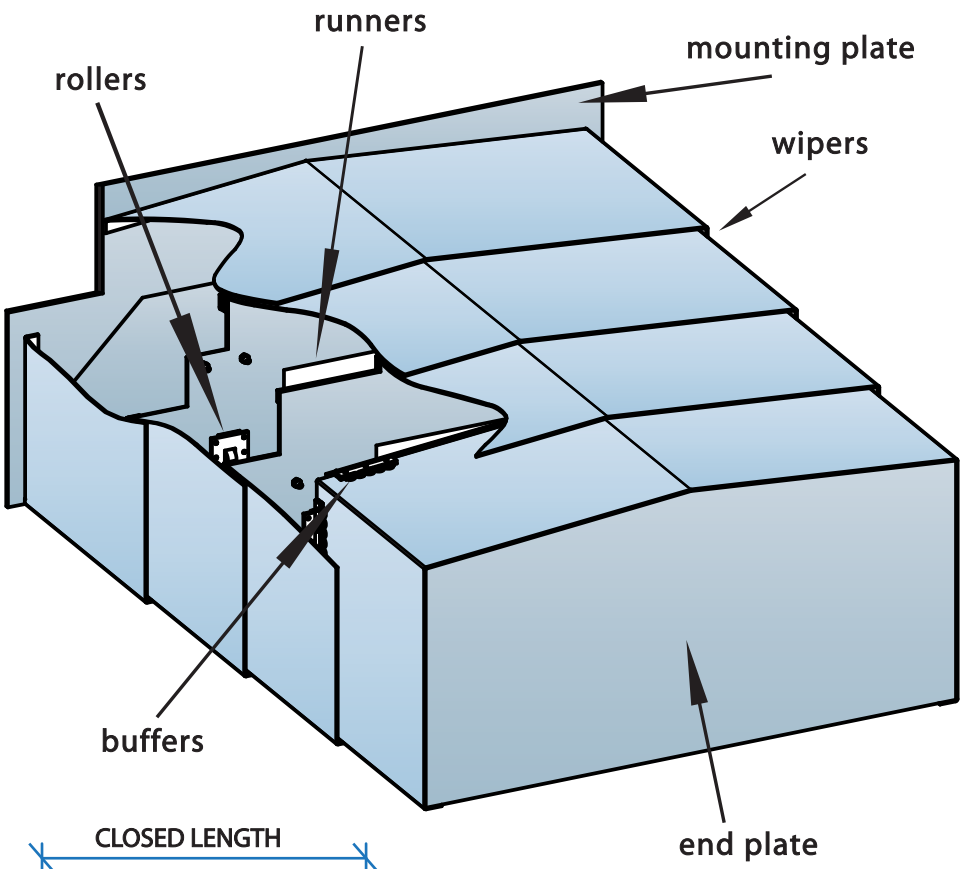
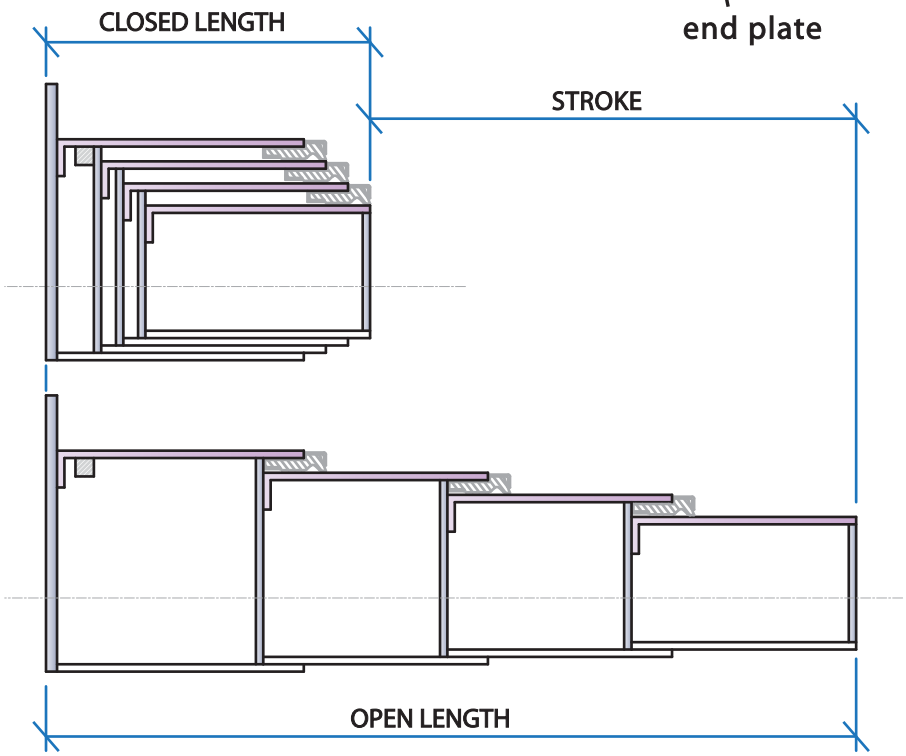
STANDARD TELESCOPIC COVERS

Our company has started with the production of sheet metal telescopic covers: these covers, once intended as protective covers for machine tool slideways, have evolved to the point of becoming an integral part of the machine housing, and can be produced in variable thicknesses. Our designers always start from the client's requirements and build a customized product with the added guarantee of high quality material. In addition, as part of our improved customer service, we can provide a cost estimate for the REFURBISHMENT of any telescopic cover, to be carried out on our premises. Where REFURBISHMENT is not feasible or cost effective, we can build a new cover using the measurements taken from a sample provided.





OPEN LENGTH - CLOSED LENGTH = STROKE

RUNNERS

Usually used for telescopic covers with speeds below 20 m/min. 1. 2 ft/s .

