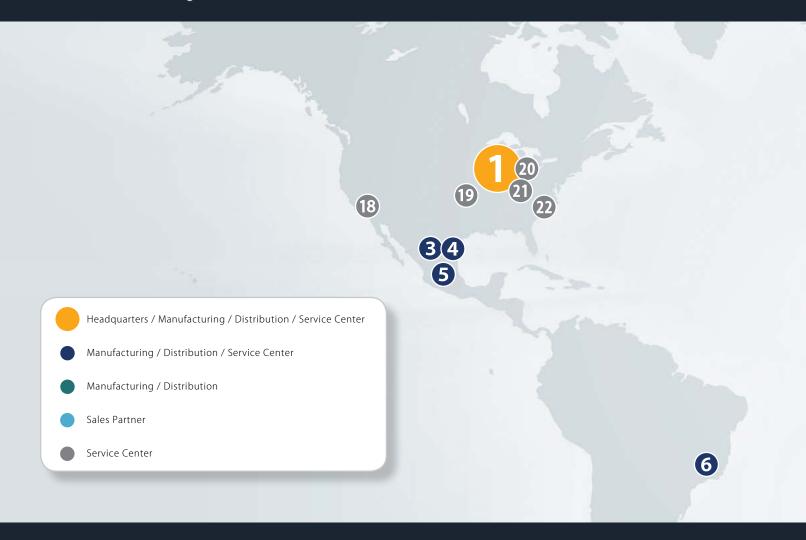
STANDARD DESIGNS | CUSTOM DESIGNS | SPECIAL SOLUTIONS | WIPER SYSTEMS | SERVICE & REPAIR





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- Hennig, Inc. N. Carolina Service Center 8916 Pioneer Avenue, Dock 14 Charlotte NC 28273 P: + 01 704-588-7200 F: + 01 704-588-7200 info@hennig-inc.com

overview

GENERAL INFO

The range of steel way covers manufactured by Hennig is unlimited. With over 65 years of experience in the industry, there is little that we haven't seen and built.

With manufacturing facilities located worldwide, we are knowledgeable of nearly every telescopic steel way cover application in the world. This experience also enables us to design and manufacture OEM or custom steel way covers for state of the art equipment, high speed machines, as well as unusual and unique applications.

- All forms are made from rolled commercial quality steel sheets.
 Standard gages 1.5 mm (16 gauge) to 3 mm (11 gauge).
 Other gages available depending on the application.
- Corrosion-resistant stainless steel can be used for extreme conditions.
- Speeds from 20 to 150m/min can be attained.
- Way wipers, guides, rollers and damping elements are interchangeable.
- Coolant troughs (preventing coolant entering the boxes) can be included in the design of different models.
- We offer service, repair, and reverse engineering for all Hennig and non-Hennig telescopic steel covers



FEATURES

1 steel

Commercial quality steel is used to withstand the abuses of the shop environment. Standard sheet thicknesses range from 1.5 mm (16 gauge) to 3 mm (11 gauge). Other gages available depending on the application.

2 guides

Brass or non-metallic guides are used on the top and sides of the covers. Small and medium size covers are supported with non-metallic, low friction guide shoes.

3 interlocking design

Wrap around construction ensures precise location of individual cover sections and automatically provides the necessary initial preload for the flexible wipers.

wiper systems

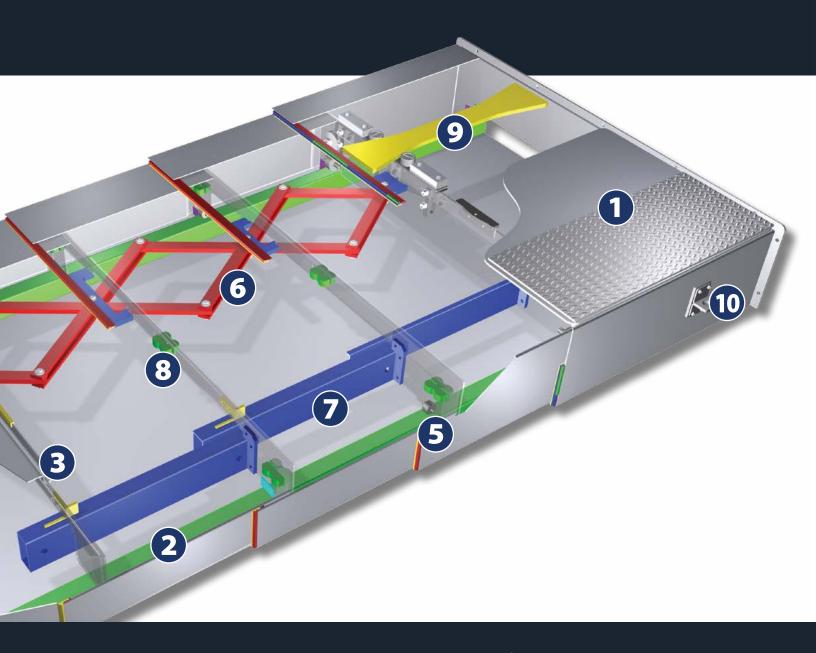
High endurance, insertable polyurethane wipers keep the cover clean and seal out chips, dust and coolants. See pages 11-12 for details.

