

Covers for machine tools

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Covers for machine tools

- **feature of covers,**
- **basic division of covers,**
- **samples of various types of covers,**
- **developments in protective covers.**

Feature of covers

Protection of operators and internal movement mechanisms of the machine before accompanying events that occur during machining, such as by flying chips and spraying the coolant, which could cause personal injury and damage to the movement mechanisms.

Protective covers also prevent operator access to dangerous machine parts that could cause injury. They are mainly moving machine parts and electrical power supply.

Basic division of covers

External covers:

- bonnets,
- service platforms,
- protective fences,
- carried covers.

Internal covers:

- uniaxial:
 - telescopic,
 - covering bellows,
 - roller shutter,
 - sectional screens,
 - wipers,
 - spiral covers.
- biaxial:
 - telescopic,
 - covering bellows,
 - roller shutter.

External protective covers

Bonnets

Full covering



Lowered covering



External protective covers

Service platforms

On machine WHN 13 CNC



Input door



User door

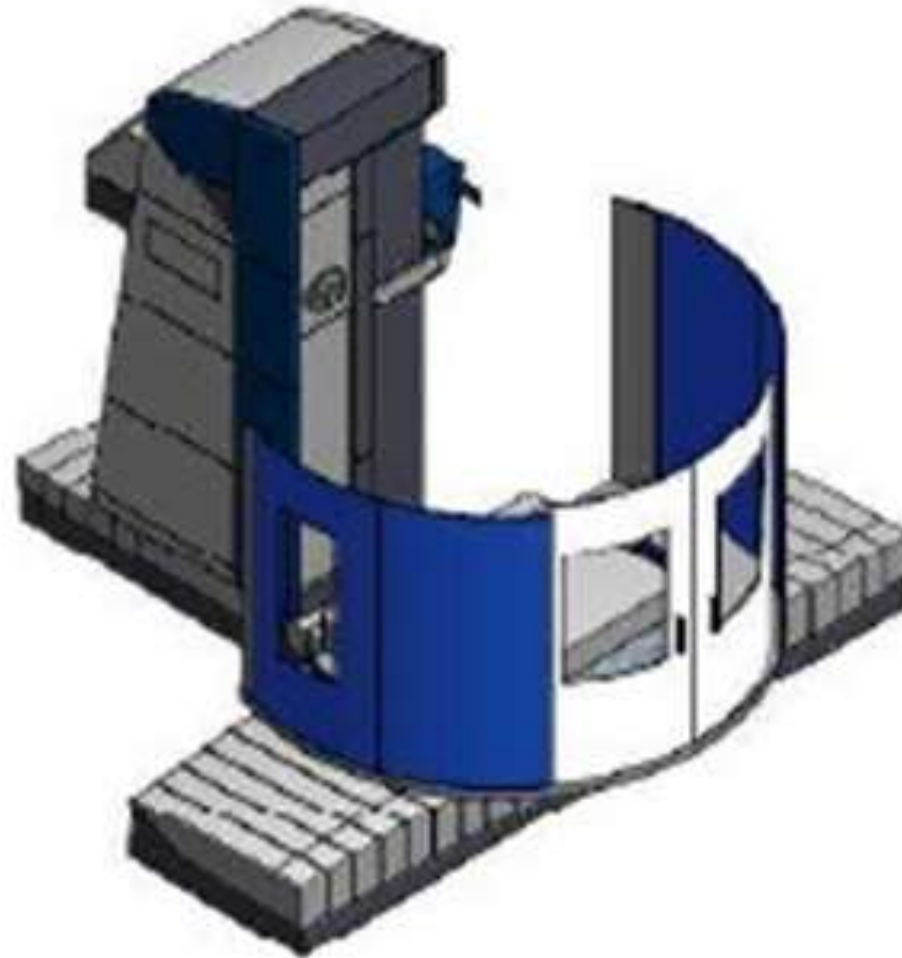
External protective covers

Protective fences



External protective covers

Carried covers



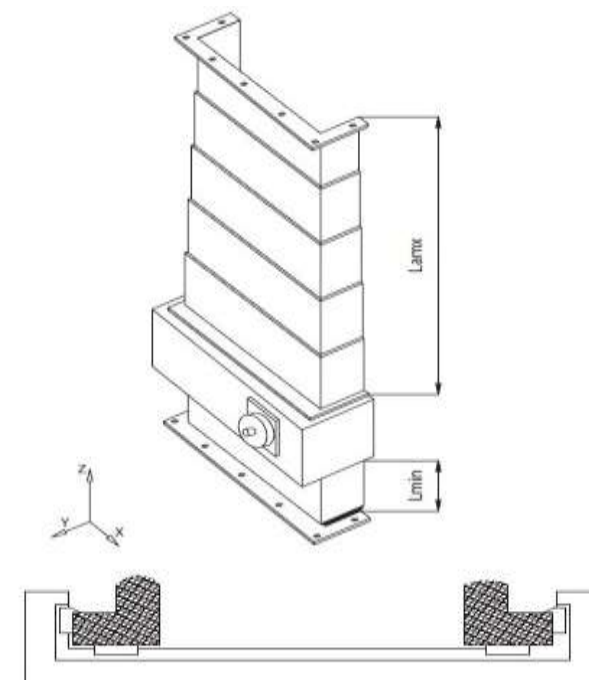
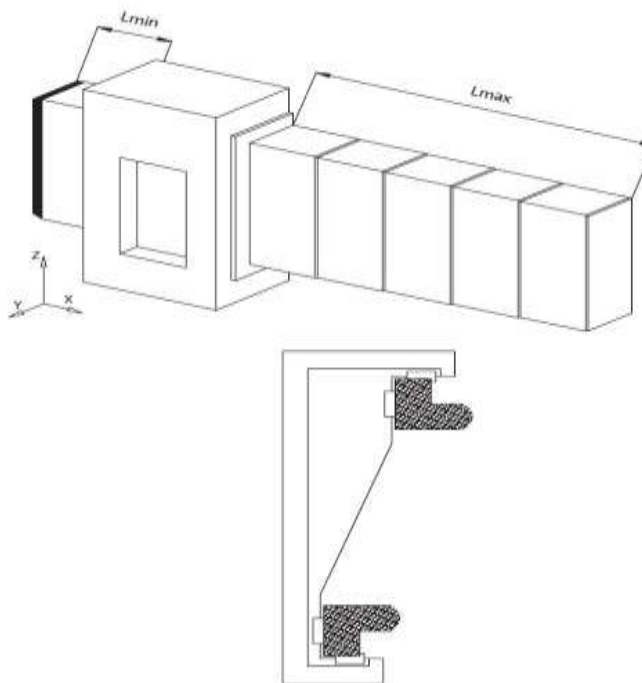
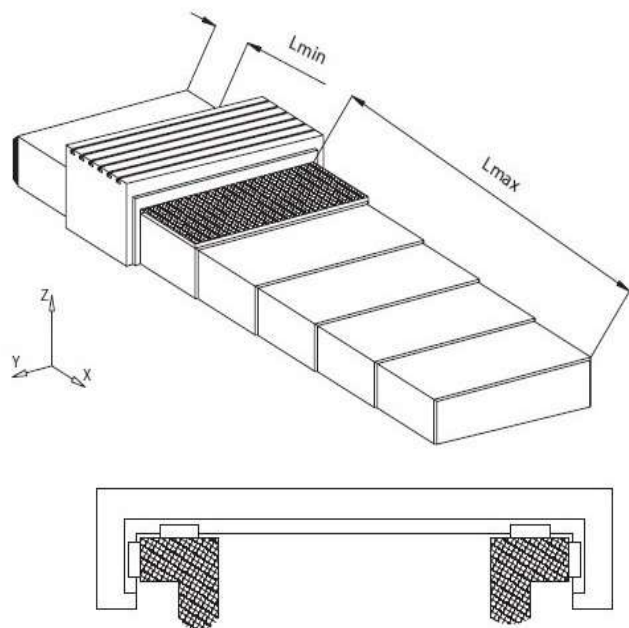
Internal protective covers moving in a one axis

