



## 309.01

### Operating instructions EWB UP Fine boring heads with micrometric fine adjustment and manual unbalance correction

**Maximum permissible cutting speed:**  
 $v_c = 2'000 \text{ m/min.}$

EWB UP (Ultra Precision) class boring heads are fitted with an innovative, extremely precise fine adjustment mechanism. This enables fine adjustments of 0.001 mm on  $\emptyset$  (1  $\mu\text{m}$  to be made directly from the gold dial ⑨). Any unbalance is very easily compensated using an integrated counterweight, which is adjusted to the required finished diameter by means of the additional chrome dial ⑩. All the heads contain coolant holes to provide cutting fluid right up to the insert.

#### Adjusting the diameter:

- Loosen the clamping screw ② on the fine adjustment mechanism ⑨.
- Turn the gold fine adjustment dial ⑨ counter-clockwise until it stops. Do not force the dial! Then rotate the dial 3 full turns clockwise to the nearest whole number ⑩.
- Loosen the clamping screw ④ for the insert holder ③.

- Coarse adjustment: The end face is fitted with a cog wheel ⑦. This is used for coarse diameter adjustment between the insert holder ③ and the fine adjustment cartridge. The scale ⑧ is useful as a coarse guide.
- There is a coarse adjustment slot ⑥ in the insert holder ③. Set the insert tip ⑤ to the required diameter. Do not forget the allowance for the measuring cut. E.g.: Required  $\emptyset 42$ , Allowance in  $\emptyset 0.25$ ; Set  $\emptyset$ : 41.75.
- Tighten the insert holder clamp screw ④.
- When tightening the clamping screw ④, the fine adjuster may shift slightly, so rotate the fine adjustment dial ⑨ back one turn and then forward to the same whole number on the dial.
- Fine correction of the diameter: Rotate the fine adjustment scale ⑨, always in a positive direction (clockwise), to set the final diameter. Be aware of the cartridge travel limits.

If the desired diameter is not reached, the coarse adjustment must be performed again. When the final diameter is set, tighten the clamping screw ②, for the fine adjustment mechanism.

#### Adjustment of the unbalance EWB UP32 to EWB UP68:

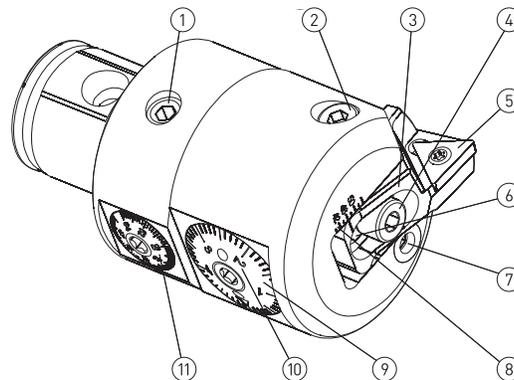
- Loosen the clamping screw ① for the counterweight.
- Adjust the chrome dial ⑩ to the boring diameter.
- Tighten the counterweight clamping screw ①.

#### General advice

For lubrication, the fine adjustment mechanism ⑨ must be rotated backwards in a counter-clockwise direction to the end stop. Periodic lubrication: Approximately every 20 operating hours. Do not use force when adjusting. A light machine oil is recommended, e.g. Mobil Vactra Oil Nr. 2, BP Energol HLP-32, Klueber Isoflex PDP 94.

#### Tightening - Torques $M_A$ in [Nm]:

Pos:	①	②	④
EWB 25 UP	/	1	1
EWB 32 UP	1.5	1.5	1.5
EWB 41 UP	2.5	2.5	2.5
EWB 53 UP	4	4	4
EWB 68 UP	5	6.5	5



#### Features:

	EWB 25 UP	EWB 32 UP	EWB 41 UP	EWB 53 UP	EWB 68 UP
Fine adjustment ⑨ in $\emptyset$	1 Div = 0.001mm	1 Div = 0.001mm	1 Div = 0.001mm	1 Div = 0.001mm	1 Div = 0.001mm
Fine adjustment ⑨ 1 rot. in $\emptyset$	0.05mm	0.05mm	0.05mm	0.05mm	0.05mm
Fine adjustment ⑨ Quantity rotations	15 (0.75mm in $\emptyset$ )	20 (1.0mm in $\emptyset$ )			
Counterweight ⑩ in $\emptyset$	no scale	1 Div = 0.2mm	1 Div = 0.2mm	1 Div = 0.2mm	1 Div = 0.5mm
Wrench	SW 2	SW 2.5	SW 3	SW 4	SW 5