

Operating instructions

Twin cutter boring head Ø23.5-153.0 mm



1. Basic safety information



Before first use, please read the operating instructions carefully. These provide important safety information and information concerning use and maintenance of the tool.

This precision boring tool is designed for finishing bores in metallic materials.

Specific information on the machining of individual metallic materials is not the subject of these operating instructions. No other application is permitted and could be dangerous. The manufacturer cannot be held responsible for damage or injury caused by improper use. A damaged tool could endanger your safety! Decommission the tool immediately and contact your suppliers. This tool complies with the prescribed safety regulations. Repairs must be undertaken only by trained personnel. Improper repairs can represent a considerable risk for the user. Keep the Operating instructions for use in a safe place for future use.

2. Application and operation

The rough boring tools are designed for holes from diameter \varnothing 23.5 – 153.0. There are 7 tools to cover this diameter range. Every tool has to be assembled with two insert holders. The insert holders are available in 70° and 90°, with a single and synchronous adjustment. For heavy duty cutting it is also possible to do a staggered cutting.

If the boring depth is increased by reducers, a smaller external reducer diameter must be selected than the machining or interference circle diameter.

3. Tool features

- manufactured from hardened and ground alloyed case-hardening steel
- as monobloc- or modular tool available
- main body and insert holders have a teeth profile
- with inner coolant supply
- the construction dimensions (length and diameter range) are identical with the fine boring heads
- staggered cutting is available
- to reach the diameter range there is original SWISSTOOLS equipment necessary

4. Balancing

The main body of this series are balanced. The unbalance, which normally occurs when adjusting the insert holder, is reduced to a minimum.

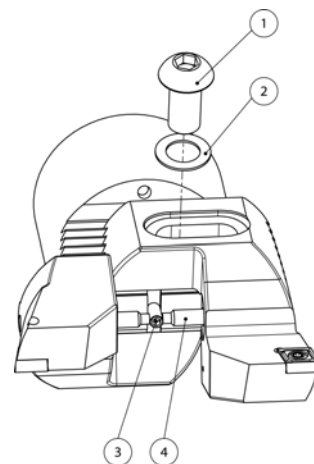
No additional balancing surfaces or holes must be added to this boring tool! Max. permitted residual imbalance of the machine manufacturer has to be observed (if necessary complete tools have to be balanced).

5. Operation

Assembling and adjustment of the single adjustment insert holders:

1. The teeth profile of the main body and the insert holders have to be cleaned.
2. Fit the insert holder on the teeth profile from the main body
3. Clamp the insert holder with the fastening screw (1) and the spring washer (2).

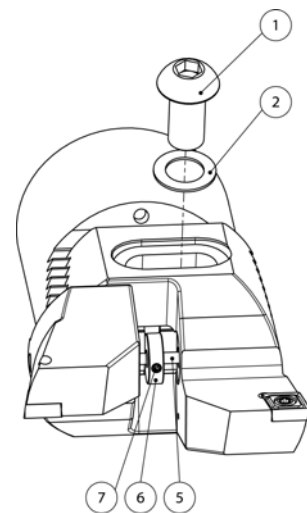
Attention: Use only original SWISSTOOLS spare parts. The function isn't warranted without the spring washer, and the insert holder will be damaged. The pin (3) must be fixed in the main body.



For diameter adjustment the fastening screws (1) have to be loose. The insert holder can be moved on the main body. The fine adjustment can be done with the adjustment screw (4). For machining the adjustment screw (4) have to be locked on the pin (3) and the insert holders have to be clamped.


Assembling and adjustment of the synchronous insert holders:


1. The teeth profile of the main body and the insert holders have to be cleaned.
2. The pin (4) is not needed.
3. Push central ring (6) towards the centre of the synchronization screw (5). Tighten one of the 3 screws of the central ring (6)
4. Insert the central ring together with the synchronization screw in the central bore. Align one tool holder moving it towards the synchronization screw..
5. Align the second tool holder moving it towards the screw. Now turn the screw by means of the key until at least one tool holder contacts the central ring.
6. Remove the previously fixed screw of the central ring. Now turn the synchronization screw until both tool holders touch the central ring.
7. Now the tool holders are in a central position. Tighten the 3 screws of the central ring. Mount clamping screws (7) and slightly tighten them. The head is now ready for synchronized machining.
8. Set bore \varnothing and fix the two clamping screws (1).



Attention: Use only original SWISSTOOLS spare parts. The function isn't warranted without the spring washer, and the insert holder will be damaged.

To set the bore \varnothing the clamping screws have to be loose. By turning the synchronization screw (5) both insert holders are moving synchronous. After the presetting the clamping screws have to be clamped.

 To avoid damage to parts of the adjustment mechanism, do not make any diameter adjustments in the clamped state.

 To avoid damage to parts, never use force when carry out adjustment.

6. Service

It's not necessary to grease the tool. The teeth profile has to be cleaned before assembling. Service and repairs will be done in our company.

7. Technical data

\varnothing range mm	Anziehdrehmoment fastening screw (2) Nm	Max. rpm
24 – 31	2.4	12.000
31 – 40	5	10.000
40 – 51	9	8.000
51 – 67	20	6.500
67 – 87	35	5.000
87 – 116	35	4.000
116 – 153	35	3.000

further information

SWISSTOOLS tools are subject to constant further technical development. You can obtain up-to-date information from our product catalogue as well as on our website.
We reserve the right to technical changes.

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