

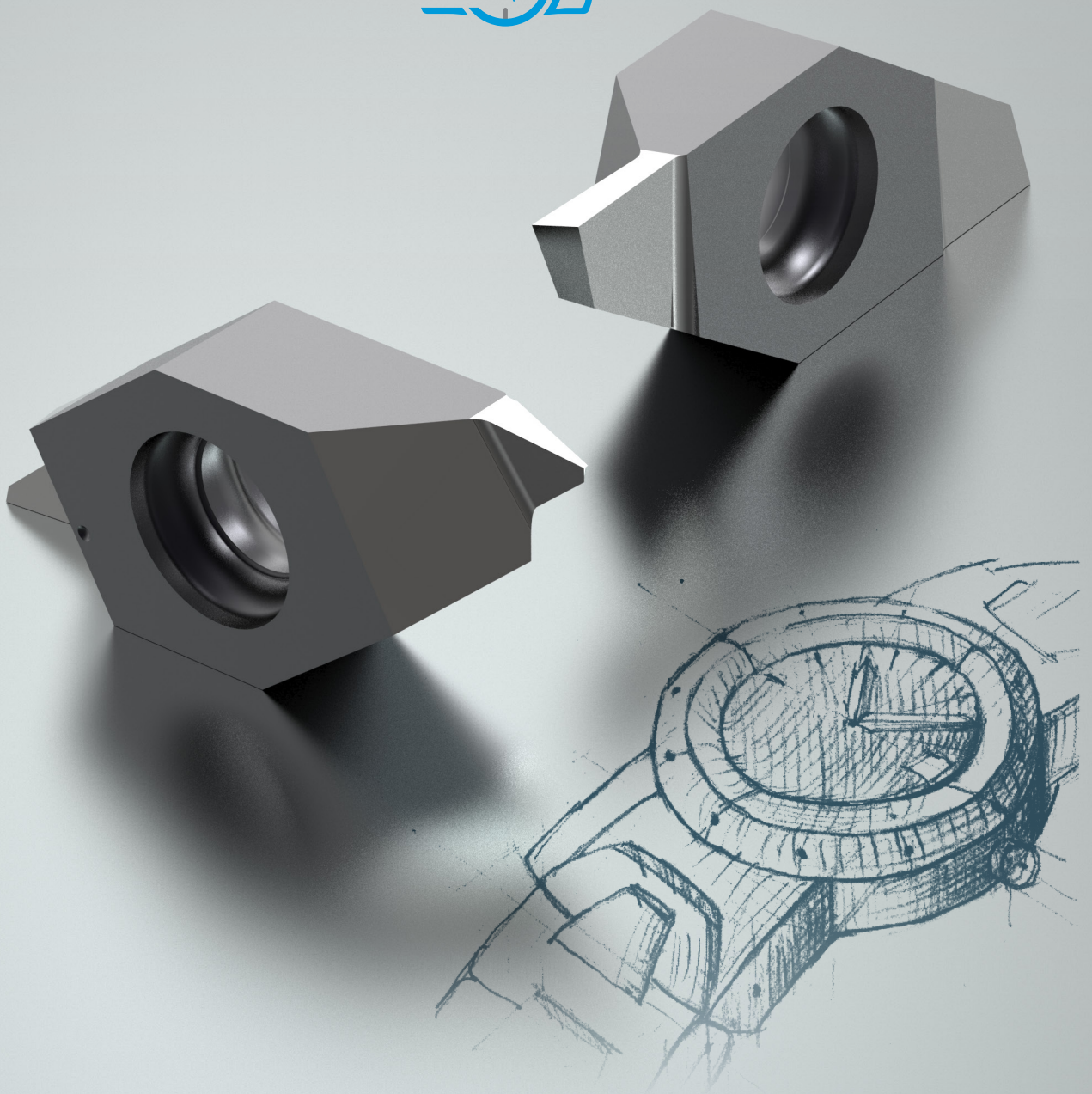
UTILIS  
**multidec**<sup>®</sup>  
swiss type tools

ENGLISH 

**multidec**<sup>®</sup>-CUT

UTILIS  
**watch-line** 

**INNOVATION**



future since **1915**

**UTILIS**<sup>®</sup>  
Tooling for High Technology

## multidec®-CUT, WATCH-LINE inserts

The WATCH-LINE range of turning inserts is designed for the efficient machining of very small parts in the watchmaking industry.