(5) support rollers

To ensure smooth, accurate operation, large covers are provided with rollers. Ball bearing, needle bearing, and many other roller options are available

6 scissors

Depending on speed and size of application, scissors can be used for a smooth operation.



OPTIONS

7 high speed module

Perfect guidance for high speed covers up to 200 m/min (660 ft/min) and accelerations up to 2Gs over the entire traverse path. Ideal for linear motor machines.

8 damping elements (bumpers)

Bumpers are used based on machine speeds.

wedge dampener (ME module)

Used to soften impact on the boxes. See page 9 for more information.

10 lifting lugs

For ease of installation, lifting lugs can be provided.

not pictured

way extension brackets

Extend from the machine ways to provide support for the cover while it is in a compressed position.

inspection openings

For quick, easy inspections hinged or Plexiglas® panes may be specified.

SERVICE & REPAIR

We offer service and repair for all way covers (Hennig & non-Hennig brands) with a worldwide network of facilities.

See page 16 for Repairs Request For Quote Worksheet. See page 17-18 for a full list of our service capabilities.

standard designs



FLAT (TYPE AA)

The flat, u-shaped design represents the best economical solution for the protection of slideways. Available in horizontal or vertical format.

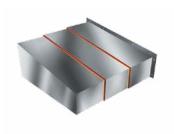
See page 13-14 for Quote Request Worksheet



PEAK (TYPE BB)

The roof-shaped design deflects coolant and swarf on either side, depending on the angle of inclination. Additionally, the ridge provides higher rigidity and perfect quidance of the boxes. Available in horizontal or vertical format.

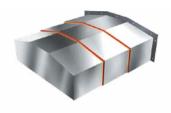
See page 13-14 for Quote Request Worksheet



SLANT (TYPE CC)

The slope of this design ensures the diversion of coolant and swarf in one direction, depending on the angle of inclination. Available in horizontal or vertical format.

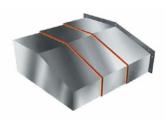
See page 13-14 for Quote Request Worksheet



HIP ROOF (TYPE DD)

The flat-roof form is used for broad covers to provide maximum rigidity of the box surfaces. Available in horizontal or vertical format.

See page 13-14 for Quote Request Worksheet



FLAT/SLOPE (TYPE EE)

The pent-roof design meets special geometric requirements and improves the draining of coolant and swarf, depending on the angle of inclination. The additional folded edge increases the rigidity of the boxes. Available in horizontal or vertical format.

See page 13-14 for Quote Request Worksheet



CROSS BEAM

Cross-beam covers can be manufactured in models 1 to 5. For more than 3 boxes, however, it is necessary to provide an additional return at the top slideway to prevent the individual boxes from tilting or disengaging.

See page 13-14 for Quote Request Worksheet

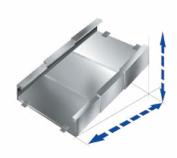
All shapes can be customized to fit your application.



VERTICAL SLIDING PLATE

In this type of cover, the individual plates slide in separate guide rails. Since these types of covers do not require slideways, they are particularly suited for the protection of column recesses. In the presence of swarf and coolant, the vertical sliding plate covers can only be mounted vertically. The guide rails are available in various materials to meet individual requirements.

See page 17 for Quote Request Worksheet



DUAL AXIS MOTION

Dual-Axis covers are typically moving behind the tables and under the spindle when space is limited. This design is limited to 3 boxes unless guide rails are used, and must be flat design for this style of cover.

See page 15-16 for Quote Request Worksheet

All shapes can be customized to fit your application.