Telescopic covers



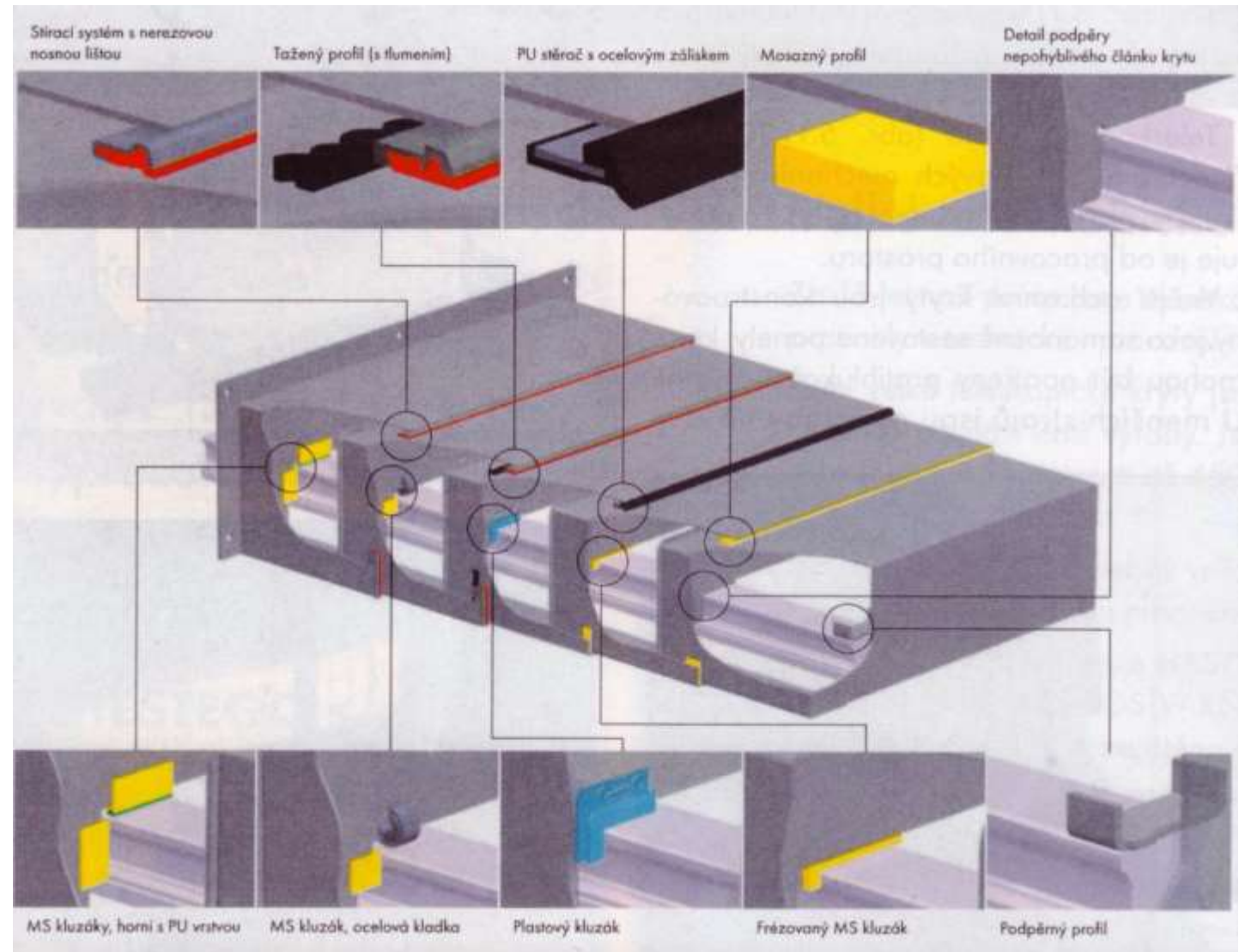
Internal protective covers moving in a one axis

Telescopic covers



Internal protective covers moving in a one axis

Telescopic covers



Internal protective covers moving in a one axis

Telescopic covers