ROLLERS

Usually used for telescopic covers with speeds above 20 m/min. 1. 2 ft/s . Or for heavy covers

BUFFERS

Usually used for telescopic covers with speeds above 20 m/min. 1. 2 ft/s . Located at the opening and closing edges to reduce noise

WIPERS

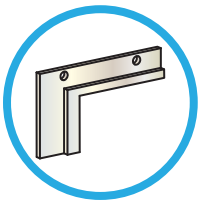
Consisting of a steel outer protection and an inner layer of oil-resistant rubber

OPEN/ CLOSED LENGTH

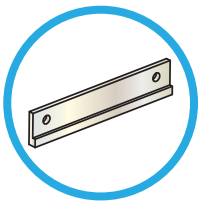
Measurements available directly from the machine or from the control panel. Basic measurements for the construction of the telescopic cover:

CLOSED LENGTH
OPEN LENGTH
STROKE

WORK AXES

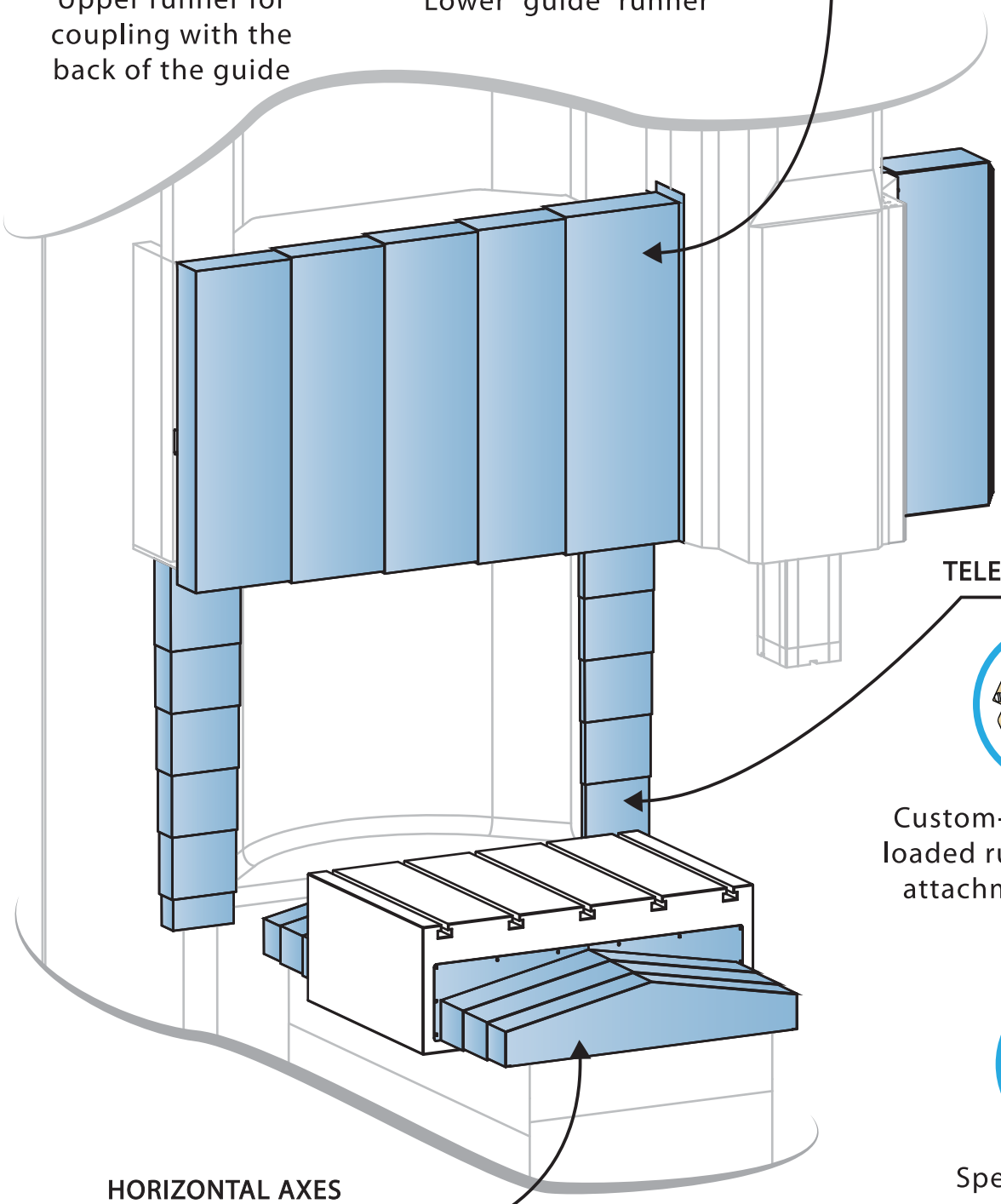


Upper runner for coupling with the back of the guide

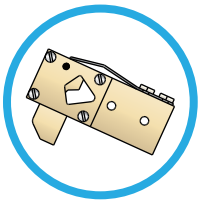


Lower guide runner

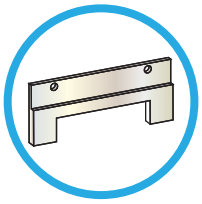
TRANSVERSE AXES TELESCOPIC COVER



VERTICAL AXES TELESCOPIC COVERS

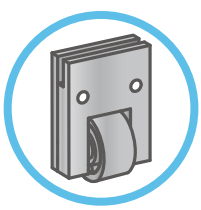


Custom-built spring-loaded runner for front attachment of cover

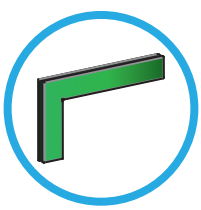


Special enclosing runner to ensure reliable cover functioning

HORIZONTAL AXES TELESCOPIC COVERS

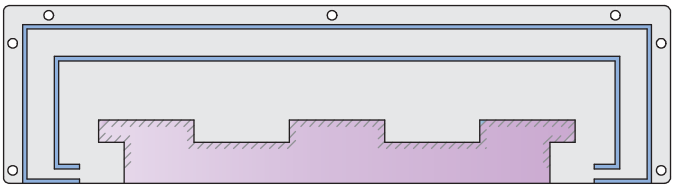


Replaceable bearings with custom-built frame



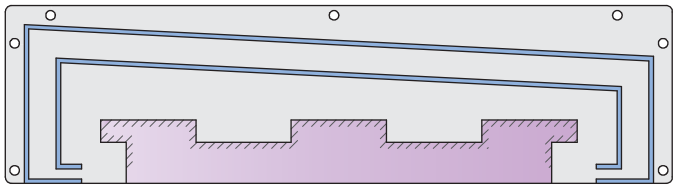
Polythene runner with groove mounting

TELESCOPIC COVERS SHAPES



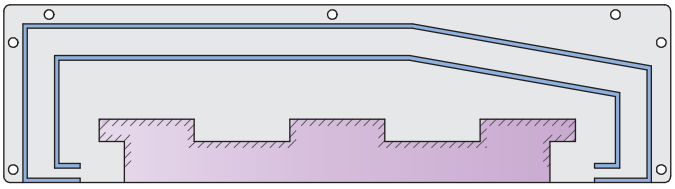
SHAPE A

Standard shape recommended for telescopic covers with flat plane of max. 900 mm. 2.59 ft = 35.4 length.



