

## Assembly instructions

### ATTENTION

All safety-relevant aspects that could lead to serious injury or even death are marked with this symbol.



**ATTENTION! DANGER!**

### ATTENTION

All safety-relevant aspects that could lead to injuries with possible permanent damage are marked with this symbol.



**Warning!**

### Start of work

Before starting work with or on fullmo products, basic general protective measures must be followed. The following must be observed:



Read and understand this document (installation instructions). If you still have questions after this step, please contact the fullmo GmbH service department. You will find the contact details at the end of this document.



Wearing safety shoes at all stages when working with the products. This already applies when unpacking the products.



Wear suitable safety gloves at all stages when working with the products. This already applies when unpacking the products.

### Indication of special hazards



**ATTENTION! DANGER!**



### Static magnetic field

There is a risk from a static magnetic field on compact drives. **Employees with pacemakers or an implanted defibrillator must be excluded from all work on, with and in the direct vicinity of drives!** Persons with a pacemaker or implanted defibrillator must keep a **minimum distance of**

**150 mm** between the compact drives and the implant. This must be ensured by suitable protective devices.

## Indication of special hazards



### Warning!

#### Falling / rolling down of shelves / tables

There is a risk of injury to the feet. Due to the cylindrical design of the drives, they can roll off storage surfaces or tables unintentionally. The drives must be suitably secured to prevent them from rolling off. If possible, the drives should remain in their transport packaging until shortly before installation.

#### Commissioning and operation

##### **Drives may only be put into operation once they have been installed in a machine!**

Suitable guards must be provided for operation.

In particular, "trial operation" in which the drive is placed on a storage surface or table is prohibited. Starting the drive causes the drive housing to rotate, which can cause the drive to roll away and fall down.

Injuries to fingers and hands are also possible if they come into contact with the drive shaft.

**During all work on, with and in the vicinity of fullmo drives, they must be safely disconnected from the power source.**

#### Pulling in / winding up hair / items of clothing

Drives have rotating drive shafts or hollow shafts. Long hair or loose items of clothing can be caught and pulled in by these during operation. Suitable guards must be provided that take this hazard into account.



#### Tripping over cables

Cables should not be laid on the floor. Especially during installation, areas where cables still have to be laid on the floor must be cordoned off.



### **Skin burns due to contact with the drive surface**

In processes with high thermal drive loads, the surfaces of the drives can become hot. A maximum temperature of 80°C can be reached. Contact with the skin (especially hands) can lead to burns.

If manual intervention with contact to very hot drives is necessary, gloves must be worn.

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### **Assembly**

Suitable mounting material must be used to mount compact drives and compact controls. The compact drives and compact controls are always fastened with metric screw connections. Dowel pins are used for precise positioning of the compact drives.

In order to use a secure fastening without damaging the drives, it is essential to ensure the correct screw-in depth.

The drive shaft must be connected using suitable shaft-scar connections.

Please refer to the information in the product drawings under the link "Rotative drive technology" on our homepage [www.fullmo.de](http://www.fullmo.de).

### **Electrical connections**

All electrical connections must be properly installed at the contact points and, where provided, completely screwed down. Installation of faulty or damaged cables is not permitted. Further information can be found at [www.fullmo.de](http://www.fullmo.de).

### **Intended use**

The products of fullmo GmbH are intended for use in industrial environments. They are designed for use in series and special machines.

The compact drives are intended to be used in machines for rotary alignment or for the rotary drive of machine components. Compact controllers, communication accessories and cable sets are used to supplement this scope. In this environment, guards are usually provided. This means that only trained personnel (technicians, mechanics, electricians) come into direct contact with the drives.

In principle, compact drives can be used sensibly in many areas of application. If compact drives are used in an area without guards, the system integrator must re-examine all safety aspects. In particular, operation by untrained personnel (operating staff, private individuals) must be checked in detail.



**Operation of the compact drives is prohibited until they have been installed in a machine and this machine complies with the provisions of the EC Machinery Directive and the EC Declaration of Conformity in accordance with Annex II A is available.**

### **Unanswered questions about installation and safety**

Please contact us via our homepage [www.fullmo.de](http://www.fullmo.de) or by telephone at +49 7544 307339-0.