

# Retipping diamond drill bits with SFM jigs

## **Preparations:**

- Secure the core drill to the workbench (height approx. 80 cm).
- Attach the Profi 2 cut-off jig.
- Connect the DZ-E speed reducer between drill and electrical mains.
- Keep sandpaper, burner and brazing alloy ready at hand.

## **Cutting off the drill bit tube:**

- Please refer to the Profi II cut-off jig Operating Instructions.
- After cutting off, clean the flanks of the tube with the sandpaper. All burr in the tube should be removed. The speed limiter can be set to step 2 for this purpose.
- Disengage the drill's drive shaft.

## **Preparations for brazing:**

- Mark the segment positions; the distances from the severed ring can be used for this.
- Determine the required projection using the first segment and magnetic holder. Position the holder against the inside of the tube, if possible.
- Position all other magnet holders and watch out for the markings.
- Position the diamond segments without brazing gap between tube and segment.
- Position the machine vertically.

## **Brazing:**

### **Follow the Instructions for Use for the magnet holders!**

- Heat the brazing point with the burner to a temperature of approx. 300° (blue temper color) and melt off approx. 3 mm of the flux coating of the brazing alloy onto the brazing point.
- Re-heat the brazing point until the flux is ready for use. This can be seen from the fact that the tube becomes metallically bare in the brazing zone.
- Hold the brazing alloy against the brazing point and melt off approx. 3 mm of brazing alloy with the flame.
- Reheat the brazing point until the brazing alloy is fully wetted. When doing this, mainly aim the brazing flame onto the tube so as not to overheat the diamond segments.
- Inspect the brazing point from the inside and, if necessary, re-braze from the outside.
- Attach the holder with a pair of pliers.

If using brazing alloys containing cadmium, preheat the brazing point to approx. 600° so that the brazing alloy flows immediately. After applying the brazing alloy, substantially increase the distance between brazing point and burner so as to avoid overheating of the brazing alloy which would produce vapors containing cadmium.

*Always braze from the outside on the suspended tube. This will allow even inexperienced users to achieve good results the first time. Alternatively, the tube may also be placed horizontally and brazed from the top. It is not advisable to braze on the vertical tube since this would quickly overheat the diamond segments.*