

## Installation and Maintenance for XYZ – Modules

### Dear Customer,

Thank you for choosing a XY-module from Hennig.

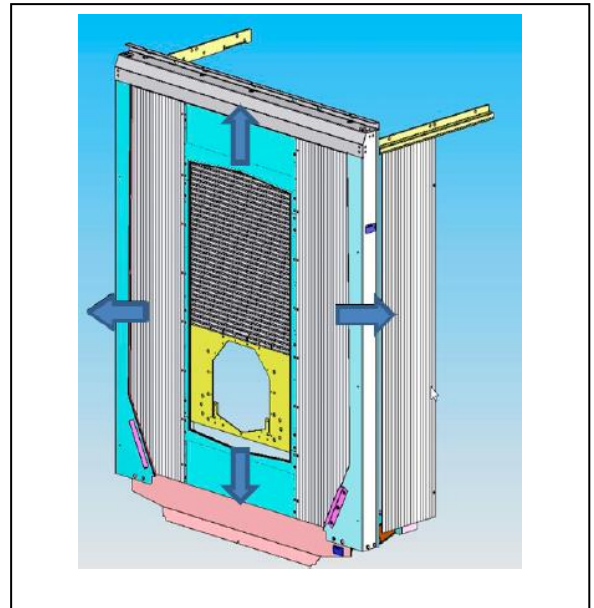
Please be informed about the following installation, maintenance and care guidelines to ensure that your protection system works reliably and in a manner that does not infringe your warranty.

HENNIG – Modules are used to protect sensitive guideways and rails from chips, dust or liquids.

Your HENNIG-Module is in general a custom-built item, therefore It may differ in detail from the descriptions and illustrations in this guide.

Please provide the information from the nameplate of your module with every order of spare modules or spare parts. Only the original spare parts from Hennig you will receive the value and optimal functionality of your module.

The name plate contains the job-number and the part-number of the enclosure and is visibly placed on the outside of the module (see picture). Additionally, the information can also be found inside on the second name plate.



### A. Installation of XY-Module

1. HENNIG- Modules are designed for industrial use and must be installed, serviced and repaired by trained technical staff only.
2. Modules are complete systems which normally can be installed with little effort. Installation and adjustment must follow the instructions for setup as listed on the the Hennig drawings. The mounting planes generally have to be perpendicular to the directions of travel ( see fig.)
3. The mounting on the machine must be stress free. Therefore, after assembly, check the motions in each axis to guarantee smooth travel.
4. Use the attached lift devices when transporting modules with cranes.
5. Make sure that chains, lifting straps or other lifting accessories do not damage the module.
6. When attaching the modules, the flexible parts inside (aprons, belts, covers...) must be protected from colliding with other machine parts.
7. Existing mounting holes might need to be adapted to suit.
8. All mounting screws should be secured ( e.g. with Loctite).

### B. Start-up

After installing the shield an operational test is necessary: first move the tool slide or machine table with low speed. Make sure that the moving parts of the module do not collide with any machine components and can move freely without binding. During the test run progressively increase the speed of the machine until the desired speed is reached.

During the slow run of the module, the moving portion of the shield might jerk, due to the slip-stick effect of the rubbing wipers. A similar effect occurs with scissors or high-modules when these run slowly.

If the module shows uneven extension, abnormal binding of single elements, heavy jerking, collision or interference, unusual noise or other malfunctions, the underlying cause needs to be investigated and corrected to avoid damage to the cover.

### C. Maintenance and Care

Prior to shipment, your Hennig-module ( steel-cover-versions only ) is coated with an anticorrosive layer. This coating protects your module during transportation and storage for up to 12 months against corrosion.

## I. Visual Inspection, Operational Test, Cleaning

Regular preventive maintenance is the foundation for a long-term and reliable operation of your module. Therefore, you should make regular visual inspections. Worn out parts have to be changed regardless of their lifespan. If parts wear out prematurely, the cause needs to be determined and corrected to prevent consequential damage.

### a. Modules with steel-covers

For this please see our installation and maintenance guide for steel-covers.

### b. Modules with bellows

For this please see our installation and maintenance guide for bellows.

### c. Modules with aprons

Aprons in use do not need a lot of care. To prevent damage, however, they have to be cleaned on a regular basis (depending on the level of contamination and demands during operation).

Please move the module in all directions and remove contaminants. This prevents parts from wearing out prematurely. Do not use compressed air to clean; the consequence would be that dirt particles and chips would be blown in the spaces between the apron joints (links).

If there are large chip volumes, the aprons have to be inspected more frequently.

If your module has been damaged due to collision with tools or components (even in a minor fashion), it has to be repaired to prevent further damage or even complete failure.

## II. Maintenance intervals and replacement of worn-out parts

A regular preventive maintenance is the foundation for a long-term and reliable operation. Therefore you should make regular, weekly visual inspections and run operational tests of the cover. If the machine operates at speeds over 40 m/min, this inspection should also include checking for noise and its causes. If problems are detected, they have to be corrected immediately. Worn out parts have to be changed regardless of their lifespan. If parts wear out prematurely, the cause needs to be determined and corrected to prevent consequential damage.

Wipers, wiper-lips, guides, dampeners, bumpers, gliders and rollers are wear-items and therefore excluded from the warranty. They have to be checked at least every 6 months and replaced if necessary, to guarantee a long-term trouble-free operation.

Please replace the **wipers** and **wiper-lips** when the surface to be wiped is not being wiped clean anymore. This can be recognized, when chips or coolant remain on the wiped surface,

Note: our C 6 wipers–lips can generally be changed directly on the machine without di-assembly of the cover boxes. (see description for wiper replacements in the installation and maintenance instruction for steel covers).  
For our C 6 wipers the replacement can take place without di-assembly. For all other wiper-types the module has to be taken apart in order to change the wiper-lips.

**Dampeners** and **bumper stops** are especially affected by the shocks of decelerating the boxes at high speed and the chemical reaction of the coolant causing increased noise levels and decreasing dampening effects.  
Therefore, all have to be replaced in the entire cover.

**Guides** and **plastic rollers** must be replaced when they show extensive wear or impregnated chips.  
**Rollers** have to be replaced when they don't run properly anymore and show extensive wear.

Check the adapter frame or angles that have been sealed with sealants regularly. If, due to aggressive coolants, the sealants get dissolved, they are to be replaced with a suitable sealant.

Any recognized problem, excessive noise or malfunction of the cover must be corrected immediately to avoid further damage or even total failure. Damaged parts have to be replaced immediately.  
The mentioned maintenance intervals are reference values only. If our products are used in an environment with high operational demands, the maintenance intervals have to be shortened accordingly. Damage to the sheet metal box, due to fallen objects, must be corrected immediately.

## D. HENNIG Service

HENNIG performs the mentioned maintenance work, complete rebuilds, service and repair, depending on the situation either at your site or at Hennig's repair shop.  
We also can quote all necessary spare parts. Therefore, please provide us with the data, serial numbers etc. from the name plate, attached to the module.

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