

# INTERAPID Small Bench SHE.30 or SHE.35

The ideal solution for precise inspection of small part series dedicated to watchmaking and precision mechanics – Fast in measuring and changing from a part to another – Wide choice of measuring inserts specially designed for the broadest variety of metrology applications.



0 to 30 mm

**Mobile measuring bolt** mounted on a plain bearing, also fitted with a semi-circular releasing disc plate.

**Measuring inserts** supplied in pairs. One is tighten on the measuring bolt, the other on the fixed anvil using one indexing pin with 1 mm dia. and two M1,4 clamping screws.

**Resting table with vertical and lengthwise adjustment facility**  
Table surface area: 24 x 9,5 mm.  
Setting range: 15 mm upright, 14 mm lengthwise.  
With tightening screws.

**Sensor** (must be ordered separately), e.g. dial gauge, electronic or precision indicator, analogue or digital probe with a 8 mm dia. shaft.

Main body in cast iron. Other parts in hardened and ground steel.

Produced by used sensor. The SH.30 model has no spring-loaded measuring force.

Accuracy is usually influenced by the measuring instrument as well as both flatness and parallelism of the measuring faces of used inserts.

**Clamping precision**  
Tolerance in flatness of both clamping faces: 0,05 mm.  
Tolerance for the axial position of both indexing pins against bolt axis: 0,05 mm.  
Tolerance for the parallel position of the table surface against bolt axis: 0,05 mm.

Also see drawing

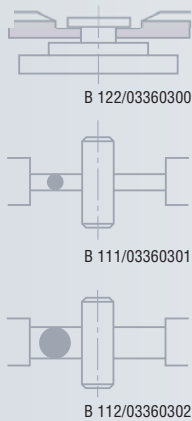
2,1 kg

Shipping packaging

Declaration of conformity

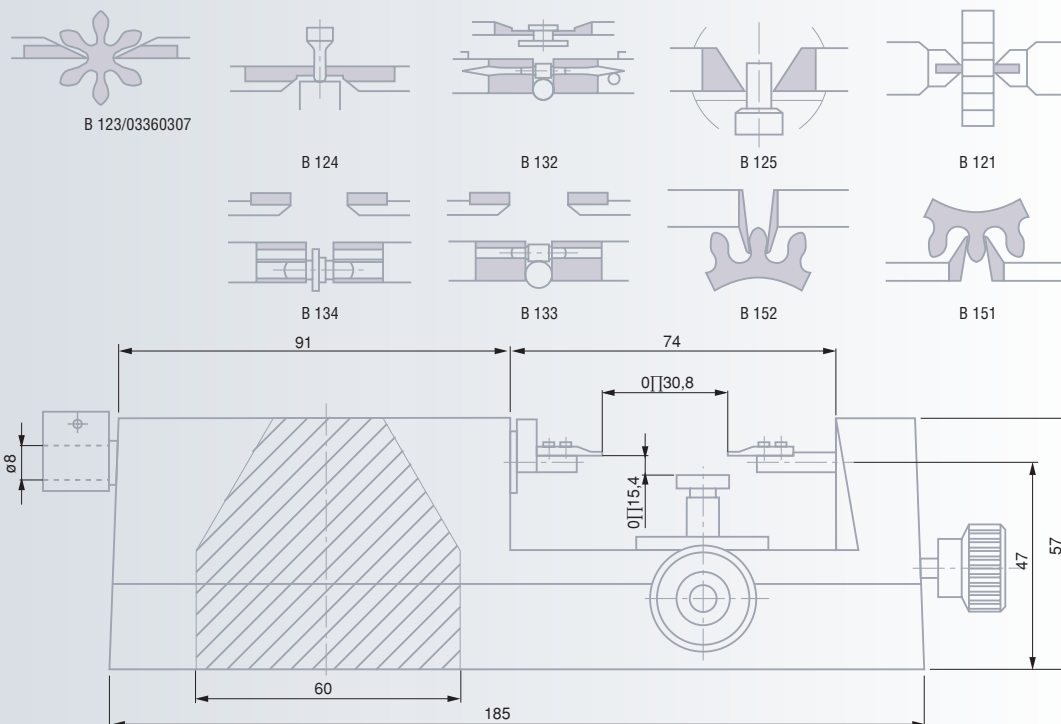


## INTERAPID SHE.30 for External Dimensions



No	Symbol	Description
03330004		INTERAPID small measuring bench SHE.30 for external dimensions, without measuring inserts
<i>Tungsten carbide tipped measuring inserts available in pairs</i>		
03360300		Flat measuring face, 3,5 mm long, 0,4 mm thick*
03360301		Cylindrical insert with a flat measuring face, 1,2 mm diameter
03360302		Cylindrical insert with a flat measuring face, 2 mm diameter
03360307		Knife-edged measuring face, 3,5 mm long, 0,05 mm thick, 40°
* Measuring inserts with thickness to 0,1 mm or 1,5 mm also available upon request		