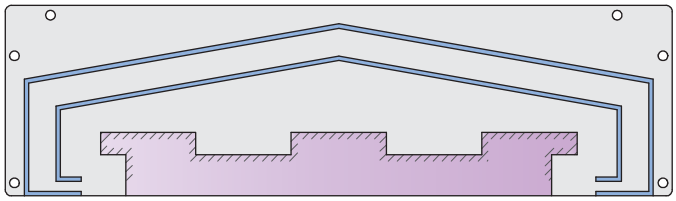
SHAPE B

Standard shape recommended for telescopic covers requiring side chip removal



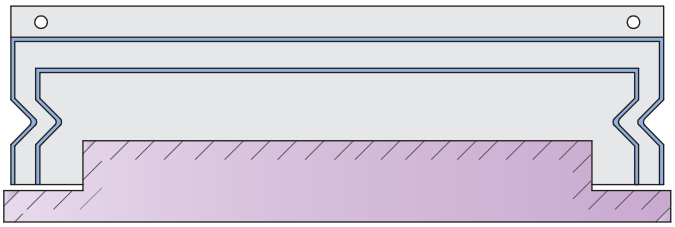
SHAPE C

Standard shape recommended for telescopic cover with upper side measuring more than 900 mm. 2.59 ft = 35.4 and requiring side chip removal



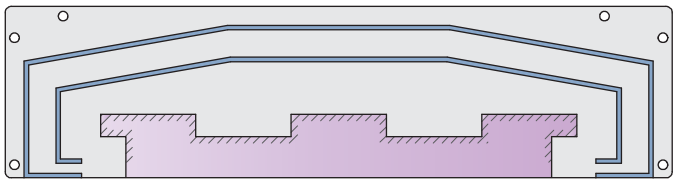
SHAPE D

Standard shape recommended for telescopic cover with upper side measuring more than 900 mm. 2.59 ft = 35.4 and requiring chip removal on both sides



SHAPE E

Standard shape recommended for telescopic cover with upper side measuring less than 500 mm 1.64 ft = 19.7.



SHAPE F

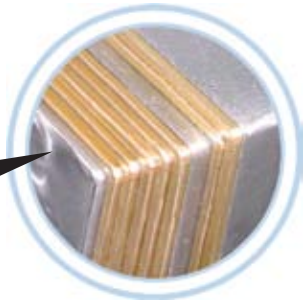
Standard shape recommended for telescopic cover with upper side measuring more than 900 mm. 2.59 ft = 35.4 up to max. 3000 mm 9.84 ft = 118.

SHAPE G

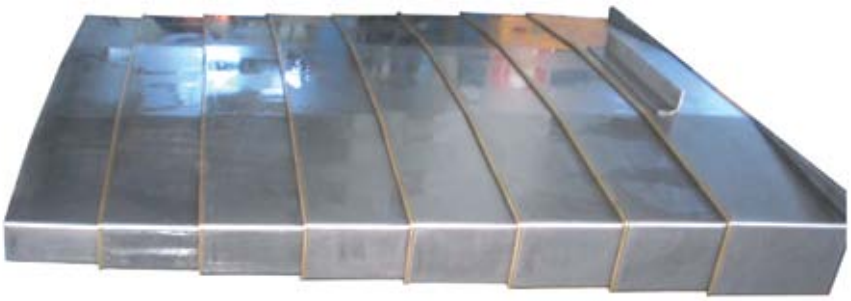
Standard shape recommended for protection of vertical axes

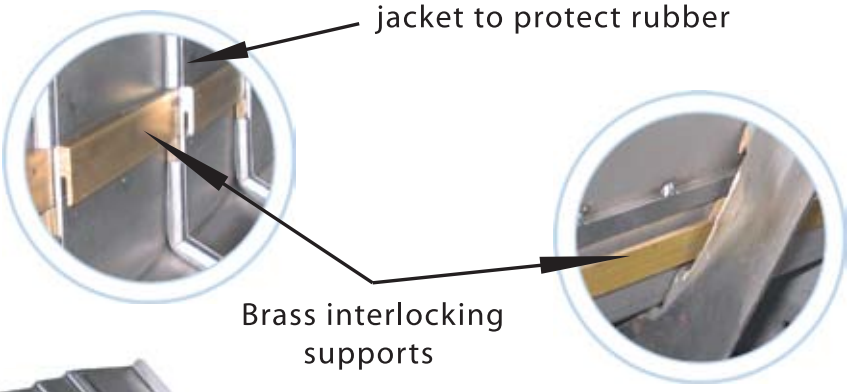
For all non-standard shapes see the paragraph on special designs

TELESCOPIC COVERS IN STAINLESS STEEL



Stainless steel is recommended where large quantities of coolant are present. Metal Gennari produces stainless steel telescopic covers in any shape and size. Given the high friction produced by the material it is necessary to separate the elements using specific internal contrivances, like wipers and first contact strips in brass.