XYZ MODULE

(modular face shield)

Hennig manufactures vertical-wall telescopic steel covers to deliver full protection of the X and Y-axes on horizontal-spindle machining centers.

The precision ways and CNC feedback devices are completely protected against the hot chips and flood coolant that can potentially affect machine uptime and accuracy. Based on space availability, these covers can be designed with telescopic steel boxes, stainless steel or fabric roll-up aprons, bellows with steel plate protection (lamellas), or our new Aluminum FlexProtect system.

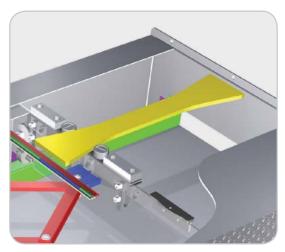
custom designs & special solutions



CUSTOM DESIGNS

for complicated slideway forms

Different requirements and environmental conditions, complicated slideway forms, and less than ideal spacial conditions of special machines demand close cooperation between our design engineers and the machine tool manufacturers. Our engineers design your covers with knowhow, creativity and an attractive price-performance ratio.



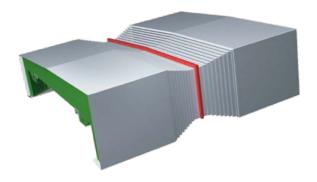
ME Module shown in yellow

ME MODULE

for heavy loads

High feed rates and accelerations are no longer excluded with large, heavy telescopic steel covers. The transport mechanism eliminates high limit stop forces and corresponding noises in all operational positions, moving smoothly when the covers are pulled apart as well as when they come together.

Test runs at speeds exceeding 328 feet per minute (100 meters per minute) and accelerations exceeding 2g were absolutely trouble-free. The system is not positively driven; as a result, it doesn't have to move the entire mass; the only boxes moved are the ones that are needed. The mechanically muffled units travel on guides which guarantee extremely high stability.



COUPLED TELESCOPIC STEEL COVER

for longer travel

By coupling a telescopic steel cover, a longer travel can be obtained. The box height above the ways, based on the same travel, is less with coupled telescopic steel covers than with one individual cover. The compressed length however is longer.

WATER-TIGHT TELESCOPIC STEEL COVERS

Our standard TSC designs are splash proof and suited for high traversing speeds.

For high coolant applications, we offer water-tight covers using gutters to divert coolant.



integral gutter

The gutter is formed as an integral part of the rear panel of the individual boxes. This version can be manufactured in a cover width of up to approximately 2000 mm.



separate gutter

We can manufacture separate gutters for covers more than 2000 mm wide. In this design, a specially developed way wiper diverts the coolant along the inner side of the boxes. Due to its large cross-section, a separate gutter deflects the water optimally.



scheduled gullet

An attached water trough can be utilized with a variety of dimensions and is used mainly for large telescopic steel covers.

wiper systems

Wiper systems specially developed for telescopic steel covers. For particular requirements such as limited space for mounting or use in the presence of high volumes of chips produced, we also offer suitable solutions.

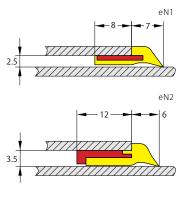
■ wiper lip ■ profile support 🛭 sheet metal box ■ damping material ■ profile support



eN SERIES

- Used on telescopic steel covers for slideways with small cross-sections
- Wiper lip vulcanized to a flat steel profile
- Highly wear-resistant polyurethane lip, resistant to oil, coolants and microbes
- Standard length of the eN way wiper: 500 mm

See page 60 for more information





C SERIES

- Same design for all types of C wipers (except CL1)
- Highly wear-resistant polyurethane lips ensuring optimum resistance to water, coolants, chemicals and oil
- Various Shore hardnesses available as required (dry, fluid and mixed machining, as well as native oils)

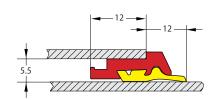




CL₁

- Usable for large surfaces and aluminum apron systems for manifold applications
- Optimum wiping effect. Will wipe uneven surfaces up to 4 mm
- Highly durable and resistance against all common coolants
- Exchangeable and suitable for all profiles of series C2, 3, 5 and 6 (Illustration: CL1 with C5 profile)

