



Guideline for furniture manufacturers for the use of the EU Machinery Directive (2006/42/EC) for furniture equipped with Free E

1. Background information and classification Free E

The EU Machinery Directive defines health and safety requirements for bringing machinery into circulation within the European Economic Area (EEA), Switzerland and Turkey.

According to the latest version of the EU Machinery Directive, the Free E drives are an **incomplete machine**. A **complete machine** in the sense of the Machinery Directive does not occur until an E-drive is installed in furniture. For this reason, manufacturers and distributors of furniture with electromotive drives fall within the scope of validity of the Machinery Directive and must adhere to certain procedures in order to market their product in compliance with the directive. These procedures are explained in detail below.

The relevant directives and standards are usually covered by certification in accordance with the IECEE CB scheme for countries outside the European Economic Area.

2. Requirements in accordance with the Machinery Directive

As the manufacturer or distributor of a furniture item with an electromotive drive which corresponds with the machine definition in accordance with the Machinery Directive, you must fulfil the following obligations:

- Production and storage of product-related technical documentation
- Carrying out of a **risk assessment** for the installed furniture
- Production of a declaration of conformity
- Attachment of a type plate and a CE marking to the completed furniture
- Handover of documentation to end customers



2.1. Production and storage of product-related technical documentation

Separate technical documentation must be prepared for a furniture item equipped with an electromotive drive and kept for the duration of at least ten years. The documentation should contain the following:

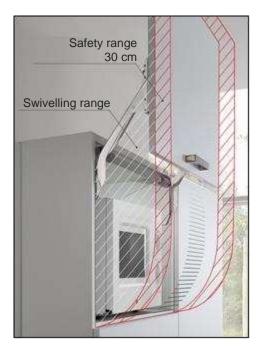
| Document | Created by |
|--|------------------------|
| Construction drawing of the furniture | Furniture manufacturer |
| Technical specifications and test reports | Furniture manufacturer |
| Risk assessment for installed furniture (see 2.2) | Furniture manufacturer |
| EC declaration of conformity (see 2.3) | Furniture manufacturer |
| Installation instructions for the Free fitting (see 2.4) | Häfele |
| Operating instructions for Free E (see 2.4) | Häfele |

2.2. Carrying out of a risk assessment for the installed furniture

The risk assessment should point out any dangers associated with the installed furniture item with electromotive drive, and the extent of the potential danger and the probability of occurrence should be evaluated. Any measures for minimising the risk must also be described.

Häfele has produced the following example risk assessment for a standard single-line kitchen, which uses the following prerequisites as a starting point:

- Adherence to the processing and usage specifications shown in the installation and operating instructions for Free E
- No risk of collisions with structural elements that are present or other furniture fronts
- Additional safety clearance of 30 cm from the swivelling range of the furniture front



If all of these prerequisites are fulfilled, the risk assessment in the following can be taken over as a guideline. Otherwise, if the processing and usage specifications are not complied with, a full risk assessment in accordance with DIN EN ISO 12100 is required.



Example illustration of risk assessment for a standard single-line kitchen:

| Danger location | Risk in starting situation | | Measures | | Risk after measure | |
|--|-------------------------------|------|--|----|-----------------------|--|
| Risk of crushing | | 2013 | | | | |
| Risk of crushing if two Free E flap fronts collide which are arranged across a corner | w | 0 | | W | 0 | |
| | SA | L | Carry out programming to avoid collision | SA | к | |
| | AD | н | > Section in operating instructions: "Teach in across-corner operation" | | - | |
| | EA | M | | | - | |
| | WE | M | | | - | |
| | W | 0 | None (low risk, small amount of damage) | | 0 | |
| Risk of crushing when opening and closing | SA | L | | | L | |
| adjacent Free E flap fronts and other furniture fronts / moving elements (e.g. tall | AD | н | | | н | |
| cabinet door, kitchen entrance door) | EA | M | | | M | |
| cabinet door, kitchen entrance doory | WE | M | | | M | |
| Pick of cruching when enoning and closing | w | 0 | | | 0 | |
| Risk of crushing when opening and closing Free E flap fronts which are arranged one on top of the other (e.g. lower flap front collides with the open flap front above it when it opens) | SA | L | Carry out programming to avoid collision > Section in operating instructions: "Teach in across-corner operation" | SA | к | |
| | AD | Н | | AD | - | |
| | EA | M | | EA | - | |
| | WE | м | | WE | - | |
| Risk of crushing when Free E flap front is opening due to collision with adjacent fixed element(s) (e.g. tall cabinet) | W | 0 | a contemporaria e | W | 0 | |
| | SA | L | | SA | L | |
| | AD | н | None (low risk, small amount of damage) | | н | |
| | EA | M | | | M | |
| | WE | M | | | M | |
| Risk of cutting | | | | | | |
| Risk of cutting from sharp edges on front panel | w | 1 | | W | 0 | |
| | SA | L | | | к | |
| | AD | н | Front panel and cabinet edges with rounding radius >1.5 mm | AD | - | |
| | EA | к | | | - | |
| | WE | М | | | - | |
| Electrical danger | | | | | | |
| | W | 5 | Pay attention to the notes in the operating instructions | | 0 | |
| Power supply / cable at risk due to | SA | T | | | к | |
| mechanical effects (e.g. chafing against | AD | S | | | - | |
| moving parts) | EA | M | | | i. | |
| | WE | к | | | 14 | |

