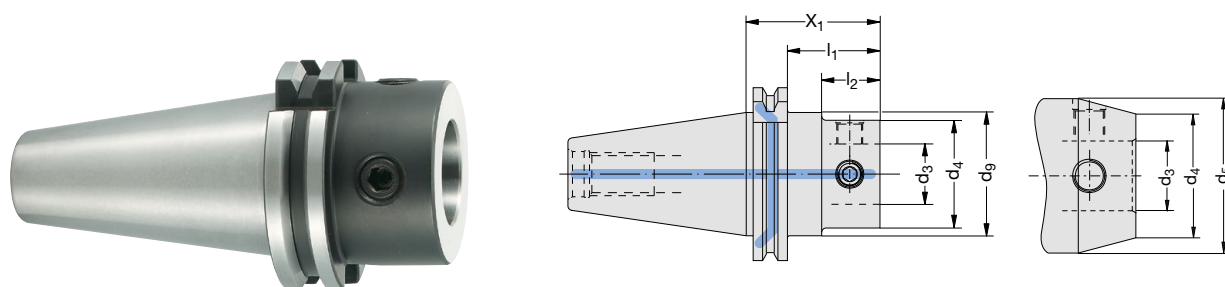
Taper size	MVS connection		X ₁	l ₁	d ₅	kg	Order No.	
	d ₄	d ₃						
40	50	28	46	26,90	-	1,1	327005	
	63	36	66	46,90	-	1,4	327006	
50	50	28	46	26,90	-	2,9	327017	
	50	28	186	166,90	60,0	6,0	327025	
	50	28	186	166,90	49,5	4,9	327033	new
	63	36	56	36,90	-	3,2	327018	
	63	36	206	186,90	78,0	8,9	327026	
	63	36	206	186,90	-	6,7	327034	new
	80	36	56	36,90	-	3,7	327010	
	80	36	256	236,90	90,0	13,6	327027	new
	80	36	256	236,90	-	11,5	327035	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	new
	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	new
	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	new

**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	new
	50	28	202	182,9	167	49,5	69,95	5,3	353025	new
	63	36	72	52,9	37	-	69,95	3,6	353008	
	63	36	222	202,9	-	78,0	69,95	9,3	353020	new
	63	36	222	202,9	-	-	69,95	7,1	353023	new
	80	36	72	52,9	187	-	69,95	4,1	353009	
	80	36	272	252,9	-	90,0	69,95	14,2	353021	new
	80	36	272	252,9	-	-	69,95	11,9	353024	new

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

Project: 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.

- **Machining** = 14^{H7}
- **Tool length** = 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.



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