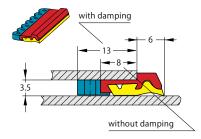
See page 20 for more information





C2

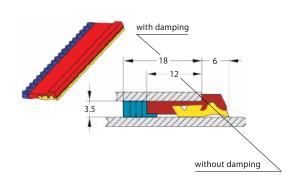
- Smallest wiper of the "C" series
- Replaceable wiper lips
- Very little space required (regarding the mounting height and depth)
- Also available with a rubber profile vulcanized on the profiled support, for optimum damping properties at high traverse speeds (illustration: C2 with damping)





C3

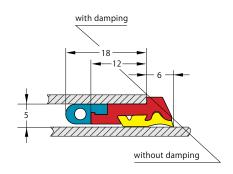
- Wider profile to ensure a better adhesion when spot-welding it to the box
- Replaceable wiper lips
- Very little space (mounting height) required
- Can be screwed onto the cover box
- Optimum rigidity of the cover box in the wiper area
- Available with and without damping
- Assembly dimension with damping 18mm





C5

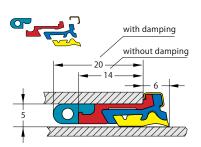
- Designed for large covers
- Replaceable wiper lips
- A combination of C5 and C3 wipers is possible
- Optimum rigidity of the cover box in the wiper area
- Enlarged return gutter to ensure a rapid draining of the coolant
- Available with and without damping (illustration: C5 with damping)

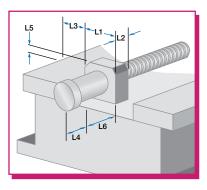


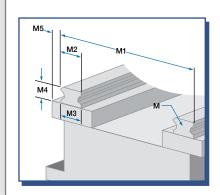


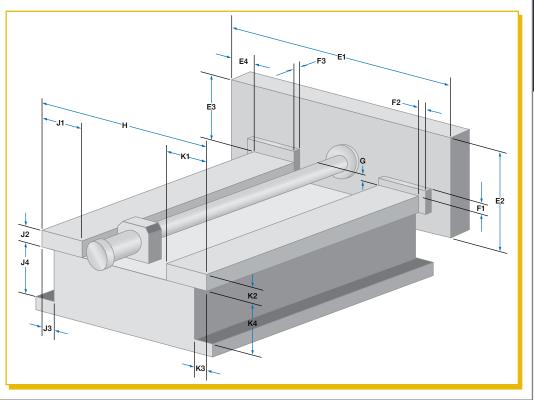
C6

- Can be replaced directly on the machine without disassembling the cover
- Time saving and cost-effective
- Enlarged return gutter to ensure a rapid draining of the coolant
- Available with and without damping (illustration: C6 with damping)
- Replaceable profile (shown in blue) is fixed with spring clamps
- Solid profile support (shown in red) is welded with the box plate and remains on the cover