| / | | | | |
|--|----|----|-----------------|--|
| Value | w | 0 | Minimum risk | |
| value | vv | 10 | Maximum risk | |
| Extent of damage | SA | L | Minor | |
| | | S | Major | |
| 22.1 | | Т | Death | |
| Time spent in danger area | AD | S | Seldom | |
| Time spent in danger area | AU | н | Frequent | |
| Possibility of detecting and avoiding the danger | EA | M | Possible | |
| | | к | Hardly possible | |
| | WE | K | Low | |
| Probability of occurrence | | M | Medium | |
| | | G | High | |

If the installation situation changes or the furniture with the electromotive drive is relocated, another risk assessment must be carried out.



2.3. Production of an EC declaration of conformity

With the EC declaration of conformity, the furniture manufacturer is documenting adherence to the health and safety requirements listed in the machinery directive in a legally binding way. A copy of the EC declaration of conformity that has been signed by the manufacturer must be enclosed with every furniture item that is equipped with a Free E-drive. A template for an EC declaration of conformity in accordance with the Machinery Directive 2006/42/EC can be found below:

Example illustration of an EC declaration of conformity:

| | Your compan | y name and address | | |
|----------------------------------|---|------------------------------|---------------------------------|--|
| clare on o | ur own responsibility that product | Identification of furniture | e (see type plate) | |
| which this | declaration relates is compliant with | the following EC directives: | | |
| | | | | |
| • EC | Machinery directive | | 2006/42/EC | |
| • EC | EC EMC directive 2004/108/EC | | | |
| Rad | io and telecommunications terminal | equipment directive | 1999/05/EC | |
| | | | \sim | |
| e following | harmonised European directives w | ere used | | |
| EN | 300440-2 | EN 60335-1 | EN 55014-2 | |
| | 301489-3 | EN 62233 | EN 61000-3-2 | |
| EN | | | EN 61000-3-3 | |
| | 301489-1 | EN 55014-1 | | |
| EN | 301489-1 tested in compliance with DIN EN 1 | | . — | |
| EN Also | e tested in compliance with DIN EN | | | |
| EN | | | | |
| EN Also | e tested in compliance with DIN EN | 15282 | ontact for techn. documentation | |
| EN Also cation | tested in compliance with DIN EN | 15282 | | |
| EN Also cation te me | vetested in compliance with DIN EN the second | Name of the co | | |
| EN Also cation ite | Your location Date Your name | Name of the co | | |

2.4. Attachment of a type plate and a CE marking to the completed furniture

On the basis of the EC declaration of conformity, the completed and ready-to-operate furniture with E-drive must be permanently and visible marked with the CE symbol. As shown in the following example, this can take place in connection with the type plate which is also required. The latter must contain the following information:

- Manufacturer name and address
- Product and type designation
- Date of manufacture

The type plate must be attached in a location which is clearly visible to the user of the furniture.

Example illustration of type plate:

| Machine description Bezeichnung der Maschine Désignation de la machine | Tipo di macchina Designation de la máquina | Electrically driven furniture Elektrisch angetriebenes Möbel Meuble actionné électriquement Mobile azionato elettricamente Mueble accionado electrónicamente |
|---|---|--|
| Name of manufacturer Herstellername Nom du fabricant | Nome del produttore Nombre del fabricante | C R |
| Address Adresse Adresse | | - 5 T F |
| Furniture description Identifizierung des Möbels Identification du meuble | | |
| Year of manufacture Baujahr Année de fabrication | Anno di produzione Año de fabricación | |

After attaching the type plate and the CE marking to the furniture, the CE marking on the type label of the E-drive unit must be obliterated.

2.5. Handover of documentation to end customers

The following documents must be handed to the end customer during the delivery and installation of the furniture:

- Free E-drive installation and operating instructions from Häfele
- Copy of signed EC declaration of conformity

If there are any other questions about the applicability of the EU Machinery Directive to a furniture item equipped with a Free E fitting, please contact us via your Häfele sales adviser or at <u>www.haefele.de</u>.