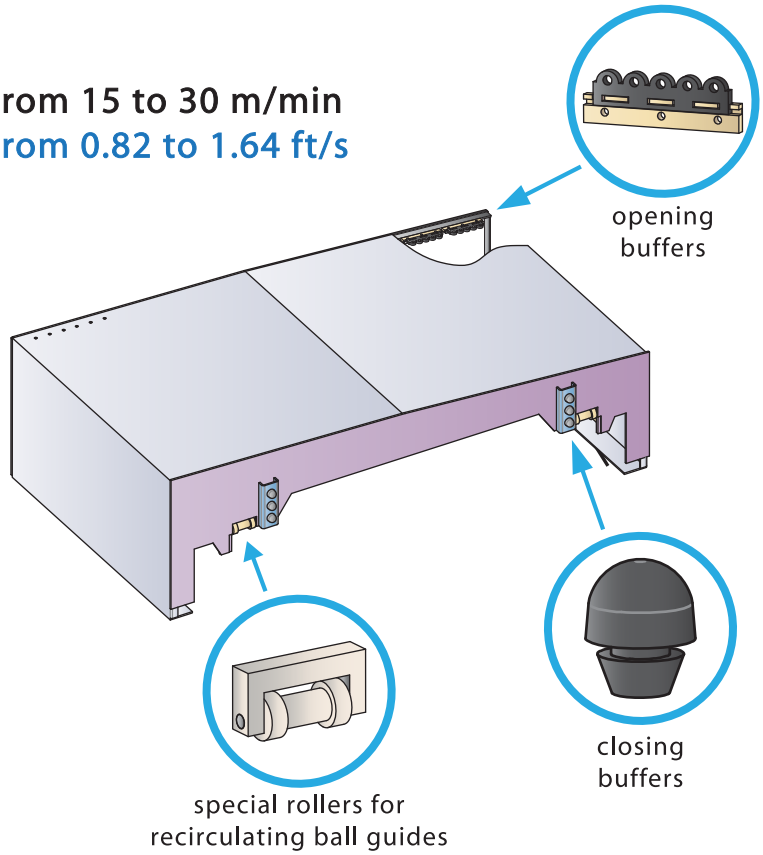




HIGH-SPEED TELESCOPIC COVERS

An essential consideration in the design of a telescopic cover is the traverse speed. Up to 15 m/min. 0.82 ft/s the covers do not need specific buffers, except in special cases. Between 15 and 30 m/min. 0.82 ft/s and 1.64 ft/s specific accessories are required to cushion the impact between the elements in order to make them last longer. From 30 to 60 m/min. 1.64 ft/s to 3.28 ft/s scissors are fixed on the cover. Thanks to their "concertina" movement, they prevent impact between the elements and allow them to move smoothly.

From 15 to 30 m/min
From 0.82 to 1.64 ft/s



OPENING BUFFERS

These shock absorbers are made up of a part in brass and a part in 100% NBR rubber with SHORR hardness 80. They are positioned in the front part of the element, immediately behind the oil wipers. Allow 15 mm space for each one.

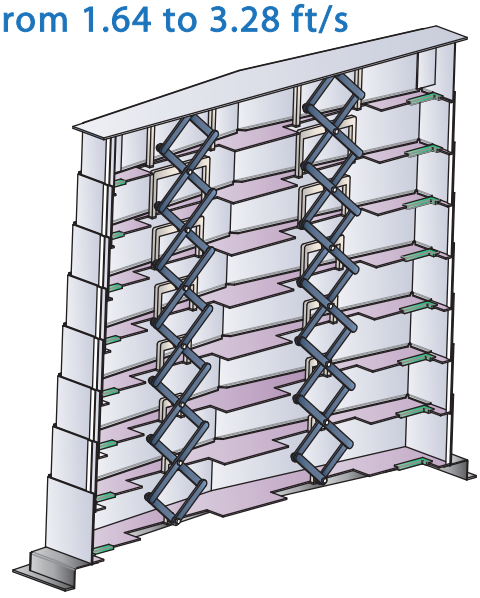
CLOSING BUFFERS

Buffers in anti-vibration rubber 70% NBR SHORR hardness 80 positioned on the rear part of the leading edge. In various shapes and dimensions according to need.

SPECIAL ROLLERS FOR RECIRCULATING BALL GUIDES

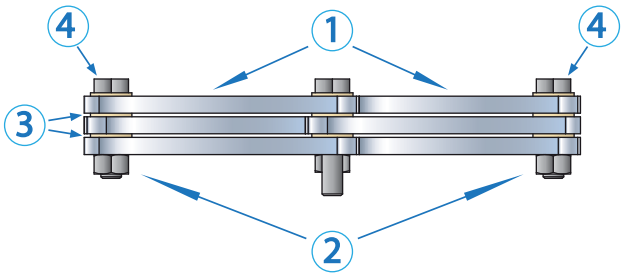
Turned plastic rollers with central groove specifically designed to glide over screw-covers. Fixed on a specific support block, therefore easily replaceable.

From 30 to 60 m/min
From 1.64 to 3.28 ft/s

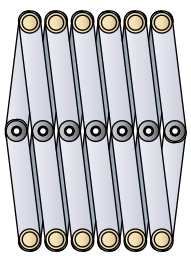


SCISSOR PARTS

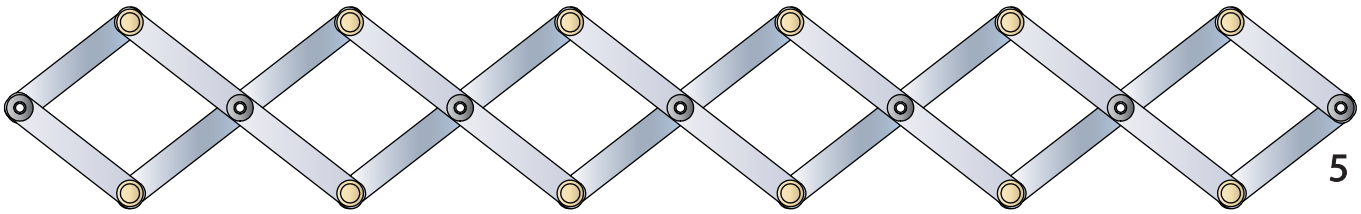
1 - steel opening arms,dimensions according to requirements
2 - rectified stem pins
3- custom-built brass bushes
4 - self-locking nuts



CLOSED SCISSOR



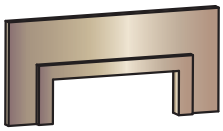
OPEN SCISSOR



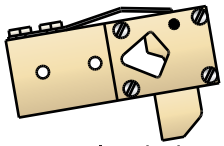
STANDARD PARTS

Runners

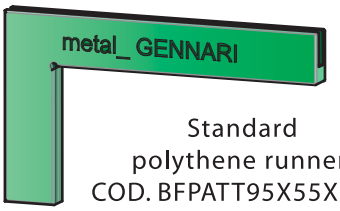
Brass wrapping runner
built to specification



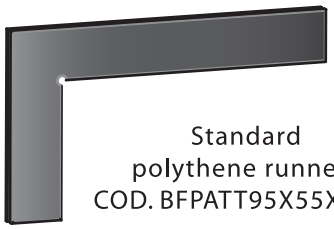
Ferrozell wrapping runner
built to specification



Brass spring-loaded runner
COD. BFSCROOTT60X25X10

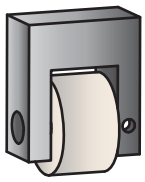


Standard
polythene runner
COD. BFPATT95X55X5-VE



Standard
polythene runner
COD. BFPATT95X55X7-NE

Rollers



Replaceable coated
bearing on a fixed support
COD. SUPPORT
MGBL0001
COD. BEARING
PVCUSC608SPALGRI

