



INOFLEX<sup>®</sup> PNEUMATIC CFRP BRIDGE ADAPTER / INOFLEX<sup>®</sup> HYDRAULIC CFRP BRIDGE ADAPTER

# OPERATING AND CLEANING INSTRUCTIONS

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INOflex® CFRP adapters stand for an easy handling, and are also the economical solution for the best possible printing results. In order to optimally utilize them, and at the same time achieve a long service life, the following notes should be closely observed.

## 1.0 Revision

August 2017 - REV. 01

November 2017 - REV. 02

## 1.1 After delivery

After delivery and unpacking of the INOflex® CFRP adapters must be customized to the environmental conditions in your production facility for at least 24h before the first application.

## 1.2 Care

► The drying of printing inks or other impurities on the adapter surface or on the inside of the INOflex® CFRP adapters can adversely affect the mounting and dissipation properties.

► The INOflex® CFRP adapters may not be exposed to elevated temperatures (for example, for the cleaning), since this may lead to a change in the geometry.

► The use of adhesive tapes on the adapter surface must be avoided. Adhesive tape remnants that are not carefully removed can adversely affect the ability to mount sleeves.

► The adapter surface can be cleaned with a lint-free cloth or a soft nylon brush. For strong soiling, the appropriate INOCare detergent (e.g. Bioclean 2000) or ethanol or Isopropanol should be used. Never use acids, alkalis, salt solutions or sharp objects as they can permanently damage the surface. An immersion in cleaning agents or prolonged exposure times must absolutely be avoided. Excess detergent must be removed immediately. Allow the detergents to evaporate completely. For this, the INOflex® CFRP adapters must be vented for at least 30 minutes after the cleaning.

### 1.3 Safety & Storage

▶ INOflex® CFRP adapters are equipped with dissipative surfaces in order to avoid an impermissible high electrostatic charge, as these can lead to explosions and fires in explosive environments (e.g. when printing with solvent-containing paints and inks). Therefore, our INOflex® CFRP adapters meet the required leakage resistance of a maximum of  $10^6 \Omega$ . The functional principle is only valid for grounded air mandrels and dissipative sleeves, and must be checked before every use.

▶ Depending on the design, one or more ventilation holes can be installed on the faces of the INOflex® CFRP adapters. These are for your safety and may never be closed!

▶ The cylinder surface must be free of impurities.

▶ The air discharge bore holes must be checked regularly for free passage

▶ Avoid storage in extreme temperatures and under high humidity.

▶ INOflex® CFRP adapters must be stored with clearance, while avoiding any mutual contact with the surface. INOflex® CFRP adapters may not be stacked on top of each other, as weight and continuous loads can affect the concentricity.

▶ The INOflex® CFRP adapters must be secured against falling over. Risk of injury! We recommend storing the INOflex® CFRP adapter on the drive side in an upright position.

▶ If hydraulically clamping INOflex® CFRP adapters are mounted horizontally on poles, please make sure that the support points are always in the area of the tensioning points (metal bushings). We recommend the use of plastics such as PE or PP. Damage to the metal bushings must be

avoided in any case.

▶ If hydraulically clamping INOflex® CFRP adapters should be stored horizontally, this may only be carried out between cones or similar receiving devices. The direct storage of pneumatically clamping INOflex® CFRP adapters on thin rods can lead to a permanent deformation of the inside, and must be avoided in any case.

▶ The pneumatically clamping INOflex® CFRP adapters must be mountable with a low force after the first row of the air outlet bores is covered. If this is not the case, do not attempt to forcefully mount the INOflex® CFRP adapters.

▶ INOflex® CFRP adapters may only be operated with the maximum specified air pressure. A higher air pressure may cause irreparable damage to the INOflex® CFRP adapter, and result in material as well as personal injury.

► INOflex® CFRP adapters may no longer be operated if damages, such as cracks or breakouts, have occurred as a result of an improper handling or external influences. Such damages, which can affect the applicability of the INOflex® CFRP adapters, could possibly be caused by hammer blows, tipping over, falling down from a great height, or through web breaks with a subsequent wrapping of the INOflex®

CFRP adapter with substrate. In these cases, the INOflex® CFRP adapter must be checked by INOMETA regarding the suitability for further use. Additionally, we recommend having the INOflex® CFRP adapters checked regularly by INOMETA for their proper functionality and quality.

