

ECTA Safety Committee/Safety Recommendations for tube dividing machines (offline cutter)

Preliminary remarks:

In the tube and core industry, equipment used to cut and divide tubes and laminated paper cores differs in age, type and operation, depending on the manufacturer. The ECTA Safety Committee has made an effort to take into account all the existing differences in writing these safety recommendations. Therefore, the tube dividing machines shown here are to be seen as examples, since equipment identical or similar in construction reflect the current level of technology and is widely used in the core industry and by customers. Custom-made equipment designed for adjusted cutting and dividing can sometimes differ considerably from the models shown.

The committee advises you to take national standards and norms into account when applying ECTA safety recommendations. The current Machinery Directive 2006/42/EC and the relevant CE norms are to be observed as well. When in doubt, coordinating with local safety authorities is recommended!

A. Basic requirements

- I. Documented risk analysis
- II. At least **one** safety seminar per year for all employees who work with the equipment, led by a direct supervisor and an industrial safety expert and documented in writing
- III. The emergency stop chain of the cutting equipment is an integrated component of the entire emergency stop chain of the preceding and subsequent transport or feeder equipment.
- IV. Complete encasing of the cutting machine; all openings are to be fitted with safety switches.
- V. Areas with increased danger of crushing near the tube feeder (flaps) are to be secured with safety devices as far as is technically possible.
- VI. Any protective devices which already exist on the equipment may not be removed or taken out of service.
- VII. Placement of visual warnings at dangerous spots which cannot be secured due to the nature of the operation, such as near machine's tube feeder and catchment area.

B. Basic elements of the technical safety devices

I. Direct protection of moving parts.

1. Emergency stop mechanism
 - 1.1 Emergency stop button
 - 1.2 Protective cover with contact switch

II. Area safeguarding during normal operations

If necessary, additional safety devices on the input and output openings, not necessary if fully encased.

III. Area safeguarding during setup operations

1. Central switch toggling between set-up mode and normal operation
2. Automatic step-by-step control during set-up mode (every step of a cycle has to be activated by hand)
3. When in set-up mode, hardware safety features need to be secured.

An example of standard tube dividing equipment for small and large diameters is enclosed as an **Appendix**.

Remarks:

If the machine is substantially altered, the original CE certificate issued by the manufacturer lapses and the user has to have a new one issued in a timely manner.

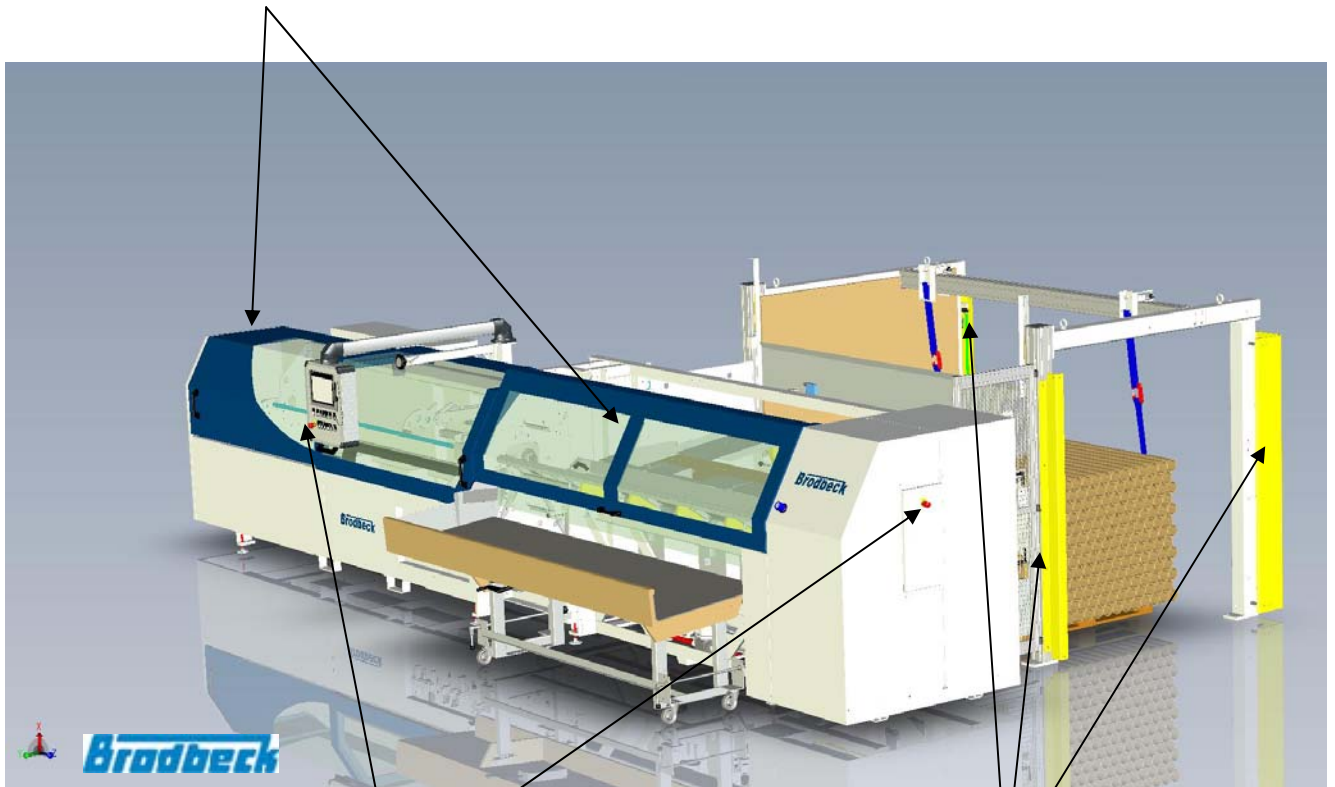
Approval of the safety concept by institutions responsible for such inspections at the national level is highly recommended.