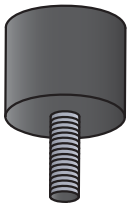
Replaceable coated
bearing on a fixed support
COD. SUPPORT
MG2000
COD. BEARING
PVCUSCNATR6ALPOR

Replaceable coated
bearing on an
adjustable support
COD. SUPPORT
MGBL0005
COD. BEARING
PVCUSCNATR6ALPOR

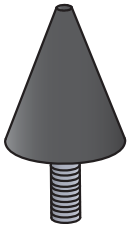
Teflon roller
Ø 20mm pin 10mm
Ø 0,787' pin 0,394'
COD. PVRULLD20NYL-000

Teflon roller
Ø 19mm pin 6
Ø 0.748' pin 0.236'
COD. PVRULLD19I6-000

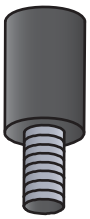
Closing buffers



Vibration-proof buffer Ø 20
Vibration-proof buffer Ø 0,787'
COD.BFAMMO20X15M6X16*45



Conical buffer Ø 25
Conical buffer Ø 0,984'
COD.BFAMMOPA25X30MP*45

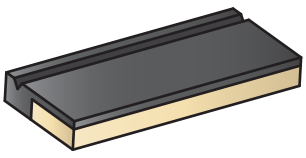


Damping buffer Ø 10
Damping buffer Ø 0,394'
COD. BFAMMO10X15M5X14

Damping buffer Ø 14
Damping buffer Ø 0,55'
COD. BFANTIALTO-00000

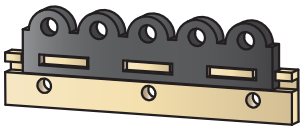
Opening buffers

Shock absorber
for the opening



COD. BFAMMOTA-G6

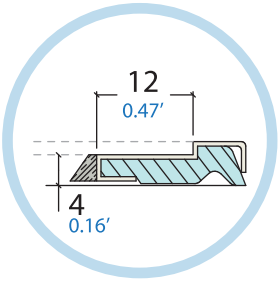
Assembled shock absorber
for the opening



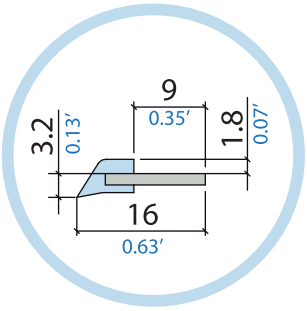
Brass shock absorber support
COD. BFTAMP12X4X70-OT

Damping contour
COD. BFAMMO61X16X4-GO

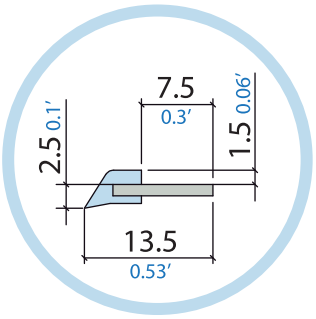
STANDARD PARTS



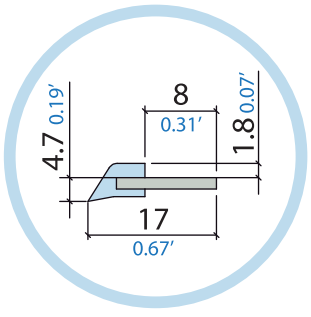
Damped wiper
MGRA0007
COD.
RUBBER: BFRASCF1134-0000
STEEL: BFRASCFEBF167-00
DAMPER: BFRASCVULCBF167*



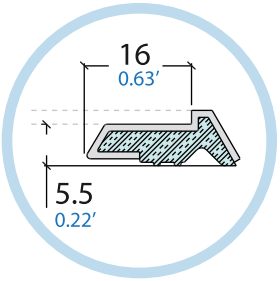
Non-jacketed wiper
COD.
BFRASCN1-000000*



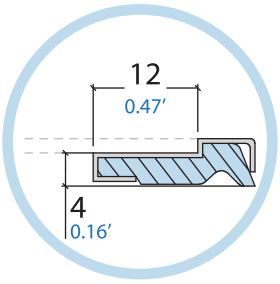
Non-jacketed wiper
COD.
BFRASCN3-000000*



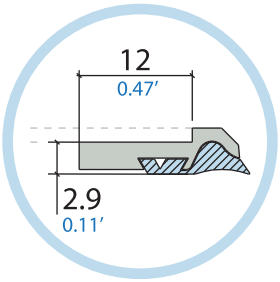
Non-jacketed wiper
COD.
BFRASCA6L1MT-000



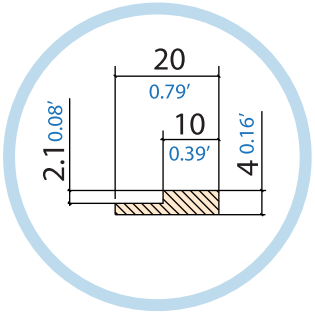
Metal-jacketed rubber wiper
MGRA0002
COD.
RUBBER: BFRASCF1170-0000
STEEL: BFRASCFESV37-000



Metal-jacketed rubber wiper
MGRA0001
COD.
RUBBER: BFRASCF1134-0000
STEEL: BFRASCFEBF167-00

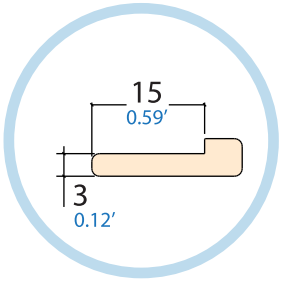


Metal-jacketed rubber wiper
MGRA0005
COD.
RUBBER: BFGOMMC1.7S-0000
STEEL: BFRASCTAC2.6-00*

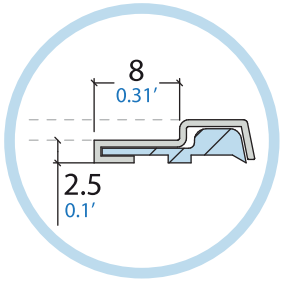


Autoslide SP.3 mm
STEEL: MGAUTO0004
BRASS: BFOTTO15X3-N6703

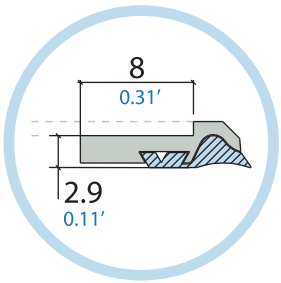
Wipers



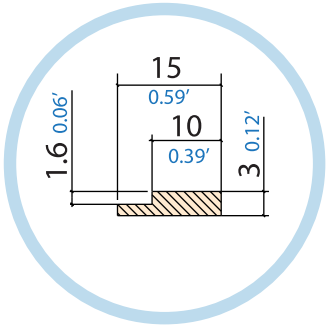
Brass wiper
COD.
BFOTTO20X5 - N9134



Metal-jacketed rubber wiper
MGRA0003
COD.
RUBBER: BFRASCPICNBR80-0
STEEL: BFRASCFEVA037