This range of inserts is characterized by:

- Very high grinding quality for very sharp cutting edges
- High positioning accuracy of the insert in all three axes
- Very wear-resistant grades and extra-fine PVD coatings



### Legend

#### Dimensions

All dimensions are in millimeter (mm).

#### Recommended usage

- Preferred application
- Possible application
- Application not recommended

#### Availability

- Standard articles
- Standard articles, new in this catalogue

#### Categorization of materials

The information on using multidec® tools refers to certain materials.

The materials to be machined are categorized in the same color throughout the entire catalog:

<b>P</b>	Steel (non-alloyed, low alloyed and high alloyed)
<b>M</b>	Stainless steel
<b>S</b>	Titanium and heat-resistant alloys
<b>N</b>	Non-ferrous metals (gold, aluminum and brass)
<b>H</b>	Hard materials

#### Order designation

To the designation of the selected type of product, the desired cutting material code must be added.

Order designation		Carbide			
		○	●	○	●
		○	○	●	●
		○	○	●	○
		●	●	-	○
		-	-	○	-
<b>L</b>	<b>R</b>	UHM 10	UHM 10 HP1	UHM 10 TX1	UHM 10 HF1
<b>WATCH-LINE</b>					
1602 W-0.8-3 L 25	1602 W-0.8-3 R 25	■	■	■	■
1602 W-1.0-3 L 25	1602 W-1.0-3 R 25	■	■	■	■

Example: 1602 W-0.8-3 L 25 UHM 10

**CUT off**

Application	Geometry
	 <b>1602 W...</b>

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**Front turning**

Application	Geometry
	 <b>1603 W...</b>

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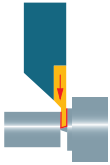
**Back turning**

Application	Geometry
	 <b>1604 W...</b>

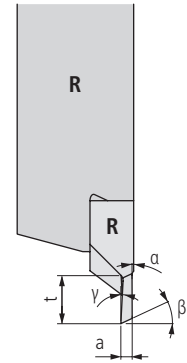
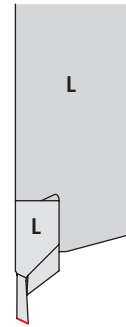
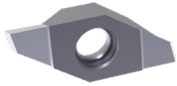
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**Grades and fields of application**

Grade	Coating	Description
UHM10	uncoated	Wear-resistant fine grain grade without coating with extremely sharp cutting edge. Suitable for easy-to-machine materials such as brass or leaded free-cutting steels.
UHM10 HP1	AlTiN extra-fine <1µm	Wear-resistant micro-grain grade with thin all-round coating for an optimally sharp cutting edge. Suitable for machining almost all materials, especially free-cutting steel.
UHM10 TX1	TiSiN extra-fine <1µm	Wear-resistant micro-grain grade with thin TiSiN coating for very sharp cutting edges. Particularly suitable for machining titanium, stainless steels and high-alloy materials.
UHM10 HF1	AlCrN extra-fine <1µm	Wear-resistant micro-grain grade with thin AlCrN coating for very sharp cutting edges. Particularly suitable for fine finishing operations in steel and stainless steel.



CUT off



1602 W...

Order designation		Carbide				Dimensions						Holder*		
		○	●	○	●									
		○	○	●	○									
		●	○	-	○									
		-	-	○	-									
<b>L</b>	<b>R</b>	UHM 10	UHM 10 HP1	UHM 10 TX1	UHM 10 HF1	a	t	$\alpha$	$\beta$	$\gamma$				
<b>WATCH-LINE</b>														
1602 W-0.8-3 L 25	1602 W-0.8-3 R 25	■	■	■	■	0.8	3	0.2°	25°	3°				1600...
1602 W-1.0-3 L 25	1602 W-1.0-3 R 25	■	■	■	■	1	3	0.2°	25°	3°				1600...