Waiver of liability:

ECTA has made an effort to draft these safety recommendations in good faith using the knowledge available to us. The recommendations are non-binding. Claims of guarantee claims cannot result from following them. The recommendations do not release members from informing themselves of the current legal statutes and of their individual application needs.

Appendix: Schematic depiction of safety features of a tube dividing machine for small diameters (3" - 6")

Complete encasing of the tube dividing machine, all openings are to be equipped with safety switches. Opening the access area triggers the emergency stop function.

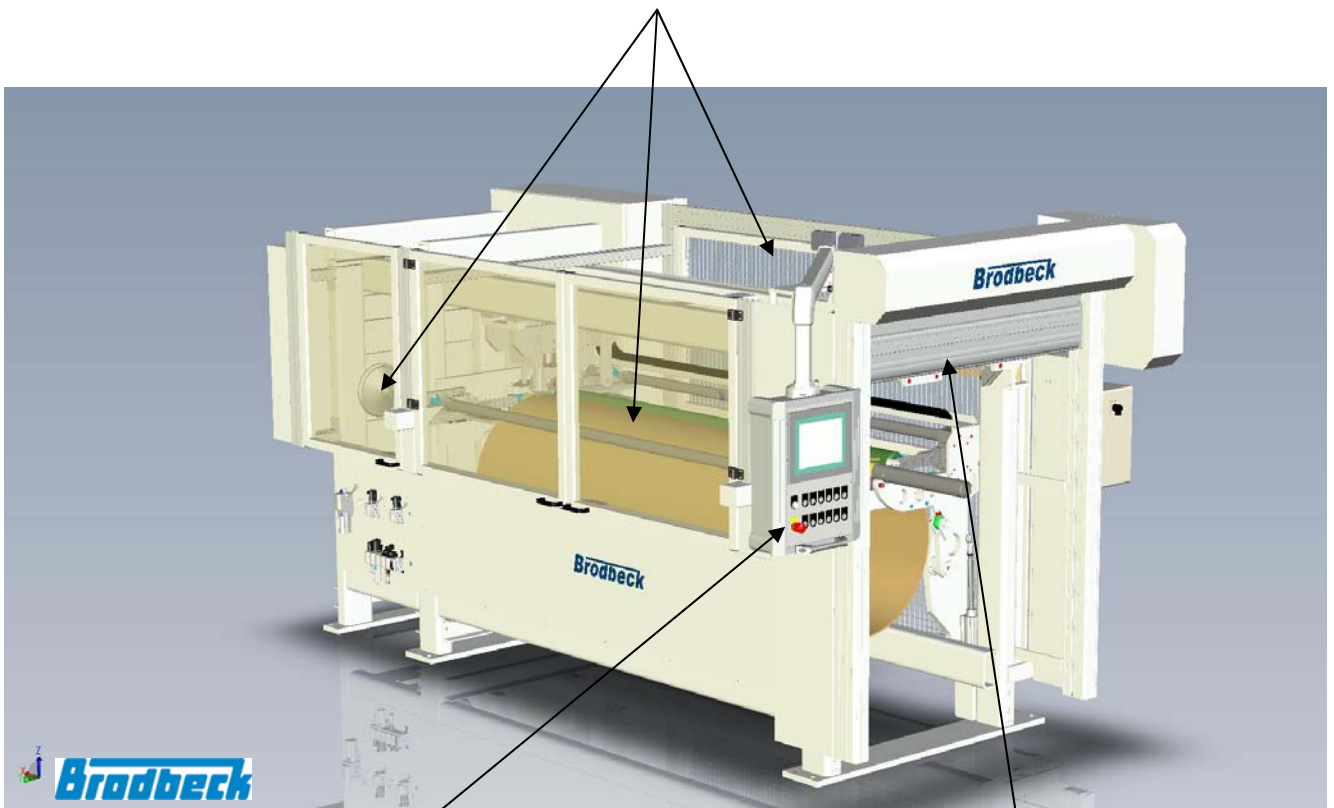


Emergency stop buttons on the control panel and at key points (e.g. tube feeder)

Light curtains in the area of pallet feeder / tube feeder. New start of cycle is only possible outside of the safety zone!

Appendix: Schematic depiction of safety features of a tube dividing machine for large diameters (12" - 20")

Complete encasing of the tube dividing machine, all openings are to be equipped with safety switches. Opening the access area triggers the emergency stop function.



Emergency stop buttons on the control panel and if necessary at key points

Rolling door at the feeder opening closes automatically after feeding a new tube; only afterwards does the automatic cutting process begin.