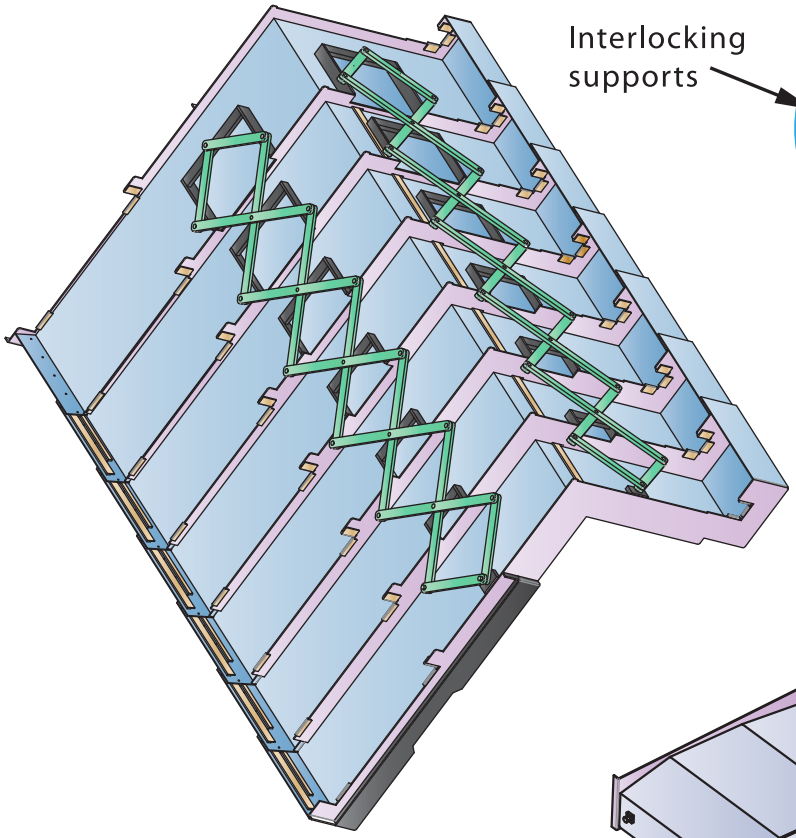
Metal-jacketed rubber wiper
MGRA0006
COD.
RUBBER: BFGOMMC1.7S-0000
STEEL: BFRASCTAC1.6-00*

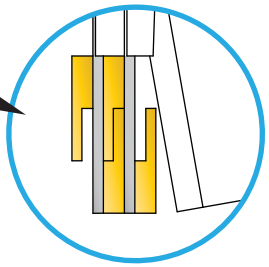


Autoslide SP.4 mm
STEEL: MGAUTO0003
BRASS: BFOTTO20X4-N1183

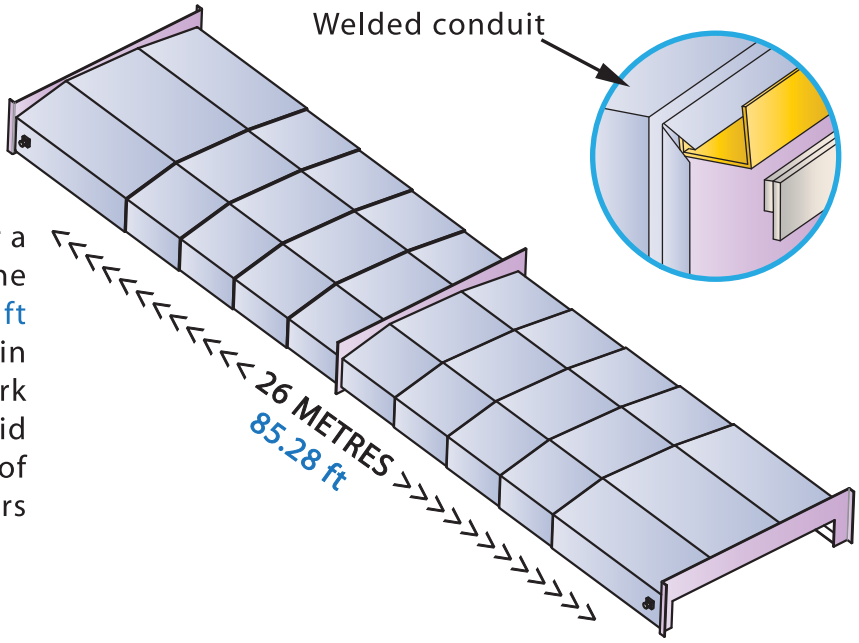
SPECIAL APPLICATIONS

In addition to the production of traditional telescopic covers our Technical Department is available for the design of bespoke applications to solve problems caused by the continual evolution of the machine tool, for example, traverse speed and large quantities of liquids.

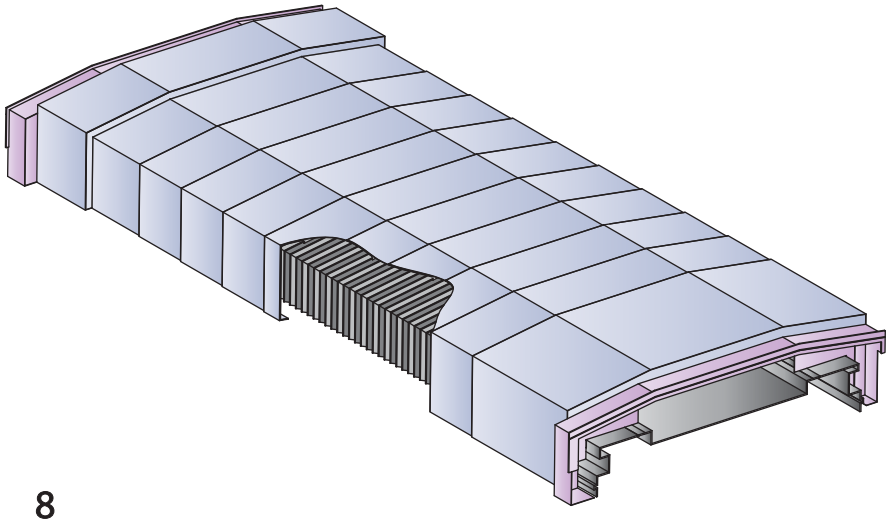




Example of special telescopic cover for parallel lathe with double scissors and 5 rows of brass interlocking supports. These are used for high speeds as they guarantee smooth opening and greater tightness between the elements and a lower risk of twisting.



