

Care Instructions for High-Current Contacts

Read these short instructions **before** installing and starting operation of the high-current contacts.

For your safety:

A riskless operation of the device is only possible if you read the instruction completely and strictly obey to the directions specified therein.

Safety and application:

The high-current contacts must only be used for the tasks they are aimed at! The high-current contacts must only be installed by a skilled person who has been instructed completely regarding the use and the risks of the installment.

In case of pneumatic contacts the indicated maximum compression force must not be exceeded. Please make also sure that no dangerous situations may arise for people while operating the device (e.g. crushing damages). Working at the contacts during system operation is forbidden.

Before each start-up operation condition and performance of the safety installations have to be checked. If a safe operation of the high-current contacts is not possible, the machine has to be shut down and may only be put back into service after all deficiencies were remedied.



Make sure that surrounding installations never present a danger at any time. Disconnect them in case of danger and make sure they cannot be reconnected.



Warning Crushing of Hands!

When working at the high-current contacts there is a risk of crushing. Disconnect the pressure supplies before starting to work.



Caution Hot Surface!

While the high-current contacts are in operation, individual components may heat up.

Before starting to work, check on the components' temperature with a suitable tool.

Make sure that there is enough time for the contact to cool down before starting to work.

Exclusion of liability:

Linnhoff und Partner Galvanotechnik GmbH accepts no liability for damage resulting from inexpert handling and non-observance of the safety rules.



Care and Maintenance:

Regular care and maintenance increase the service life of your machine and contributes decisively to the safety of your production. The following maintenance schedule is based on single-shift operation. In case of multiple-shift operation the intervals of care and maintenance have to be reduced correspondingly.

Daily: The high-current contacts have to be daily visually checked by the system operator or qualified staff whether they are dirty or worn. The contact surfaces / contact fingers should be free from deep scratches and contamination. Only a clean contacting is safe. If the contacts are dirty, the contacts may warm or heat up. Therefore, check the temperature regularly with an appropriate tool. We recommend a permanent control by sensors.

Weekly: Once a week it must be checked whether the high-current contacts move easily. In doing so, you have to switch off the machine in order to work at the contacts without danger. Take a small lever and check whether the contact surfaces move easily and whether the spring action is sufficient. Control the distance between the contact surfaces, it must be smaller than the width of your bar by all means. Should this not be the case, a safe contacting is no longer possible. Do not use this contact any more.

Check as well whether the contact is damaged. If high-current contacts are connected to the power supply by cable, it must be controlled whether the connection cables are firmly in place. **Monthly:** Once a month the high-current contacts have to be cleaned intensively. In doing so, switch off the machine in order to work at the contacts without danger.

Remove any covers to see all components of the contacts properly. Remove all coarse dirt with suitable brushes or grinding fleeces. Control all parts made of rubber and plastic regarding cracks, embrittlement or other damage. Check whether all mechanical components (springs, screws, screw nuts etc.) are complete and in good condition. Change all damaged components.

Controlling the electrical components such as connection cables, contact cables, contact bolts, shunts etc. is very important. Each component has to be clean and intact.

Yearly: In order to increase the durability and service life of the contacts, we recommend a yearly general overhaul. You can do this yourself with the help of trained staff or contact our trained professionals. During the overhaul the complete contact has to be disassembled and cleaned. Springs, shunts and bolts have to be checked and changed if necessary. Contact surfaces and fingers have to be either renewed or processed. Finally, the contact has to be reassembled.

If you have questions regarding care and maintenance of the contacts, please do not hesitate to contact us.

Always seek professional advice when in doubt.

Linnhoff und Partner Galvanotechnik GmbH Lünkerhohl 32a 58644 Iserlohn <u>www.Linnhoff-Partner.com</u> Tel: +49 2371 15750 Fax: +49 2371 157529 6 July, 2016