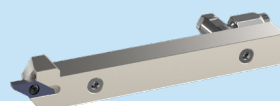


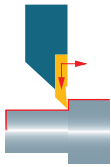
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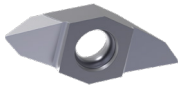
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- Holders multidec®-CUT 1600 📄 90-102, 104

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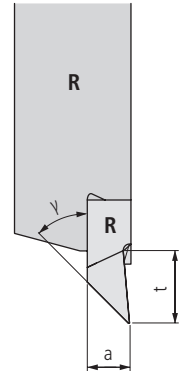
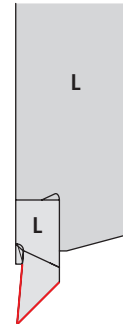
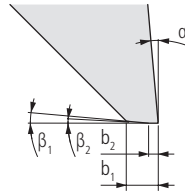




Front turning



1603 W...



Order designation		Carbide				Dimensions								Holder*
		○	●	○	●									
		○	○	●	●									
		○	○	○	○									
		●	●	-	○									
		-	-	○	-									
<b>L</b>	<b>R</b>	UHM 10	UHM 10 HP1	UHM 10 TX1	UHM 10 HF1	a	b <sub>1</sub>	b <sub>2</sub>	t	α	β <sub>1</sub>	β <sub>2</sub>	γ	

**WATCH-LINE**

1603 W-3.0-5 L 010-3/0/45	1603 W-3.0-5 R 010-3/0/45	■	■	■	■	3	0.1	—	5	3°	0°	—	45°	1600...
1603 W-3.0-5 L 010-1/0/45	1603 W-3.0-5 R 010-1/0/45	■	■	■	■	3	0.1	—	5	1°	0°	—	45°	1600...
1603 W-3.0-5 L 010/003-5/5/45	1603 W-3.0-5 R 010/003-5/5/45	■	■	■	■	3	0.1	0.03	5	5°	5°	0°	45°	1600...

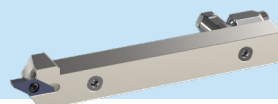


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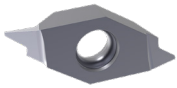
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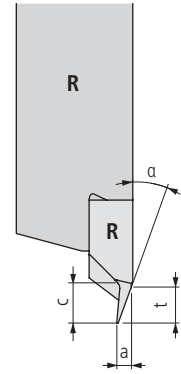
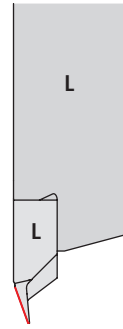
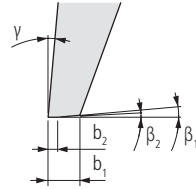
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Back turning



1604 W...



Order designation		Carbide				Dimensions							Holder*		
		○	●	○	●										
		○	○	●	○										
		●	●	-	○										
		-	-	○	-										
<b>L</b>	<b>R</b>	UHM 10	UHM 10 HP1	UHM 10 TX1	UHM 10 HF1	a	b <sub>1</sub>	b <sub>2</sub>	c	t	α	β <sub>1</sub>	β <sub>2</sub>	γ	

**WATCH-LINE**

1604 W-1.0-1.0 L 003-45/0/5	1604 W-1.0-1.0 R 003-45/0/5	■	■	■	■	1	0.03	-	2.8	1	45°	0°	-	5°	1600...
1604 W-1.0-0.9 L 010-45/0/5	1604 W-1.0-0.9 R 010-45/0/5	■	■	■	■	1	0.1	-	2.8	0.9	45°	0°	-	5°	1600...
1604 W-1.0-2.5 L 010/003-20/5/5	1604 W-1.0-2.5 R 010/003-20/5/5	■	■	■	■	1	0.1	0.03	2.8	2.5	20°	5°	0°	5°	1600...

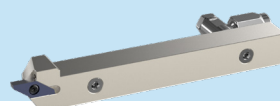


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**multidec® General catalog 2022/23**

With the slogan **"The reference in micro machining"**, UTILIS presents the multidec® general catalogue 2022/23. The general catalogue contains a wide product range with efficient tools for your needs.



Article 300362

**multidec®-CUT – G-LINE inserts**

The performance boost in machining. New technology for creation of any three-dimensional chip-breaker shapes.



Article 400870

**multidec®-MICRO TOOLS – Solid carbide micro tools**

multidec®-MICRO TOOLS are performance solid carbide micro tools for drilling, milling and milling TORX® forms. Economical, process-safe and precise, even for materials which are difficult to machine.