Internal protective covers moving in a one axis

Covering bellows



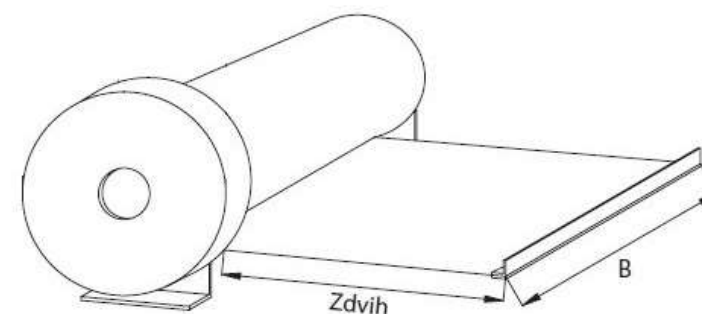
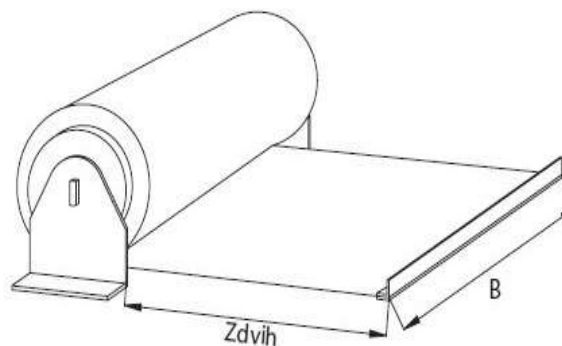
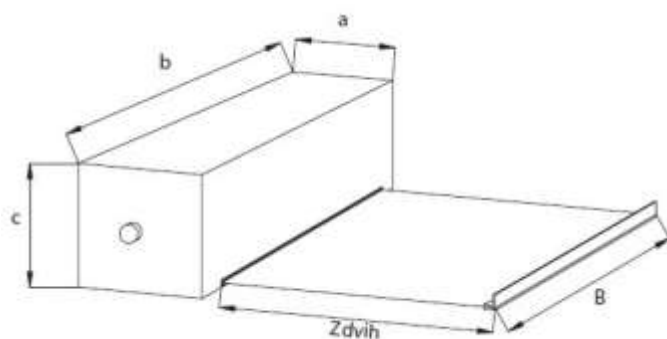
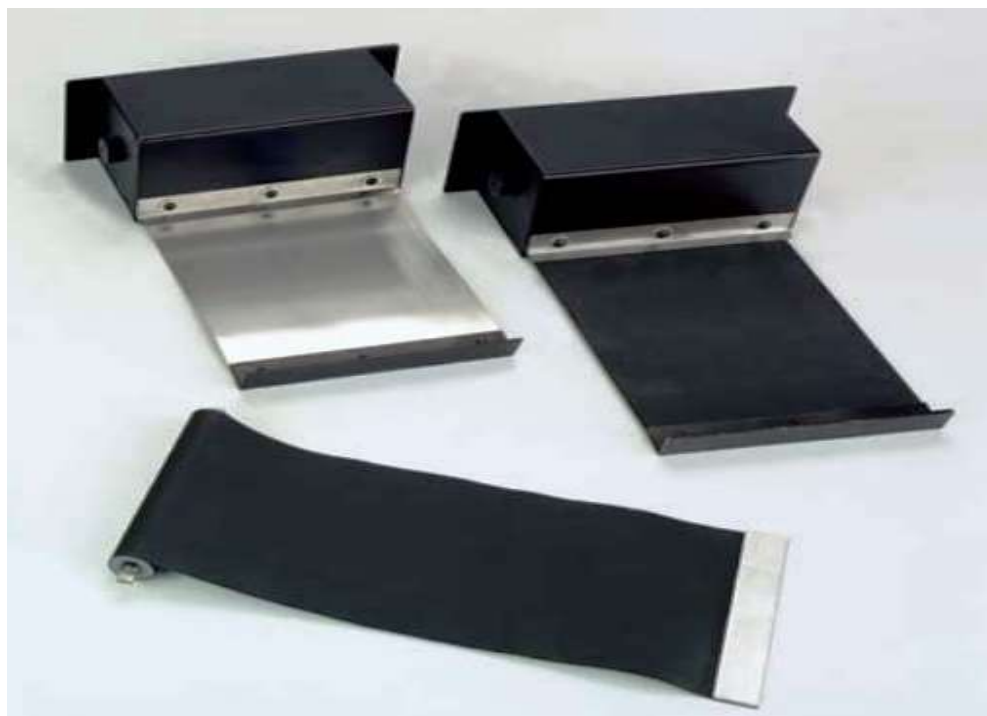
Internal protective covers moving in a one axis