### Measuring inserts (For a detailed description, see on page G-28)



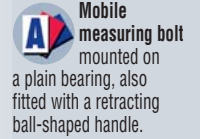
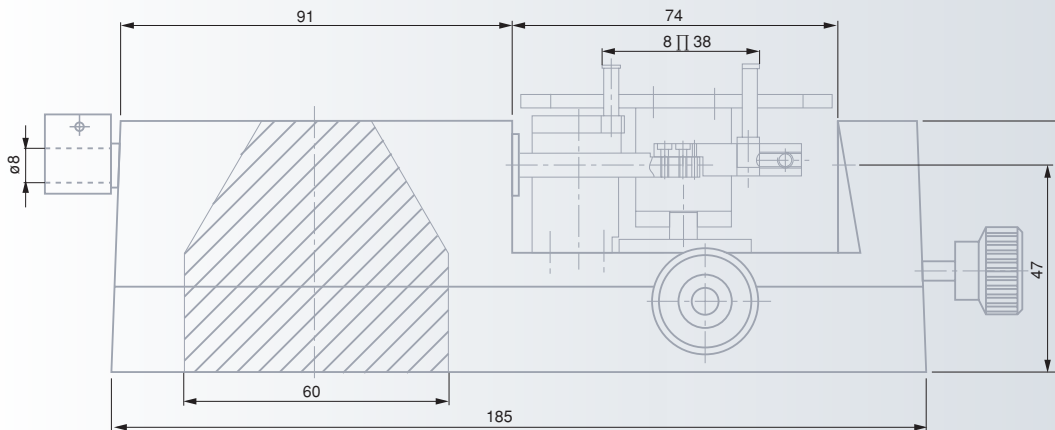
INTERAPID SHE.35 for Internal Dimensions



**03330006 INTERAPID small bench SHE.35 for internal dimensions, with measuring inserts included.**

8 ÷ 38 mm

Inserts with special design also available on request



Measuring inserts supplied in pairs. Can be exchanged. Provided with a 4 mm dia. fixing shaft.

Height adjustable resting table

Table surface area: 40 x 70 mm.  
Setting range: 8 mm.  
1 tightening screw.  
Sensor (must be ordered separately), e.g. dial gauge, electronic or precision indicator, analogue or digital probe with a 8 mm dia. clamping shaft.

Main body in cast iron. Other parts in hardened and ground steel. Inserts with carbide measuring faces.

Produced by used sensor. The bench has no spring-loaded measuring force.

Accuracy is usually influenced by the measuring instrument as well as the type of used inserts.

2,3 kg

Shipping packaging

Declaration of conformity



0 to 82 mm

Insert retraction over 26 mm. 8 h6 clamping bore for the sensor.

Cast-iron base. Other components in hardened and ground steel.

Sensor dependent accuracy

Produced through the sensor (not included)

2,5 kg

Wooden case

Declaration of conformity

Tables and inserts must be ordered together with the small bench as accessories. Correct assembly is ensured by the manufacturer for even greater accuracy.



0 to 50 mm

Insert retraction over 10 mm (using the lift lever). Spindle travel: 15 mm. 8 h6 clamping bore for the sensor.

Cast-iron base. Other components in hardened and ground steel.

Sensor dependent accuracy

Produced through the sensor (not included)

2,8 kg

Wooden case

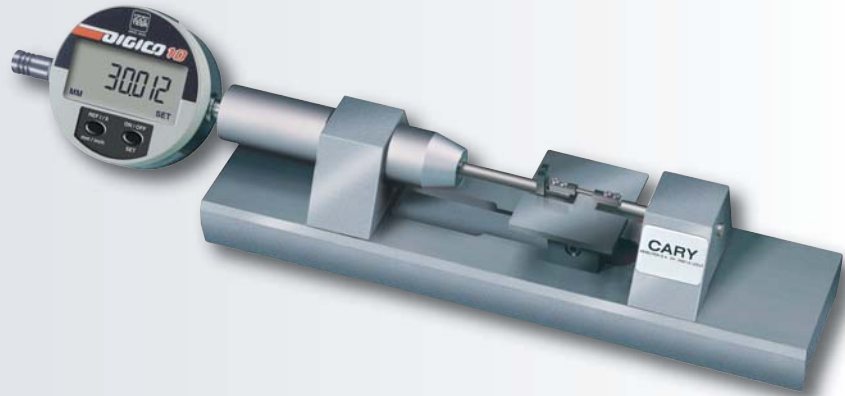
Declaration of conformity

Tables and inserts must be ordered together with the small bench as accessories. Correct assembly is ensured by the manufacturer for even greater accuracy.

