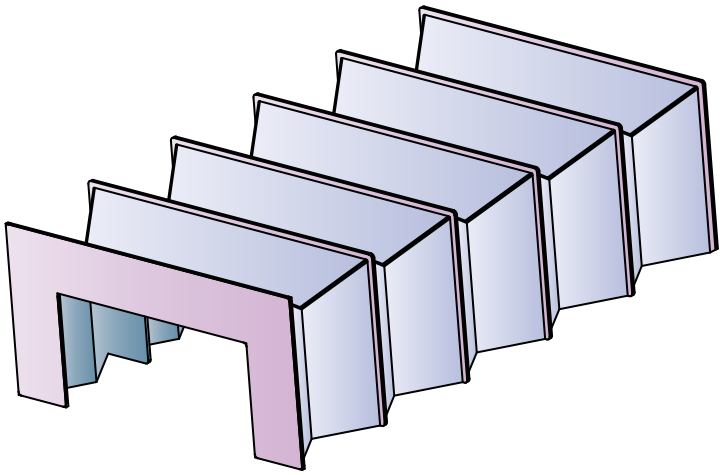
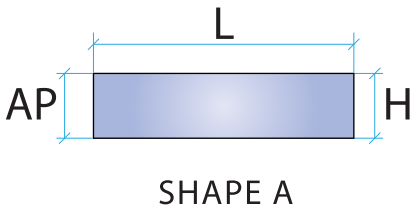
BELLOWS

The bellows can be sewn, glued or heat-sealed. The material and shape may change according to use. Special linings with stainless steel blades are available to increase the strength of the bellow when it comes into contact with chips.

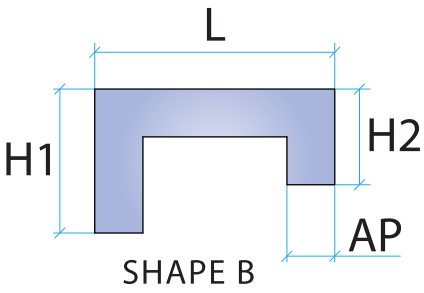


BELLOWS SHAPES

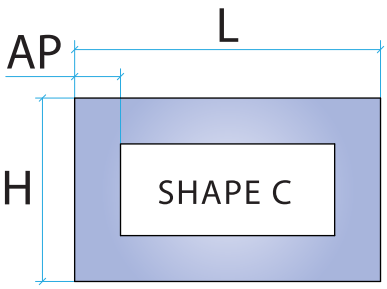
The figures below are for standard shapes; for any other shape check with our Technical Dept.