Covering bellows



Internal protective covers moving in a one axis

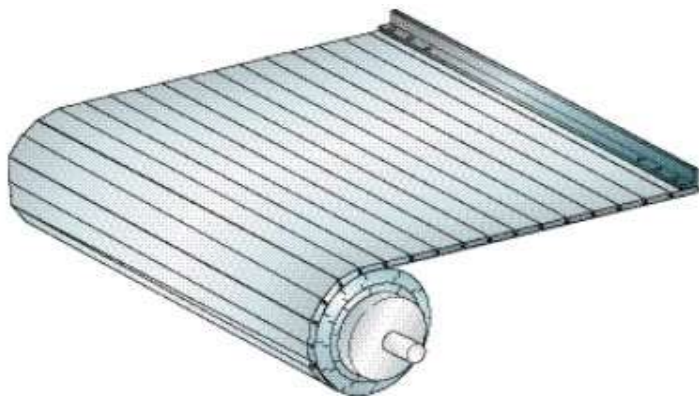
Roller shutter



Internal protective covers moving in a one axis

Roller shutter

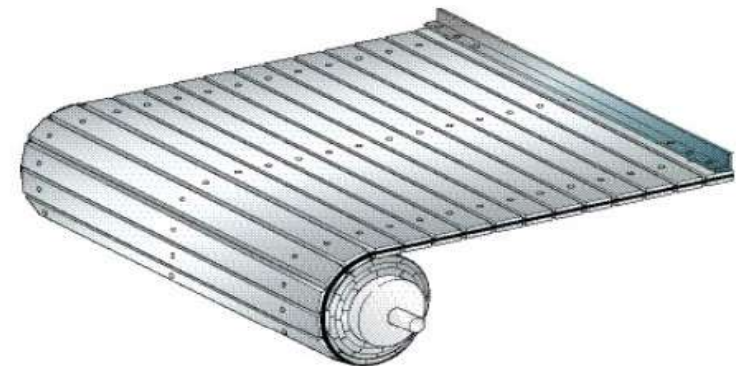
strip from aluminium profiles



PU connector



strip from plastic fabric with slats

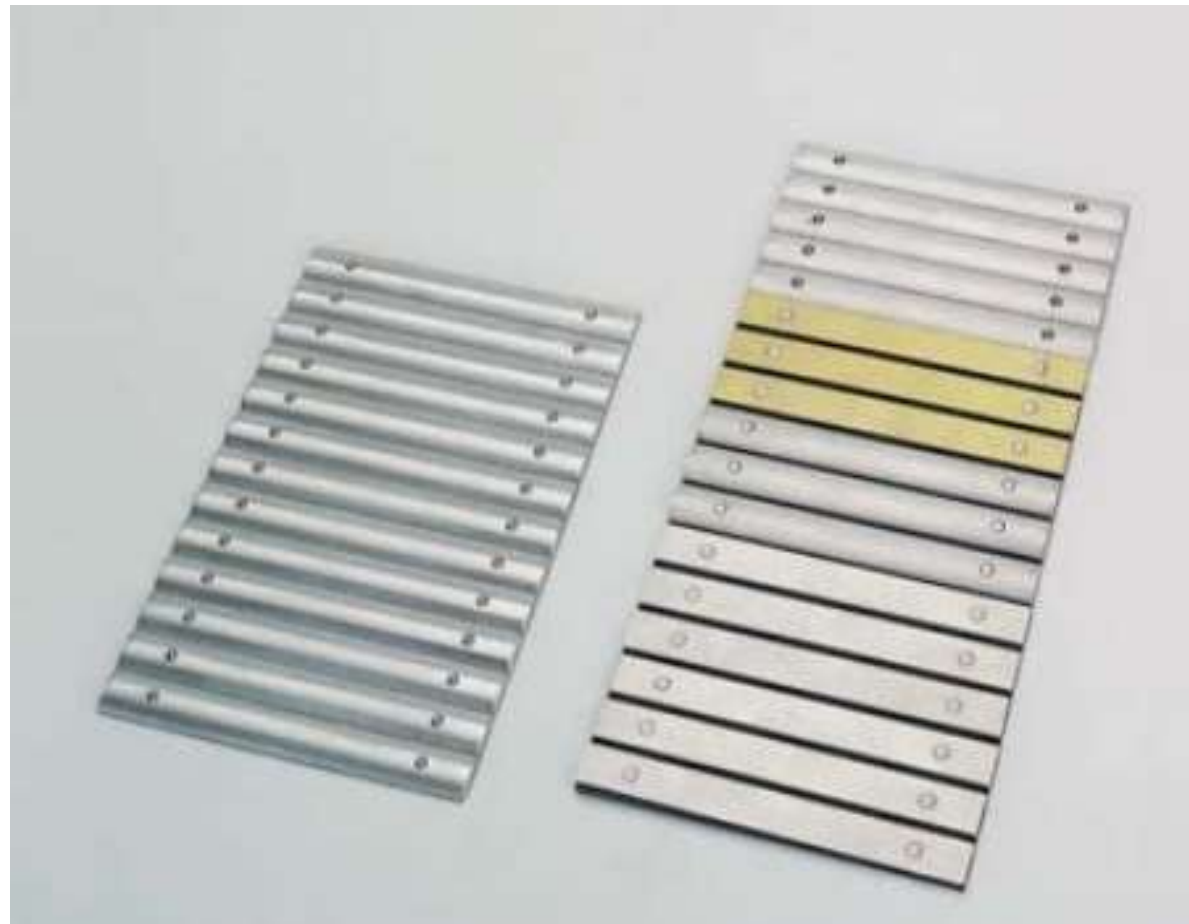


joint



Internal protective covers moving in a one axis

Sectional screens

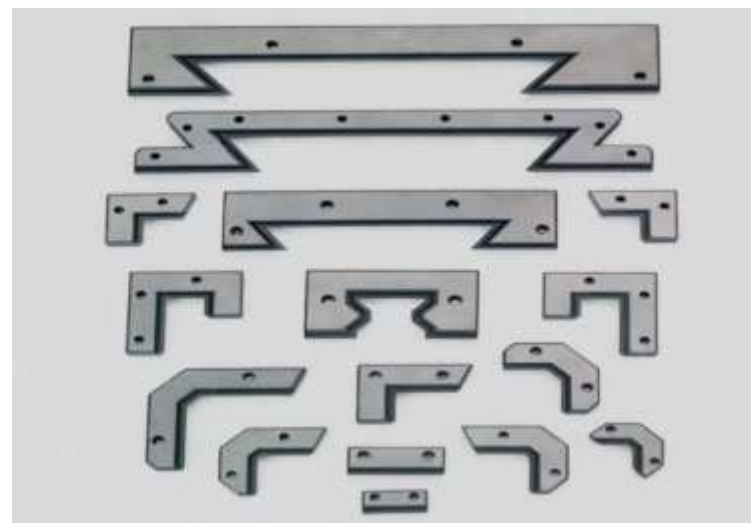
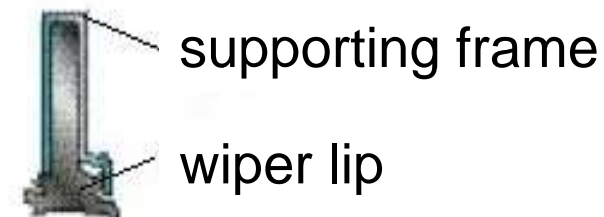
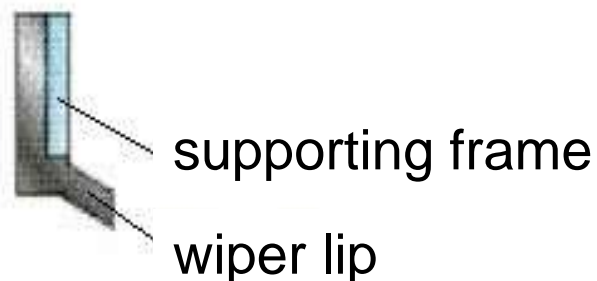