## TESA CARY Small Benches

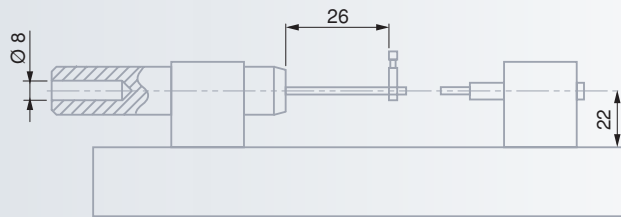
### TESA CARY BML with fixed anvil

Specially designed for fast and accurate measurement of parts used in microtechnique.



S33060776

**TESA CARY small bench BML with fixed anvil.**  
Accessories and dial gauge not included.



### TESA CARY BMS with setting spindle on anvil side

Non-rotative spindle that can be locked in any position.

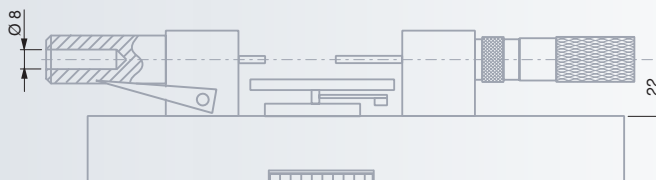
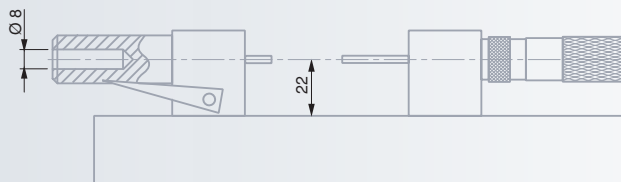


S33060597

**TESA CARY small bench BMS.**  
Accessories and sensor not included.

S33060599

**TESA CARY small bench BMS GT.**  
Accessories and sensor not included.  
Provided with a removable, height adjustable resting table over 8 mm.



### TESA CARY BMH with micrometer element

This bench has a mounted micrometer head with non-rotative, straight guided spindle. The analogue indication features additional graduations with lock by steps of 0,01 mm ensuring quick and reliable positioning of the micrometer. This ingenious device guarantees a positioning accuracy better than 1 µm with a repeatability to < 0,5 µm.



**Nº**

**=**

**S33060038**

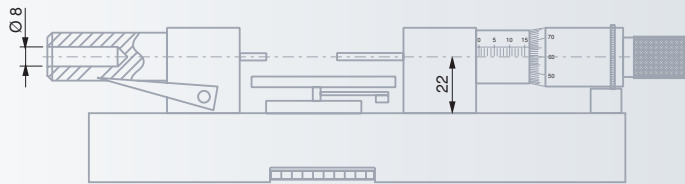
**TESA CARY small bench BMH,**  
accessories and sensor not included.

**S33060007**

**TESA CARY small bench BMH IN,**  
accessories and sensor not included.  
(Analogue indication specially graduated for inside measurement).

**S33060600**

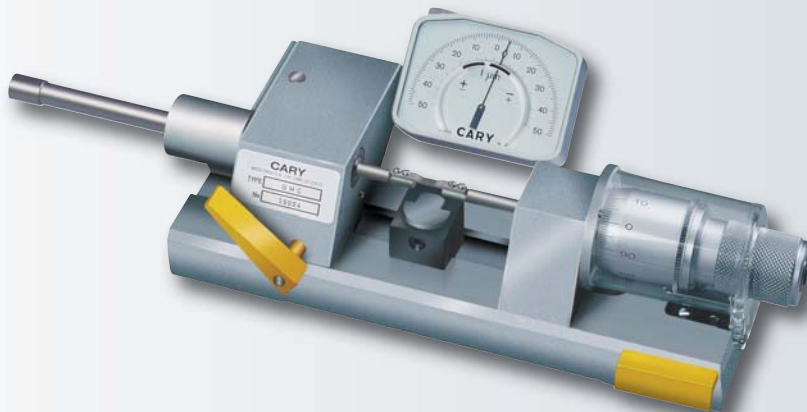
**TESA CARY small bench BMH GT,**  
accessories and sensor not included.  
This model is provided with a removable table with adjustable height over 8 mm using the lever system.