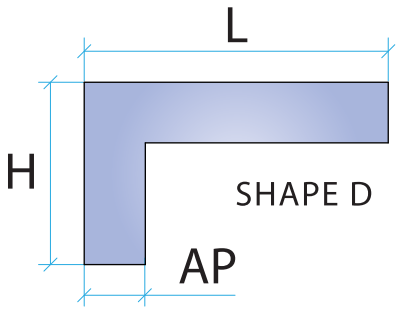


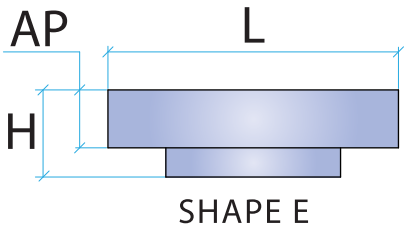
SHAPE A



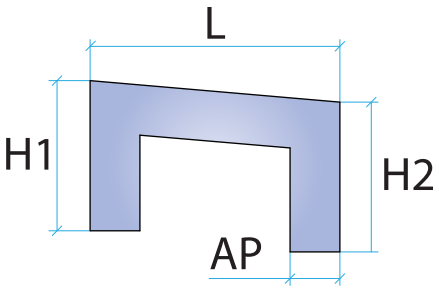
SHAPE B



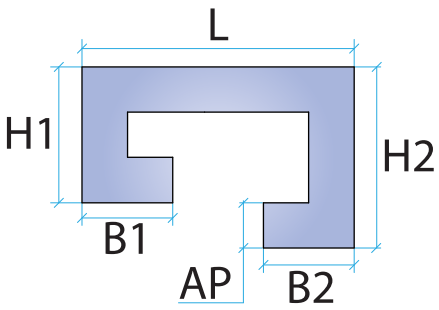




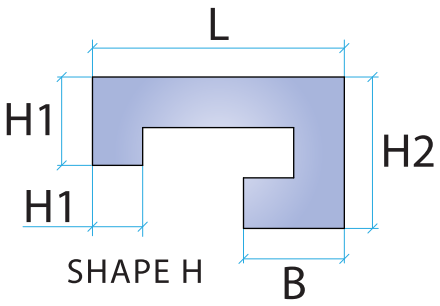
SHAPE E



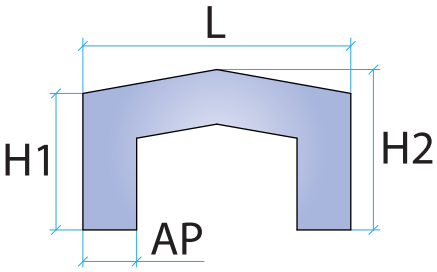
SHAPE F



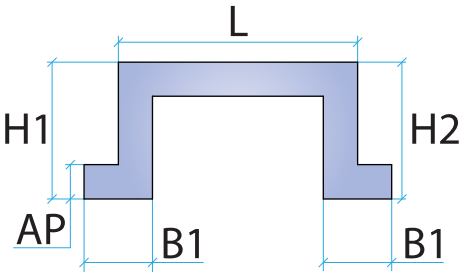
SHAPE G



SHAPE H



SHAPE I



SHAPE L

FORM TO REQUEST AN ESTIMATE

* Machine _____

Model _____

Traverse speed _____

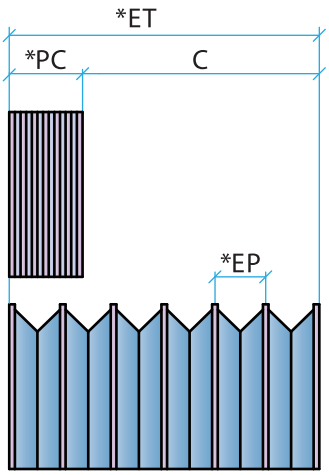
*** AXIS AND/OR WORK POSITION**

HORIZONTAL ☐ TRANSVERSAL ☐ VERTICAL ☐

* Name _____
* Company _____
* Address _____

* Town _____ * Country _____
* Telephone _____
* Fax _____
* E-mail _____

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



* ET = TOTAL EXTENSION

C = STROKE

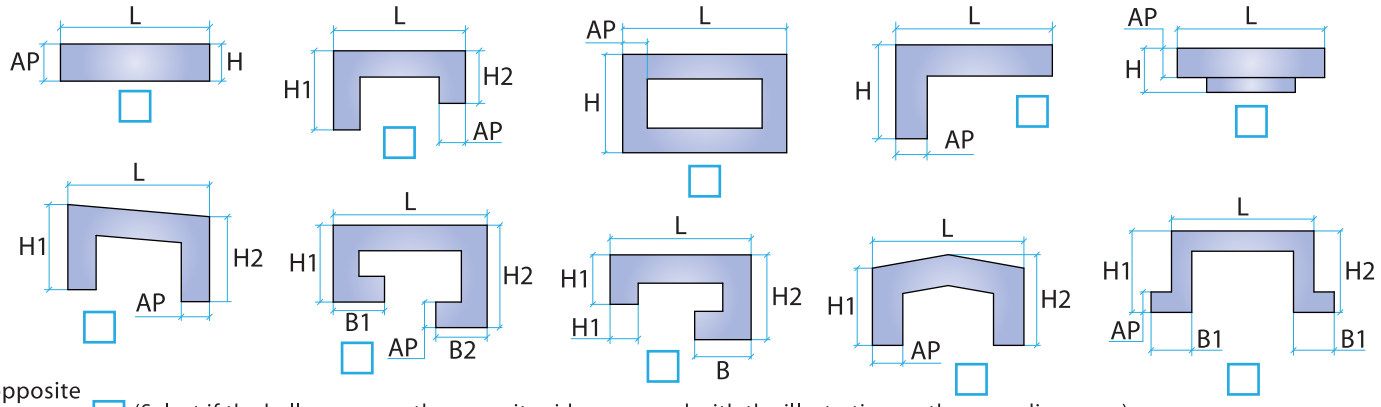
* PC = CLOSED LENGTH

* EP = FOLD EXTENSION

* MATERIALS

POLYURETHANE	Self-extinguishing fabric. Petroleum product, oils, acids and grinding dust resistant
ARAMID	Self-extinguishing fabric. Excellent mechanical resistance, good resistance to welding spray and incandescent materials
PVC	Self-extinguishing, fire-resistant fabric. Welding spray and chip resistant
LASERTEC	Self-extinguishing fabric. Petroleum product, oils and abrasions resistant. Excellent mechanical resistance, good resistance to welding spray and incandescent materials. Widely used for laser-cutting machines

SHAPE CHOSEN



opposite side ☐ (Select if the bellows are on the opposite side compared with the illustration on the preceding page)

ABBREVIATIONS FOR BELLOWS SHAPE

* L = BELLOWS LENGTH _____

AP = FOLD HEIGHT _____

* H = BELLOWS HEIGHT
* H-H1 _____
H2 _____

B = LOWER SIDE
B-B1 _____
B2 _____

* BLADES
YES ☐ NO ☐