Internal protective covers moving in a one axis

Wipers

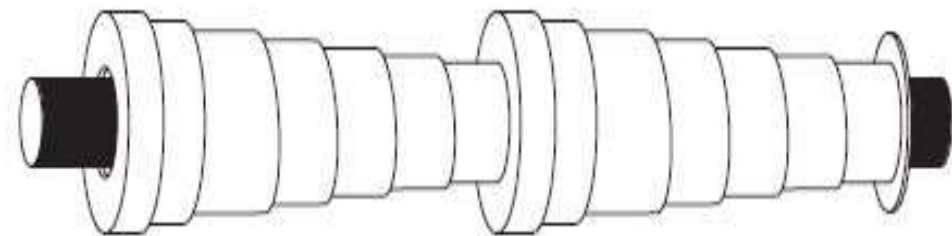
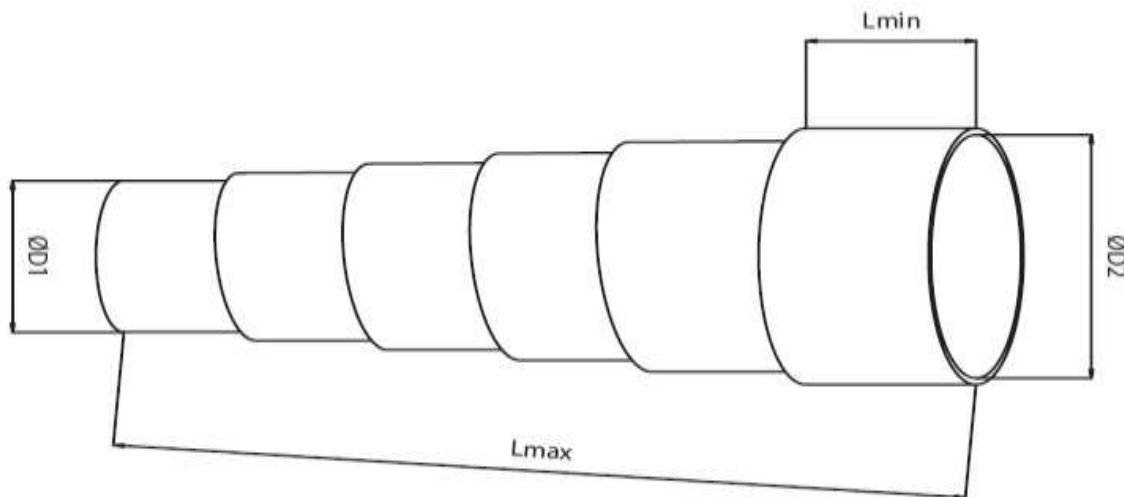
vulcanised wiper lip