#### SPECIAL REQUIREMENTS FOR AIR MANDRELS FOR PNEUMATICALLY CLAMPING INOFLEX® CFRP ADAPTERS

Air pressure static	6 bis 10 bar	87 to 145 psi
Flow rate	≥ 12 l/s	≥ 158,4 gal/min
Ø Air mandrel	nominal dimension -0/+ 0,015 mm	nominal dimension -0/+ 0,5906 mil
Number of air outlet bores on the Operating side depends on diameter of the air mandrel	Ø ≤ 121,074 mm: 4 Ø > 121,074 mm: 6 Ø > 248,398 mm: 8	Ø ≤ 4,7667 inch: 4 Ø > 4,7667 inch: 6 Ø > 9,7794 inch: 8
Ø of these air discharge bores	2,0 mm	78,7401 mil
Number of air discharge bores at of the cylinder surface	≤ 1500 mm: 2 pieces. ≥ 1500 mm: 4 pieces.	≤ 59,0551 inch: 2 pieces. ≥ 59,0551 inch: 4 pieces.
Ø of these air discharge bores	1,2 mm	47,2441 mil

## 1.4 INOflex® Seal

If your INOflex® CFRP adapters are equipped with one or more hard INOflex® seals, please observe the following:

► Keep the INOflex® seals clean of all dirt. They must always be freely movable.

► Dismantled INOflex® seals must always be replaced by new ones. When installing the new seal, proceed as follows:

1. After removing the used INOflex® seal, clean the groove thoroughly. Ink residues etc. can lead to leaks in the INOflex® CFRP adapters.

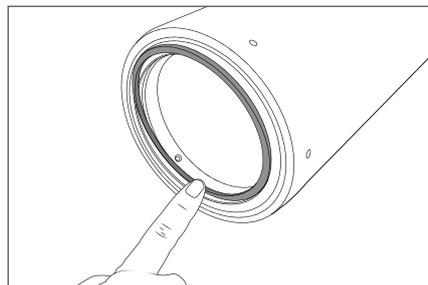


Figure 1

2. The new INOflex® seal is now inserted into the groove on one side and slightly pressed on. (Figure 1)

3. If your special INOflex® seal has a chamfer, it must always be installed in such a way that the chamfer points towards the drive side of the INOflex® CFRP adapter.

4. Attach the INOflex® seal at the lowest point in the groove with one hand and, at the same time press the seal further into the course of the groove with the other hand. (Figure 2)

5. This will cause an ovalization of the INOflex® seal, but it may not lead to kinking or other sharp-edged deformations.

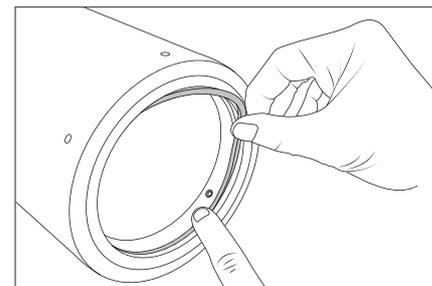


Figure 2

6. Continue inserting the INOflex® seal as far as possible until only a small loop remains. Never use force!

7. Now, with the help of both index fingers hold the INOflex® seal in the groove at a sufficient distance, and carefully insert it into the groove with the thumb. (Figure 3)

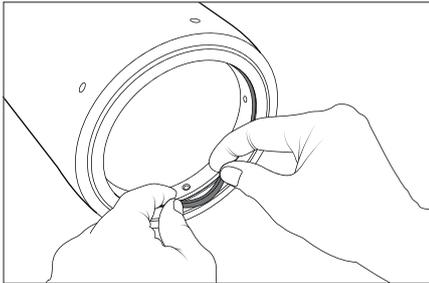


Figure 3

## INOflex®-products for excellent printing results



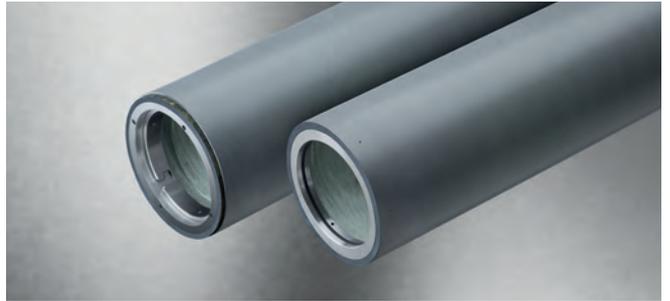
INOflex® anilox roller/anilox sleeve



INOflex® hydraulic CFRP bridge adapter



INOflex® CFRP air mandrel

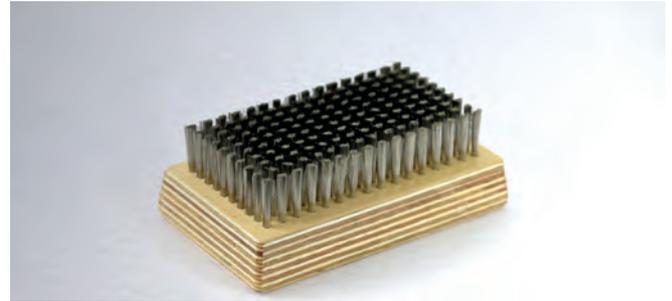


INOflex® pneumatic CFRP bridge adapter

## INOcare-products for optimal care



INOcare BIOCLEAN 2000



INOcare stainless steel/brass cleaning brushes



INOcare anilox roller protective cover



INOcare doctor blade



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