fixed ☐
moving ☐

BELLOWS TYPE
sewn ☐
heat-sealed ☐
glued ☐

SPECIFIC REQUESTS

Notes :

* QUANTITY _____

BELLOWS MATERIALS LIST

MATERIAL CODE	DESCRIPTION			THICKNESS mm inches	THERMAL RESISTANCE CONTINUOUS		MAIN RESISTANCE CHARACTERISTICS
	OUTSIDE	TEXTILE INSERT	LINING		Min °C °F	Max °C °F	
4509	SILICON	FIBREGLASS	PVC	0.44 0,00173	- 30 - 22	+ 200 + 392	Self-extinguishing fabric. Coolant liquid spray, acids and dust resistant. Suitable also for moderate welding spray
4474	POLYURETHANE	POLYESTER	POLYURETHANE	0.25 0,0098	- 30 - 22	+ 90 + 194	Self-extinguishing fabric. Petroleum product, oils, acids and grinding dust resistant
4549	POLYURETHANE	POLYESTER	POLYURETHANE	0.35 0,0138	- 30 - 22	+ 90 + 194	
5189	POLYURETHANE	ARAMID	POLYURETHANE	0.45 0,00157	- 30 - 22	+ 380 + 716	Self-extinguishing fabric. Excellent mechanical resistance, good resistance to welding spray and incandescent materials
5185	PVC	POLYESTER	PVC	0.36 0,0142	- 30 - 22	+ 70 + 158	Self-extinguishing fabric. Coolant, oil and dust resistant
4743	PVC	POLYESTER	PVC	0.25 0,0098	- 30 - 22	+ 70 + 158	
6501	PVC	POLYESTER	PVC	0.40 0,00157	- 30 - 22	+ 70 + 158	Self-extinguishing, fire-resistant fabric. Welding spray and chip resistant
LASERTEC	POLYURETHANE	KEVLAR	POLYURETHANE	0.36 0,0142	- 30 - 22	+ 180 + 356	Self-extinguishing fabric. Petroleum product, oils and abrasions resistant. Excellent mechanical resistance, good resistance to welding spray and incandescent materials. Widely used for laser-cutting machines

MATERIAL FOR GLUED BELLOWS

Internal PVC support with internal lining in HJPALON. Thickness 0.30 mm 0,004'. Resistant to grinding dust, water, oils and acids. Resistant to temperatures ranging from -30°C -22°F to +120°C +248°F.

