



Replacement of metal bellows

Necessary Spare Parts

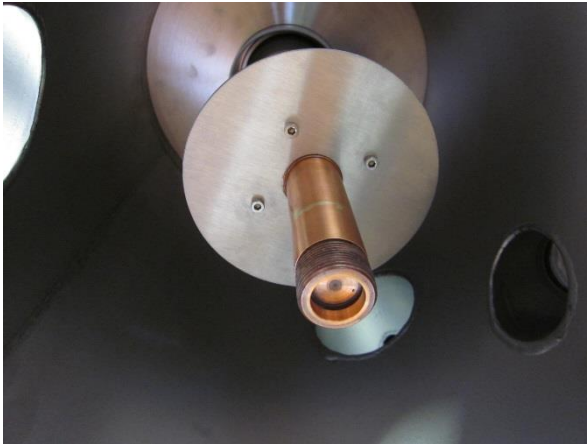
Art-No.	Article	Pcs
5443	Metal bellows	1
5375	O-ring Ø 100 x 5	2
5376	O-ring Ø 35 x 4	1

Necessary Tools

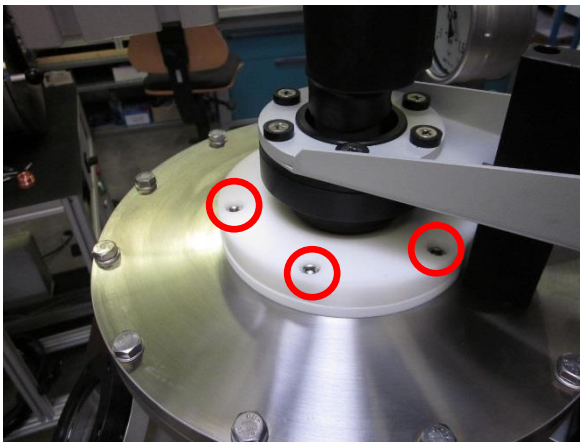
Allen key 5 mm
Allen key 2,5 mm
Pin wrench
Lever (supplied by Bühler)
Loctite 243
Vacuum grease

	Disconnect the AM from the power supply
	Make sure that the water supply is turned off

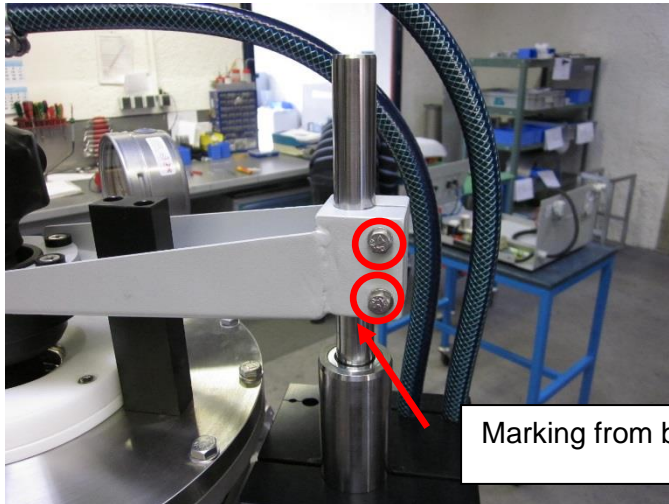
1. Unscrew electrode tip and remove it together with its nut
2. Unscrew the protection shield at the lower end of the electrode (4 screws M4 x 6mm)



3. Adjust the electrode into the lowest position by means of the motorized lifting unit.
4. Remove the six Allen screws (M6x20) in the upper white ring of the lid of the arc melting chamber



5. Loosen the 2 hexagon screws at the horizontal arm of the electrode. Before doing so, make sure you mark the position of the arm. Attach the mark from the lower side of the arm.



Marking from bottom

6. Now carefully lift out the complete electrode and mount it back onto the axis as shown on the picture below.



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7. Dismount the current cable(s) from the electrode and replace it/them with the lever. This lever holds the electrode in position while the copper plate will be untightened.