### TESA CARY BMC along with micrometer element and micro-comparator

Derived from the BMH model, this small bench has the following key features:

- Analogue indication through the TESA CARY MCA8-2 micro-comparator positioned right above the measuring point.
- Possible assembly of a TESA inductive probe or electronic indicator.



**Nº**

**=**

**S33060534**

**TESA CARY BMC small bench with MCA8-2 micro-comparator,**  
but without any other accessories.



Insert retraction over 10 mm (using the lift lever). Spindle travel: 15 mm. Spindle lock by steps of 0,01 mm. Plexiglas tube to protect the micrometer. 8 h6 clamping bore for the sensor.



Cast-iron base. Other components in hardened and ground steel.



Sensor dependent accuracy. Measuring force produced through the sensor (not included).

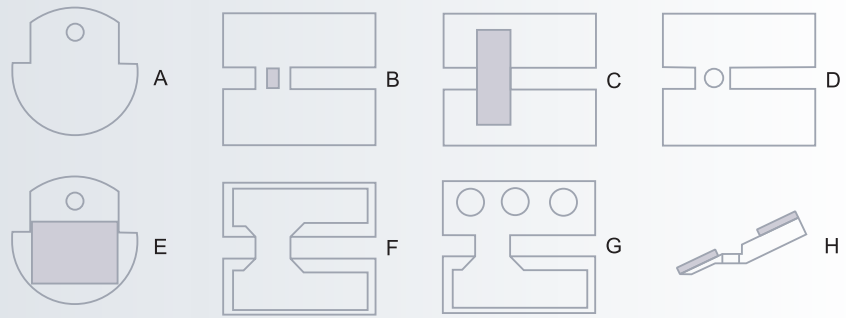


Declaration of conformity. Tables and inserts must be ordered together with the measuring bench as accessories. Correct assembly ensured by the manufacturer for even greater accuracy.





### Resting tables alone



No	Type	Description	
S33060526	BT 1	Small table with a 16 mm diameter	A
S33060524	BT 2	H-shaped table with tungsten carbide resting face (H = 2 mm)	B
S33060523	BT 4	H-shaped table with tungsten carbide long plate (H = 2 mm)	C
S33050416	BT 5	H-shaped steel table, hardened	D
S33060522	BT 6	Small table, 16 mm diameter, with tungsten carbide plate (H = 2 mm)	E
S33050417	BT 8	H-shaped steel table with borders, hardened	F
S33060521	BT 9	H-shaped steel table with 3 cups and borders on the front face, hardened	G
S33060520	BT 10	Tilted tungsten carbide table	H
S33060525		Common table support provided as standard accessory	








### Resting Tables with height adjustable support

No	Type	Description	
S33060519	BT 21	H-shaped table with tungsten carbide resting face (H = 2 mm)	B
S33060518	BT 41	H-shaped table with tungsten carbide long plate (H = 2 mm)	C
S33050418	BT 51	H-shaped steel table, hardened	D
S33060517	BT 81	H-shaped steel table with borders, hardened	F
S33060516	BT 101	Tilted tungsten carbide table	H

Paired inserts for external measuring

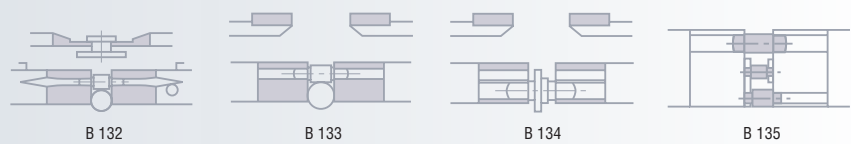
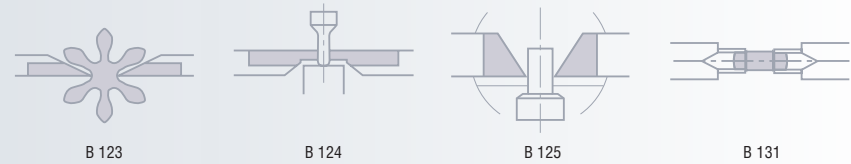
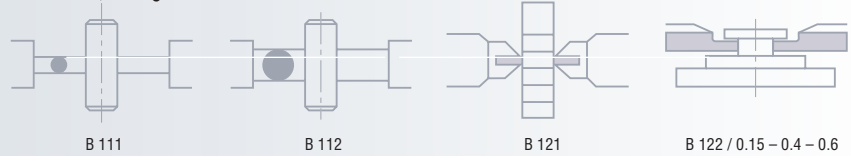