Example of special telescopic cover for a turnable standard milling machine. The cover must allow a stroke of 26m 85.28 ft so a double cover has been fitted in order to make it last longer and work better. Special attention has been paid to the problem of the watertightness of the elements by placing special gutters for liquid recovery between the boxes.



Example of special telescopic cover for hydraulic working machines. This solution completely eliminates the possibility of infiltrations, as independent heat-sealed PVC bellows are fitted between the individual boxes. Alternatively, where there are 2 distinct surfaces for fixing on the guide, it is advisable to use a single bellow, which will open under the telescopic cover.

FORM TO REQUEST AN ESTIMATE

N.B.: The data evidence to you with *, are those essential things for an offer.

*Machine _____

Model _____

N. Elements _____

* AXIS AND/OR WORK POSITION

HORIZONTAL ☐ TRANSVERSAL ☐ VERTICAL ☐

* Name _____

* Company _____

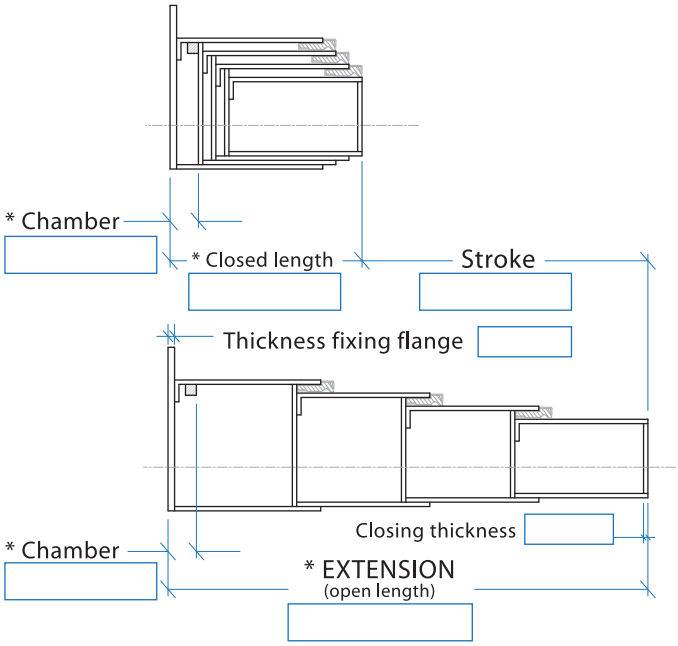
* Address _____

* Town _____ * Country _____

* Telephone _____

* Fax _____

* E-mail _____



* Traverse speed

LOW	MEDIUM	HIGH
Less than 10 mt/min 0.55 ft/s	Between 10 and 30 mt./min. 0.55 and 1.64 ft/s	Between 30 and 60 mt./min. 1.64 and 3.28 ft/s
☐	☐	☐

Walk-on [1] : YES ☐ NO ☐

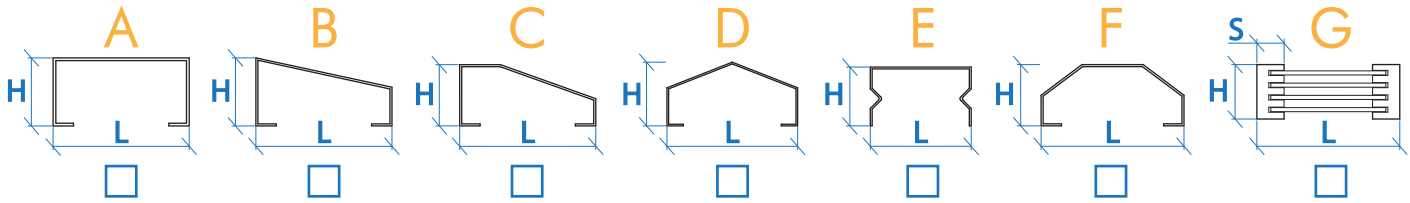
Water tightness : normal ☐ with rear recovery ☐

* Contact with the guides by

RUNNERS ☐ — nylon ☐ brass ☐

ROLLERS ☐ — steel ☐ coated ☐

* SHAPE VIEWED FROM THE X AXIS



A ☐ B ☐ opposite side ☐ C ☐ opposite side ☐ D ☐ E ☐ F ☐ G ☐

CUSTOM-BUILT SHAPE (SHAPE H) ☐

* L : _____ * H : _____ S : _____

* Sheet : ☐ steel thickness _____ ☐ stainless steel thickness _____

Notes : * QUANTITY _____

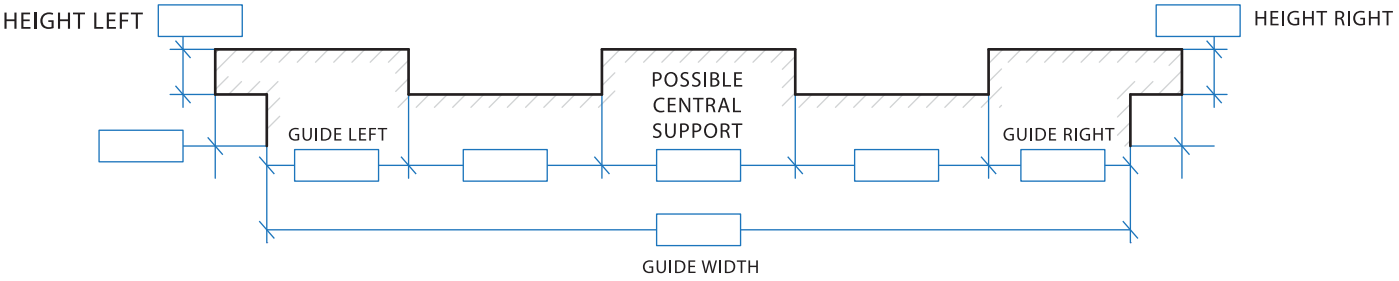
* Do not step on the telescopic cover components, especially when they are moving (Law 626/91). Walking on is guaranteed only when the cover is closed. Any other special feature must be agreed with our Technical Dept. and explicitly approved by it.

