

User Recommendation

NEUMO BioConnect® Flange Connection

1. Scope:

1.1. NEUMO BioConnect® flange connections

2. General Information:

- 2.1. The general rules for the use of flange connections apply.
- 2.2. Further legal requirements of the area of operation are not taken into consideration.
- 2.3. The personnel must be trained on the handling of the NEUMO BioConnect® flange connection.

3. Prior to Assembly:

- 3.1. The item should be stored in its original packaging only.
- 3.2. The connections should not be unpacked prior to assembly.
- 3.3. A visual check to be carried out, especially in view of the intactness of the sealing contour and any damages such as scratches, dirt and impact marks shall.
- 3.4. Only original NEUMO BioConnect® O-rings shall be used. Therefore, the O-ring's packaging label must be inspected prior to O-ring assembly.

4. Installation and Assembly:

- 4.1. NEUMO BioConnect® is designed for welding with automatic orbital welding devices only. Manual welding would most probably lead to an increased heat input resulting in a warping of the sealing surfaces, thus jeopardising the tightness of the connection assembled.
- 4.2. Maximum flatness deviation is:
- Up to nominal width DN25 / 1" including : 0,15mm
 - Exceeding nominal width DN25 / 1" up to DN50 / 2" including : 0,25mm
 - Exceeding DN50 / 2" up to DN 100 / 4" including : 0,4mm
 - Exceeding DN100 / 4" up to DN200 / 6" including : 0,6mm
- 4.3. After the welding operation the evenness of the sealing surfaces should be checked. For example, an even glass plate of a minimum thickness of 6mm and a blade feeler gauge are suited for this purpose.
- 4.4. When exceeding the maximum flatness deviation a replacement of the respective NEUMO BioConnect® component is recommended.
- 4.5. The sealing contours must be handled with care and protected against damage at any time and with respect to all activities. Sealing contour damages may result in leakages. Open sealing contours of the NEUMO BioConnect® flanges should be protected with caps or other suitable means until assembly.
- 4.6. For the assembly of the NEUMO BioConnect® flange connection the general regulations for flange connections apply. This concerns for example the nuts, the tightening of the screws and nuts by hand and the subsequent tightening in steps with increasing torques and the essential order in which the screw connections have to be tightened.
- 4.7. Only screws and nuts supplied by NEUMO must be used.

4.8. NEUMO recommends the following tightening torques:

	M8	M10	M12	M14	M16
Coefficient of Friction	Tightening Torque				
0,10	14,5	30,0	50,0	79,0	121,0
0,12	16,3	33,0	56,0	89,0	136,0
0,14	17,8	36,0	62,0	98,0	150,0
0,16	19,3	39,0	66,0	105,0	162,0
0,18	20,4	41,0	70,0	112,0	173,0
0,20*	21,5	44,0	74,0	119,0	183,0
0,30	25,5	51,0	88,0	141,0	218,0
0,40	27,6	56,0	96,0	152,0	237,0

* Recommended tightening torque!

4.8. Prior to the assembly of the complete NEUMO BioConnect® flange connection it must be ensured that the NEUMO BioConnect® flanges are centered (aligned) and in parallel position.

4.9. The O-ring should not be removed from its packaging until assembly and be inserted carefully without a twist. Damaged and used O-rings must be replaced.

5. After assembly:

5.1. The tightening torques recommended may be varied according to operating experience, should the respective operation experiences advise this.

5.2. After completing an initial heat cycle, the screw connections must be checked respectively re-torqued.

*BioConnect® is a registered trademark of the NEUMO GmbH + Co. KG

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