				
Main characteristics			Applications (examples)	Convenient tables
S33010576	B111	Cylindrical, 1,2 mm in diameter, tungsten carbide.	Measure diameters on cylindrical parts, e.g. staffs, arbors, rods, pins, balls, spheres.	A-C-D-F-G
S33010071	B112	Cylindrical, 2 mm in diameter, tungsten carbide.	Same as B111, but plus thickness of prismatic parts, bars, washers, blades.	A-C-D-F-G
S33010056	B121	Knife-shaped, 0,4 mm wide, 2 mm thick, fitted with diamond pads.	Measure diameters on watch stones. Tracked counter-pivots. Mounted on a wire.	C-H
On request	B122-0,4	Flat, 3,5 mm wide, < 0,4 mm thick, tungsten carbide.	Measure diameters and thickness on watch stones, washers etc.	A-C-D-F-G
S33010060	B122	Same as above, but 0,4 mm thick.	Same as above	A-C-D-F-G
On request	B122+0,4	Same as above, but >0,6 mm thick.	Same as above	A-C-D-F-G
S33010377	B123	Knife-shaped, 3,5 mm wide, 0,05 mm thick, 40° angle, tungsten carbide.	Measure diameters on staff pivots of watch wheels and pinions.	A-D-F-G
S33010759	B124	Flat, 3,5 mm wide, with bevel-edge, 0,09 mm thick.	Measure diameters on conical pivots of wheels for watches.	B
S33010758	B124	Flat, 3,5 mm wide, without bevel-edge, 0,12 mm thick.	Same as above	B
S33010449	B125	Knife-shaped, 0,05 mm wide, 1,5 mm thick, tungsten carbide.	Measure diameters on gauges, gauge rods and staffs.	E
S33010949	B131	Cylindrical, 2 mm in diameter, with a 90° vee groove, 0,3 mm in depth, tungsten carbide.	Measure diameters on cylindrical parts, e.g. staffs, arbors, rods, pins, balls, spheres or distance between shoulders.	A-C-D-F-G
S33010958	B132	Flat, 3,5 mm wide, 0,7 mm thick with a 90° vee groove, 0,35 mm in depth, tungsten carbide.	Measure diameters and thickness on watch stones, washers, files or distance between shoulders.	A-C-D-F-G
S33010073	B133	Flat, 3,5 mm wide, 0,6 mm thick with a 90° vee groove, 0,4 mm in depth, tungsten carbide.	Measure distance between shoulders plus diameters of staff, rods, bearing pins, pinions.	A-C-D-F-G
S33010075	B134	Flat, 3,5 mm wide, 0,85 mm thick with two 90° vee grooves, 0,4 mm and ,8 mm in depth, tungsten carbide.	Measure distance between shoulders of staffs, bearing pins, rods, pinions for pivot diameters up to 1,5 mm.	A-C-D-F-G
S33010845	B135	Flat, 5 mm wide, 0,6 mm thick, with one or two 90° vee grooves, 0,4 mm in depth, tungsten carbide. Hardened steel vee racks, 0,12 mm thick.	Measure distance between shoulders or centres of staffs, rods or pinions.	A-D-F-G

Continued on page G-29

Paired inserts for external measuring

		Main characteristics	Applications (examples)	Convenient tables
S33010935	B151	With one or two 90° vee grooves, 0,6 mm in depth, tungsten carbide. Hardened steel vee racks, 0,12 mm thick, adjustable for varying diameters up to 1 mm.	Measure distance between shoulders or centres of staffs, rods or pinions with varying pivot diameters (height adjustment over one insert).	A-D-F-G
S33010934	B152	Jaws, 3,5 mm wide, 1 mm thick, in excess by 1,5 mm on top, full angle to 70°, tungsten carbide.	Width of the leaves of pinions, lowest module 0,05 mm	E
S33010937	BTS121-47			
S33010936	B151-9	Jaws, 1,5 mm thick, in excess sideways by 1,3 mm, full angle to 80°, tungsten carbide.	Width of wheel, lowest module 0,05 mm	



Paired inserts for internal measuring,  
without holder



			Description
S33010933	B171		For internal dimensions from 0,6 to 4 mm
S33010938	B172		For internal dimensions from 1 to 5 mm
S33010939	B173		For internal dimensions from 1,5 to 6 mm
S33010940	B174		For internal dimensions from 2,5 to 7 mm
S33010941	B175		For inside grooves from 1,45 mm
S33010942*	B200		Holder for inserts made to measure internal dimensions from 0,6 to 7 mm

\* Each pair requires the use of the holder.