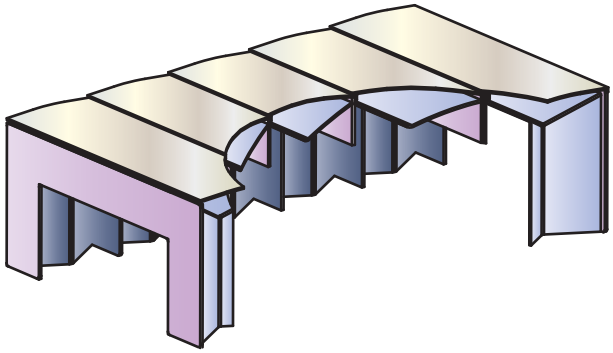
Internal support in PVC and external part in aluminized fibreglass. Thickness 0.30 mm 0,004'. Resistant to oils, acids, welding spray and incandescent materials. Resistant to temperatures from -30°C -22°F to +100°C +212°F reaching peaks of up to +400°C +752°F.

MATERIAL FOR SUPPORTS

DESCRIPTION	THICKNESS mm inches
PVC	0.50 0,0197
PVC	1.00 0,0394
PVC	1.50 0,0591

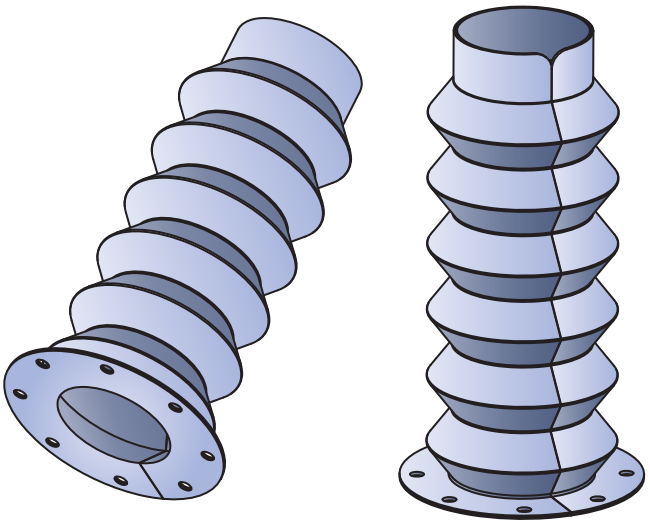
MATERIAL FOR FLANGE ENDS

DESCRIPTION	THICKNESS mm inches
ALLUMINIUM	2.0 0,0787 - 3.0 0,1181
STAINLESS STEEL	2.0 0,0787 - 3.0 0,1181 - 4.0 0,1575
PVC	2.0 0,0787 - 3.0 0,1181



PROTECTION BLADES

The blades are made of stainless steel. They are used in environments where large-size chip is present. Especially suitable where acids are present. They may be moveable or fixed.



CIRCULAR BELLOWS

Circular bellows are suppllied sewn, glued or heat-sealed. They are used when a very short compressed length is required or when good resistance to rotation is needed. They can be fixed using a flat-face or ring-face flange. To facilitate assembly they may be made with a lengthwise opening. In this way, they can be fitted without having to dismantle the part needing protection.

FORM TO REQUEST AN ESTIMATE

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

* Machine _____

Model _____

Traverse speed _____

* AXIS AND/OR WORK POSITION

HORIZONTAL ☐ TRANSVERSAL ☐ VERTICAL ☐

* Name _____

* Company _____

* Address _____

* Town _____ * Country _____

* Telephone _____

* Fax _____

* E-mail _____

* BELLOWS TYPE		* MOUNTING		* MATERIALS	
SEWN	☐	FLANGE	☐	PVC ☐	ARAMID ☐
GLUED	☐	RING	☐	POLYURETHANE ☐	FIBREGLASS ☐
HEAT-SEALED	☐	ON BOTH SIDES	☐		