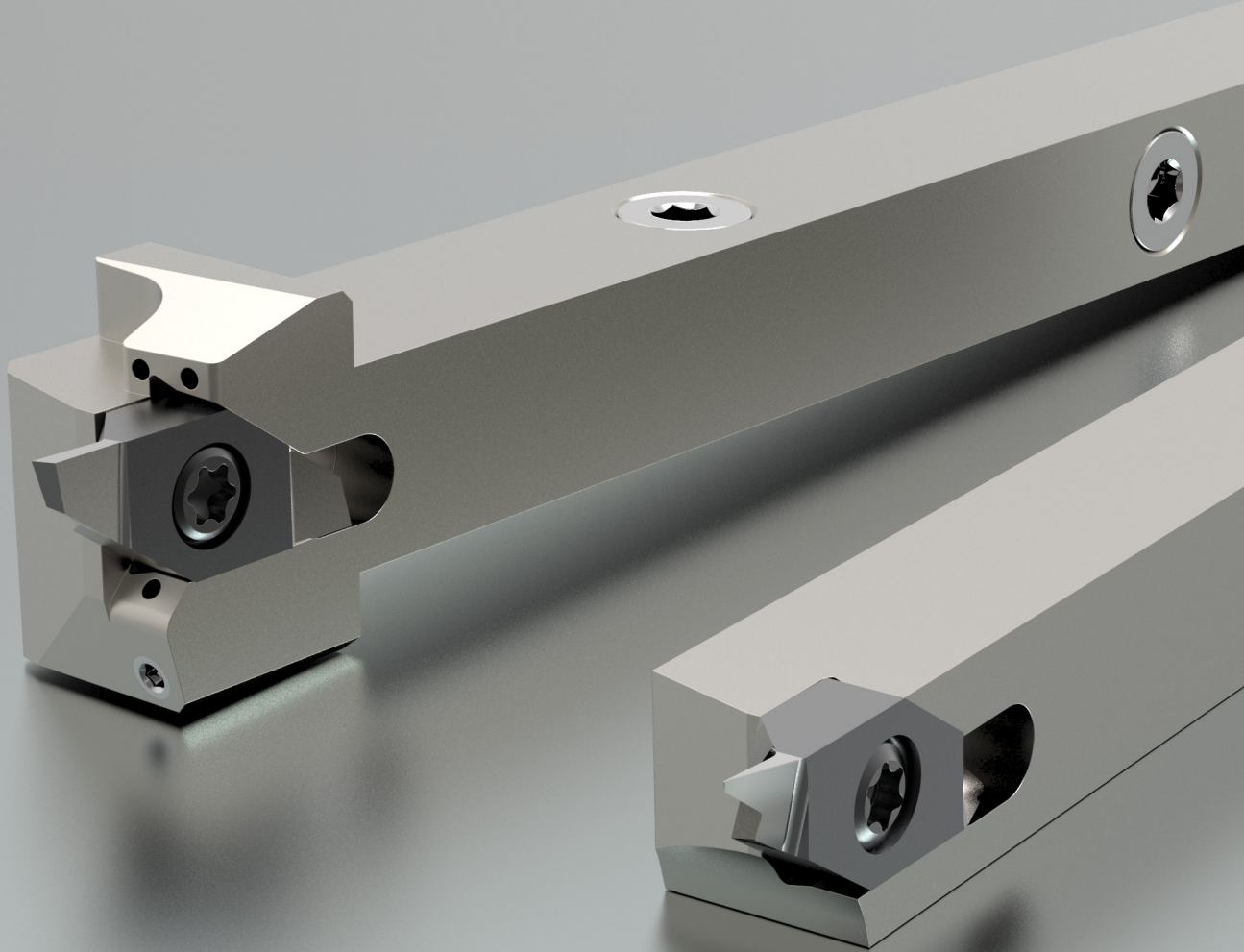
Article 400898

**multidec®-CARE – From the idea to the machine**

You have an order or an idea, and you want to know how to implement it? Together, we can realise a cost-effective solution for you.



Article 400885



**UTILIS<sup>®</sup>**  
Tooling for High Technology

■ **Utilis AG, Precision Tools**

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