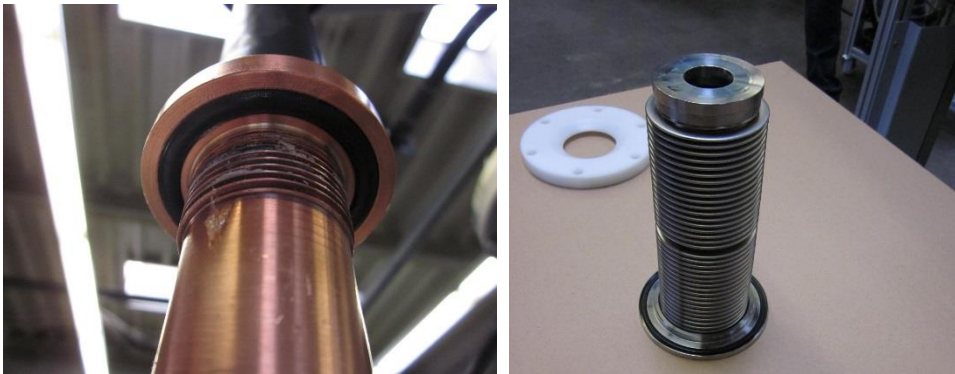


8. Untighten the copper plate by means of a pin wrench. We recommend to do this step by 2 persons in order to hold the electrode in position. Untightening might get hard because there is Loctite 243 in the thread for screw locking.



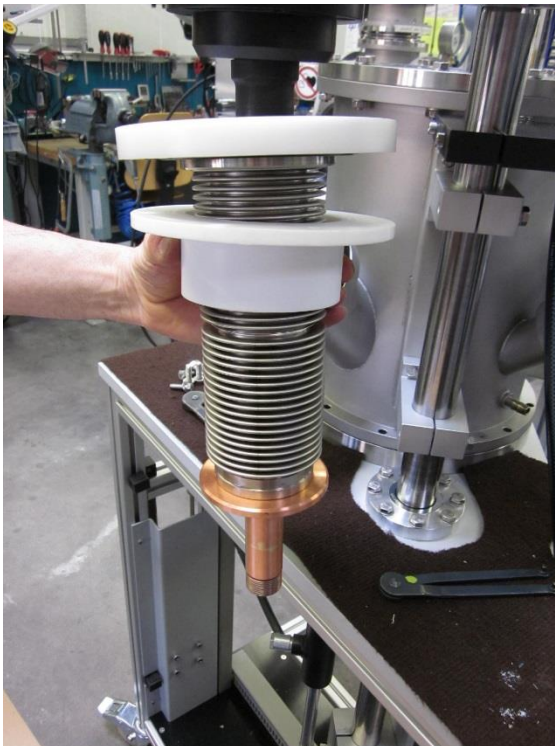
9. Remove the copper plate and subsequently the old metal bellows.

10. Replace all the o-rings (2 x 5375 Ø 100 x 5 and 5376 Ø 35 x 4). Grease them with vacuum grease and put them into the respective position



2nd o-ring 5375 is on top of the chamber

11. Assemble all the electrode parts like shown in the picture below.



12. Put some Loctite 243 (included in the spare part delivery) onto the thread of the electrode and onto the thread of the copper plate. This screw locking prevents unintended untightening of the copper plate through process handling. Put the lever on the other side of the axis as it was before. Then tighten the copper plate by means of the pin wrench. We recommend to do this step with 2 persons in order to hold the electrode in position.

13. Untighten the hexagon screws at the horizontal arm, lift the whole electrode out of the axis and put it back into the chamber. Take care that all o-rings stay in their position.

- | |
|---|
| 14. Adjust the horizontal arm into the position which was marked earlier. |
| 15. Adjust the white plastic parts into the right position, put in the allen screws M6 x 20 and tighten them. |
| 16. Reassemble the current cable(s). Do not forget to put the plastic cap onto the screw head after the current cable(s) are remounted. |

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