* ET= total extension

CO= stroke

* PC= closed lenght

* A = bellows external diameter

B = bellows internal diameter

* C = screw diameter

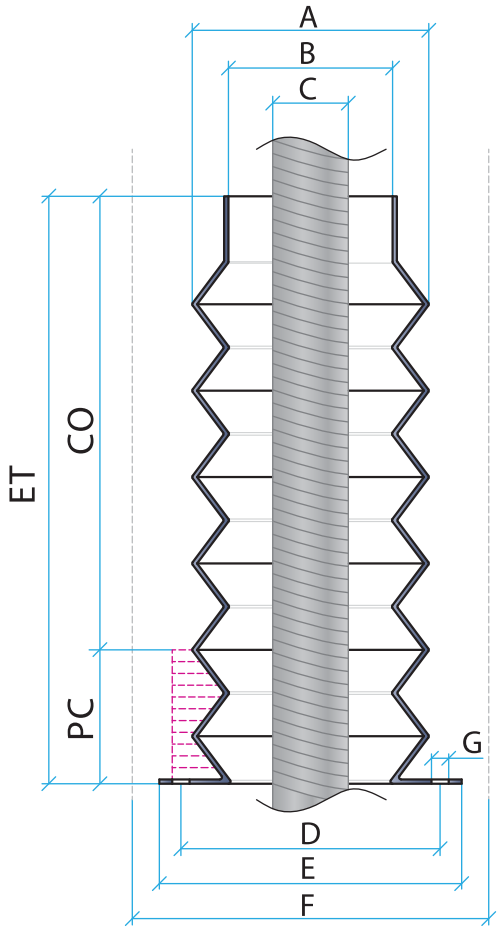
D = distance between flange hole centers

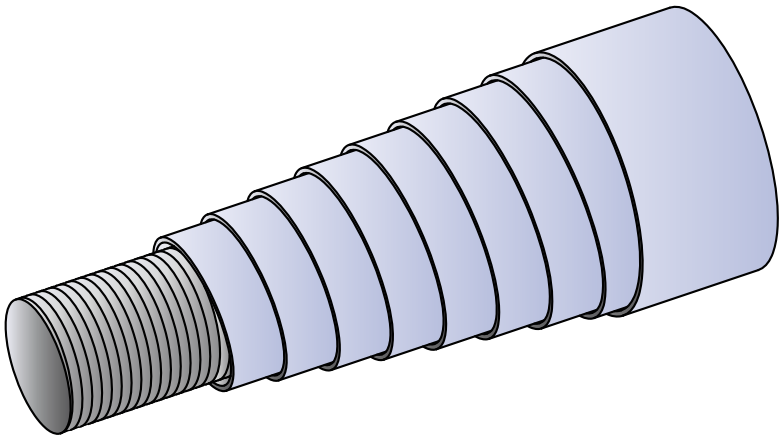
E = flange ends external diameter

F = fixing holes diameter

G = distance from any encumbrances

QUANTITY *





SPIRAL SPRING COVER

The spiral spring cover for ball screws is a single steel protection. It is normally used for the protection of ball screws and shafts installed in the machine tools. It protects the equipment against chips, dust and coolants, without compromising the normal operation of the machine, but always guaranteeing the maximum protection.
They are delivered (in steel band that is wrapped around the balls screw or shaft) and can easily be fastened to the machine.