freely inserted wiper lip



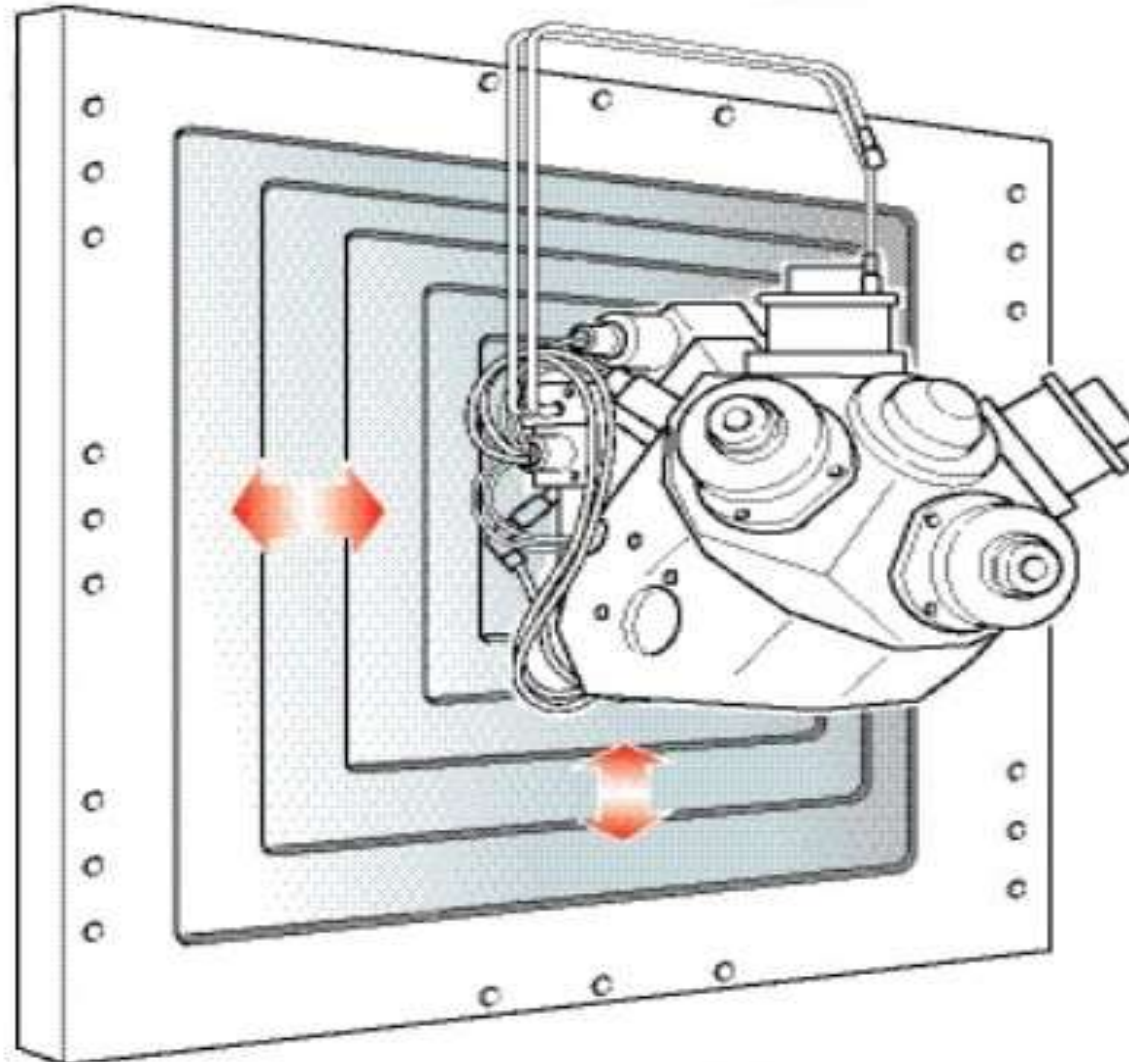
Internal protective covers moving in a one axis

Spiral covers



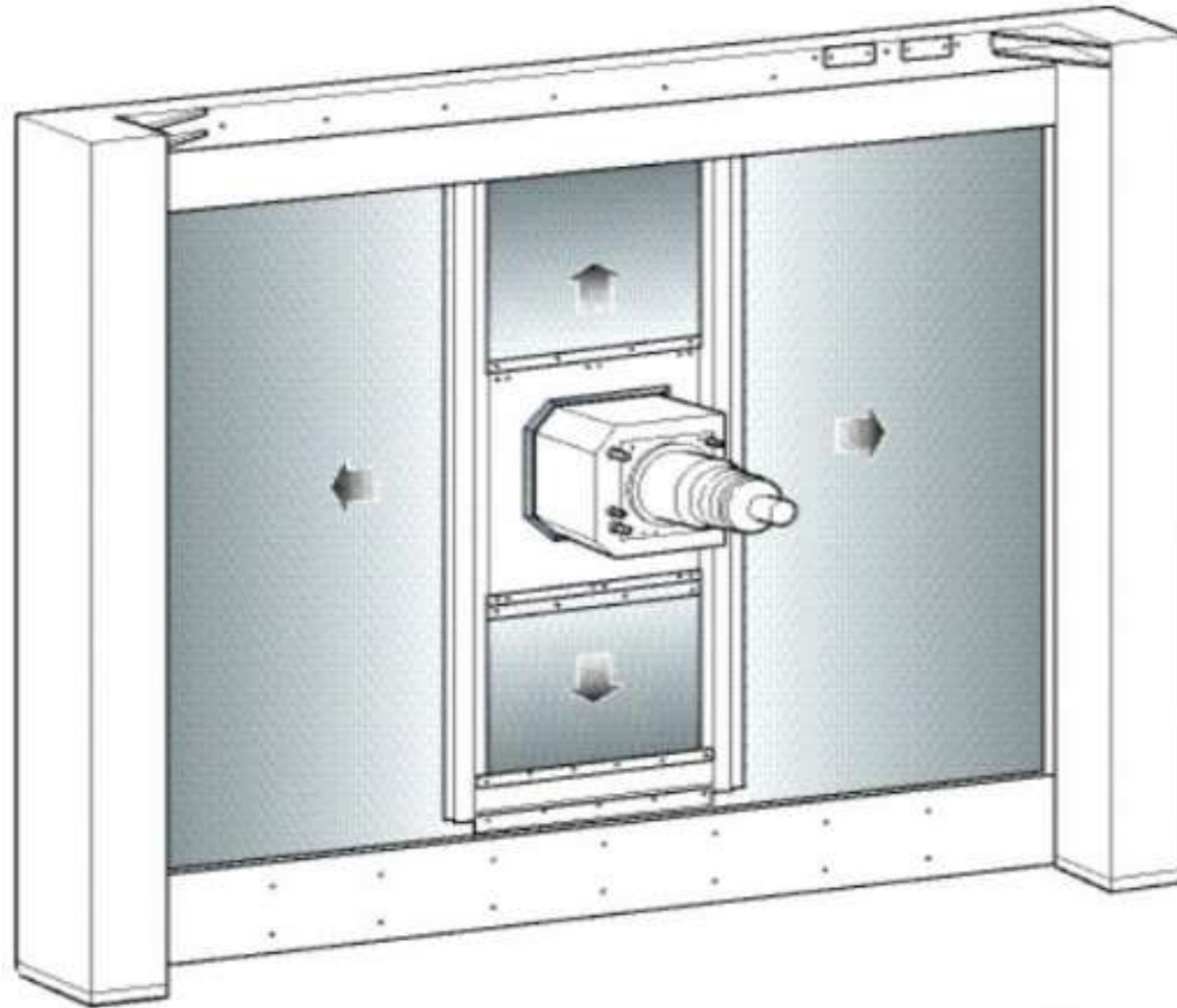
Internal protective covers moving in a two axis