FORM FOR SURVEY OF THE MACHINE TOOL GUIDES

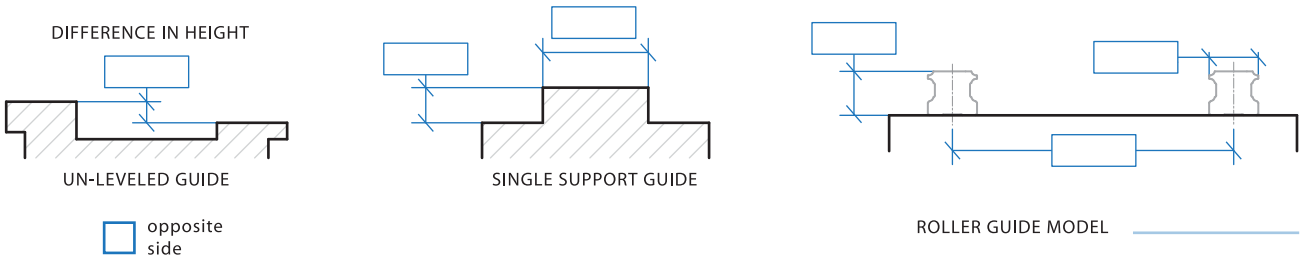
Whenever it is necessary to build new telescopic covers, either because the machine was not designed with any, or where it is necessary to modify the pre-existing cover, the measurements indicated below must be provided.

IMPORTANT: ALL MEASUREMENTS MUST BE TAKEN STANDING IN FRONT OF THE SMALLEST ELEMENT. SEE VIEW FROM X IN FIG. 1.1, PREVIOUS SHEET.

MACHINE TOOL GUIDES AND/OR COVER SUPPORT



COMMON SPECIAL CASES (EXTRA MEASUREMENTS TO TAKE)



It is necessary to check for encumbrances that may interfere with the housing near the supports of the fixing points of the end elements.
The most common cases are shown in figures 2.1 and 2.2.

FIG. 2.1

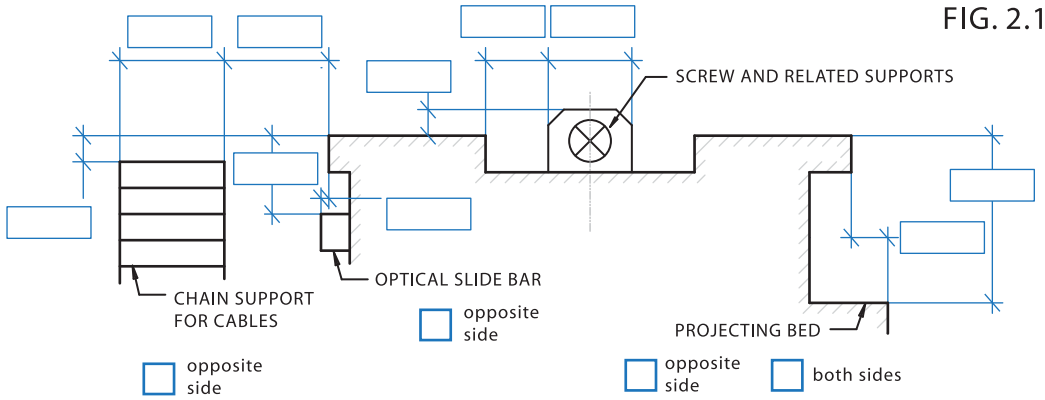
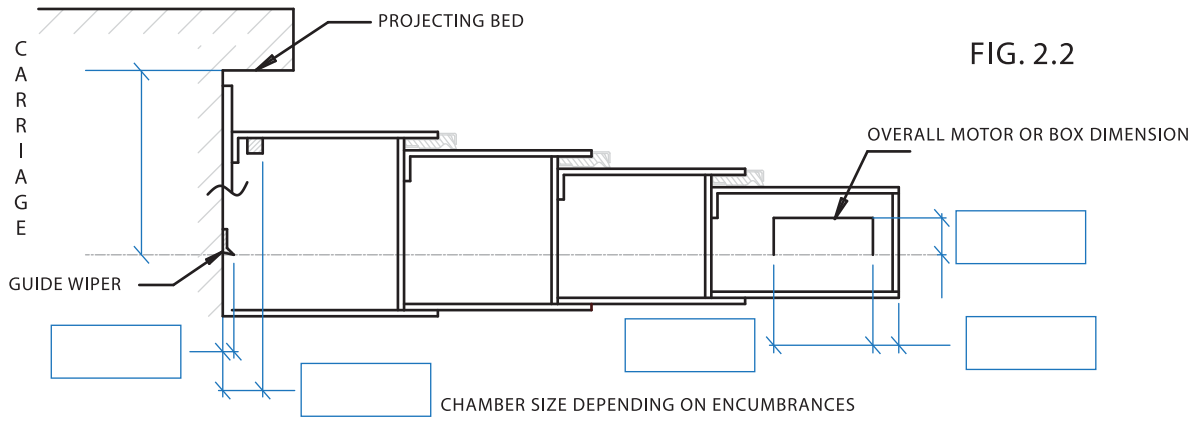


FIG. 2.2



REFURBISHMENT OF WORN TELESCOPIC COVERS

As part of our improved customer service, if possible and cost-effective, Metal Gennari can provide a cost estimate for the OVERHAUL of any telescopic cover, to be carried out on our premises.

GETTING START

1 - Repair or replacement of damaged individual element

2 - Replacement of the oil wipers in brass or PVC, if worn

3 - Replacement of runners, rollers, buffers and any other part of the cover

4 - Cleaning and satin-finishing of each individual part

5 - Testing with our simulators and/or test benches

6 - Fast delivery, sometimes in just a week!

If the cover is too damaged, or refurbishment would not be cost-effective, Metal Gennari can provide a new cover with the same characteristics.

NEXT

TESTING FOR TELESCOPIC COVERS BY SIMULATOR

It is the only one of its kind and is able to test covers included within the following range of dimensions:

- Width guide range: Y axis 400 mm. 1.312 ft. Min. - 2300 mm. 0.754 ft Max ;

- Work stroke X axis: max 5500 mm. 18.04 ft ;

- Traverse speed X axis: max 60 m/min. 3.28 ft/s ;

- X axis max. acceleration: 1G;

- Max weight supported by the guides: 1600 Kg 3527 lb .

As it is completely NC-managed, it is possible to set " work cycles " of various duration with speed movements and different positions.
A test report is generated at the end of the cycle in order to give the client a certificate proving the quality of the product, if requested.