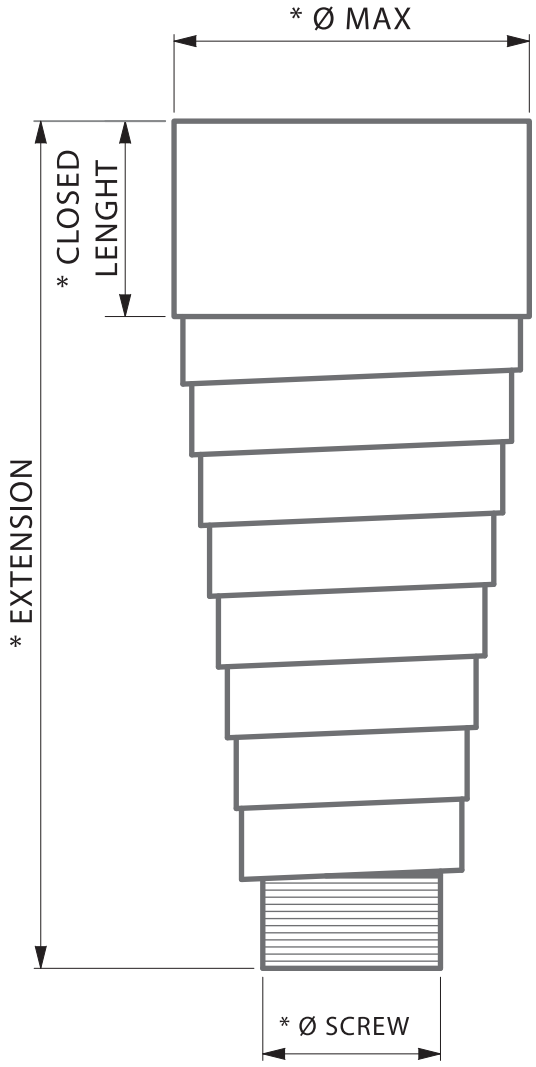
FORM TO REQUEST AN ESTIMATE

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

Machine _____

Model _____

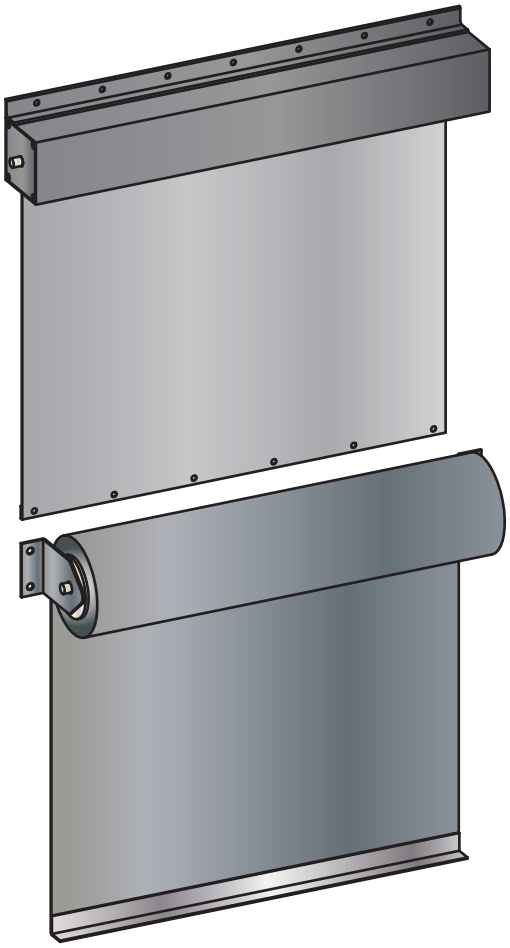
* Name _____
* Company _____
* Address _____
_____
* Town _____ * Country _____
* Telephone _____
* Fax _____
* E-mail _____



The necessary and easily measurable dimensions for the choice of the suitable type are the following:

Diameter of the ball screw to be protected
Overall dimension with closed protection
Maximum extension
Maximum available overall dimensions

	* Ø MAX
	* EXTENSION
	* CLOSED LENGHT
	* Ø SCREW
	* QUANTITY



ROLL - UP COVERS

Roll-up covers are used to protect the sliding guides of the machine against dust, coolants and chips and can be manufactured WITH or WITHOUT housing.
The extensible tissue is made of high quality materials (neoprene, polyurethane, PVC, steel) according to the type of metal chip.
Roll-up covers can be installed vertically, horizontally and diagonally where the space is limited and doesn't allow the assembly of other types of protections. They are noiseless, easy and quick to assemble, they have a long lifetime and reduced overall dimensions even at a high travel speed.

FORM TO REQUEST AN ESTIMATE

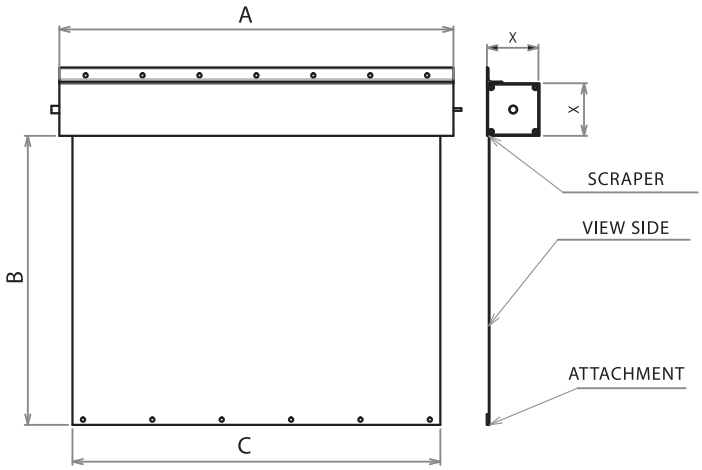
NB.: The data evidence to you with *, are those essential things for an offer.