Telescopic covers



Internal protective covers moving in a two axis

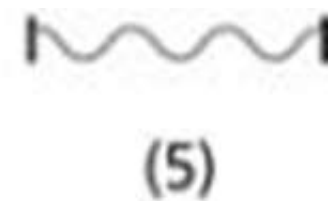
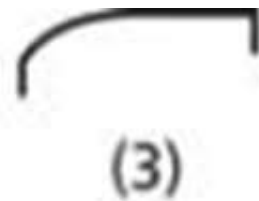
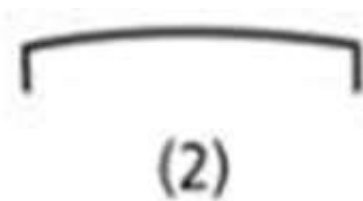
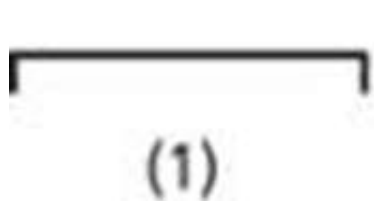
Roller shutter



Developments in protective covers

Modular system of covers

- 1) flat panel
- 2) rounded to the large radius
- 3) transitional rounded
- 4) end panel with chamfer
- 5) supplementary panel with profile fillers



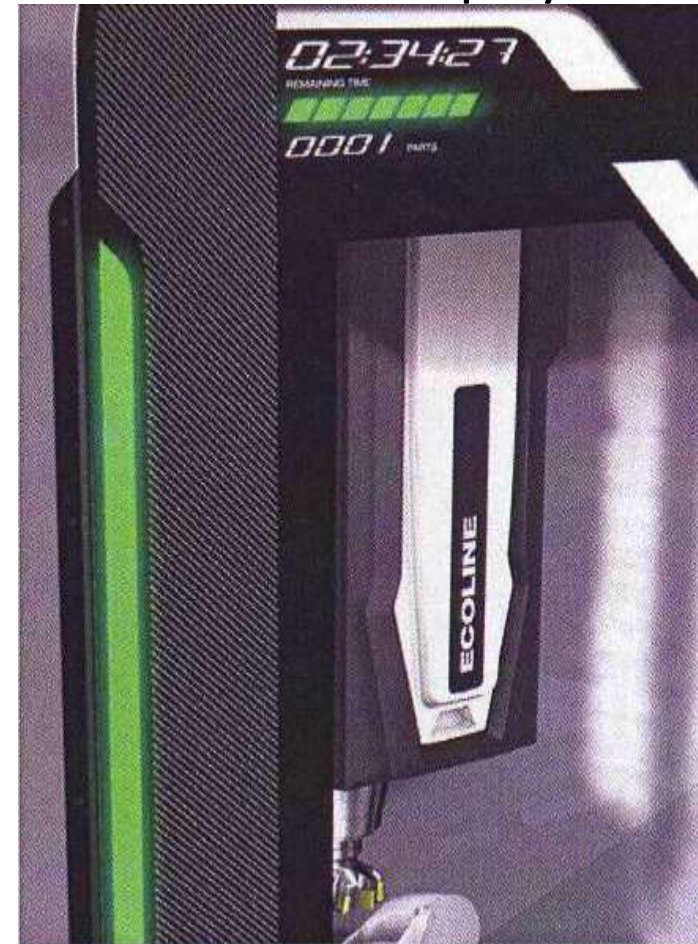
Developments in protective covers

Design

Milling machine 1035 V Ecoline



Information displays



Developments in protective covers

Design