* Name
* Company
* Address
* Town * Country
* Telephone
* Fax
* E-mail

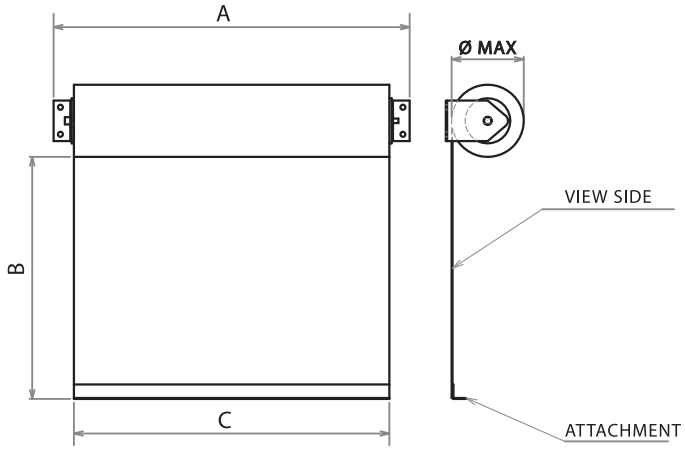
Machine
Model

* AXIS AND/OR WORK POSITION

HORIZONTAL ☐ TRASVERSAL ☐ VERTICAL ☐



WITH HOUSING



WITHOUT HOUSING

* A= OVERALL DIMENSION OF THE ATTACHMENT

* B = EXTENSION

*C= OVERALL DIMENSION OF THE TISSUE

* Ø MAX

* QUANTITY

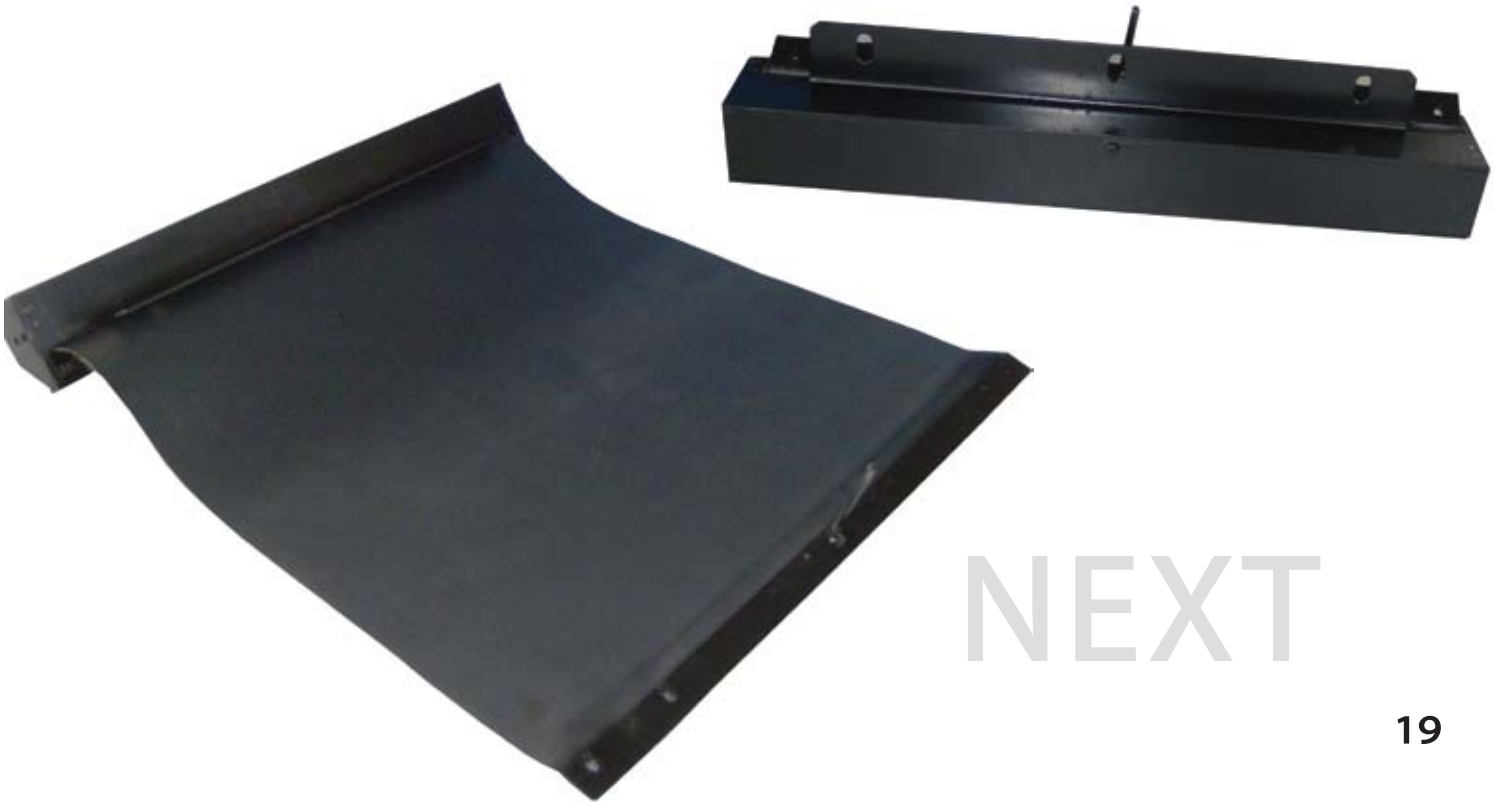
OVERHAUL OF WORN ROLL- UP COVERS

GETTING START

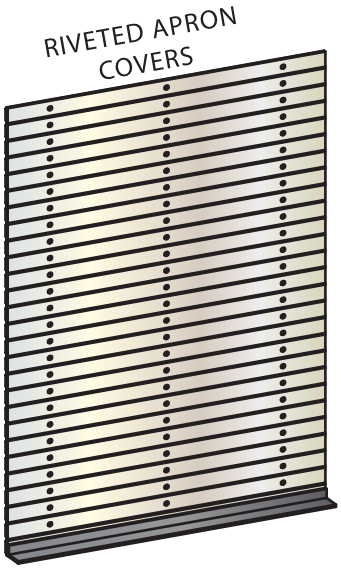
If possible and cost-effective, Metal Gennari can carry out the overhaul of roll-up covers at its workshop, on the basis of a cost estimate. The overhaul of roll-up covers consist in the following tasks:

- Replacement of the extensible tissue
- Check/repair of the inner return elements

If the roll-up cover is too damaged, Metal Gennari can provide a new one with the same characteristics.



NEXT



APRON COVERS

Apron covers are used to protect the machine guides against dust, coolants and chips; they are noiseless, easy and quick to assemble, they have a long lifetime and can work under high temperatures, assuring the highest protection.
FLEXIBLE apron covers are made of aluminium, while RIVETED apron covers are made of aluminium, steel or brass, according to the type of chip. Both covers can be installed vertically or horizontally.

FORM TO REQUEST AN ESTIMATE

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

Machine _____

Model _____

* AXIS AND/OR WORK POSITION

HORIZONTAL ☐ TRANSVERSAL ☐ VERTICAL ☐

* Name _____
* Company _____
* Address _____
_____
* Town _____ * Country _____
* Telephone _____
* Fax _____
* E-mail _____

* APRON TYPE

FLEXIBLE ☐ RIVETED ☐

	* EXTENSION
	* WIDTH
	* QUANTITY

CUSTOMER DRAWING FOR SPECIAL MOUNTINGS