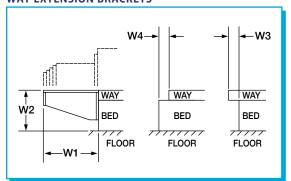






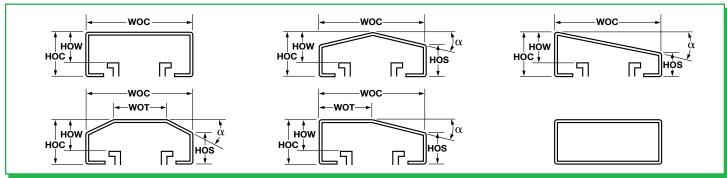


WAY EXTENSION BRACKETS

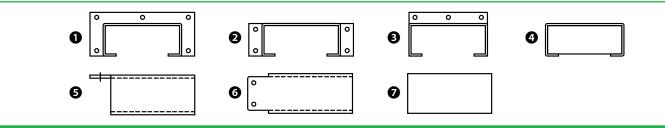


SIDE VIEW A TABLE WAY FLOOR FLOOR

COVER TYPES



MOUNTING CONFIGURATIONS

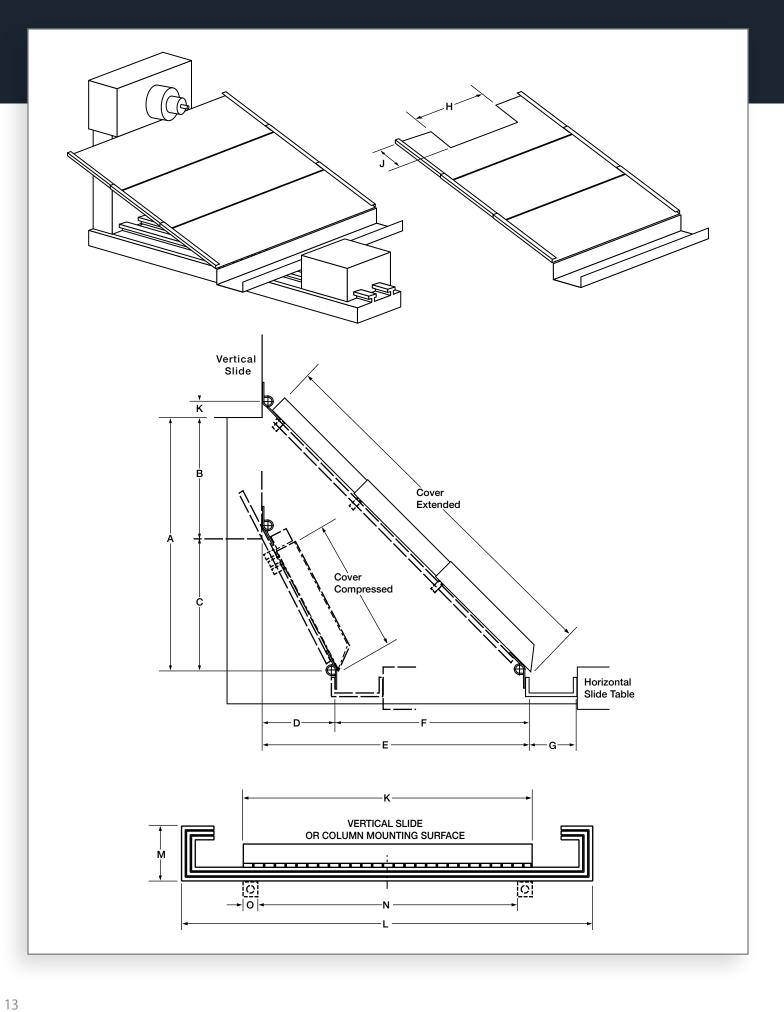


TELESCOPIC STEEL COVERS QUOTE REQUEST



Please complete this form and email or fax to your desired location (see pages 1-2 for contact info)

COMPANY (complete address)	
	Name
	Title
	E-mail
	Phone Fax Date//
2 TECHNICAL DATA / EXISTING CO	OVER DIMENSIONS
Quantity	Height of Cover
Number of Boxes	Height Over Ways
Cover Type	Angle
Mounting Configuration	Height of Side (types BB, CC, DD, EE)
Width of Cover	Width of Top (types DD, EE)
3 APPLICATION	COVER ORIENTATION (check one)
Manufacturer ☐ Hennig ☐ Enomoto ☐ Other	☐ Horizontal ☐ Vertical ☐ Cross Rail
Hennig or Enomoto Part #	☐ Slant Bed ☐ Column/Table ☐
OEM Part #	
Machine Type	Operating Environment
Make	☐ Dry ☐ Grinding ☐ Hot Chip
Model	☐ Heavy Coolant ☐ Other
Axis X Y Z Other	Operating Temperature Range
Photos Available?	Maximum Travel Speed
DWGs or Sketches available? ☐ Yes ☐ No	
4 DIMENSIONS	
A Extended length	K2 Individual height of way
B Compressed length	V2 Cida of way to side of parties
C Travel	
D1 End of way to table when compressed	to Market City
D2 End of way to table at over travel	L2 Depth of drive mount
E1 Table width	L3 Side of way to side of drive mount
E2 Table height	
E2 Table height above way	
EA CIL C . I CIL	
F1 Managina hai aha ah ang man	M. Dellama
· · · · · · · · · · · · · · · · · · ·	M1 Width aver linear rails
F2 Side of way wipers to side of way	
F3 Way wiper to table (depth)	
G Height of ball screw above way	
H Width over ways	-
J1 Individual width of way	_
J2 Individual height of way	, -
J3 Side of way to side of casting	, -
J4 Casting distance below way	W3 Way to bed offset
K1 Individual width of way	W4 Bed to way offset



DUAL AXIS COVERS QUOTE REQUEST

Www.hennigworldwide.com

Please complete this form and email or fax to your desired location (see pages 1-2 for contact info)

COMPANY (complete address)	
	Name
	Title
	E-mail
	Phone Fax Date//
2 APPLICATION	MACHINE TYPE
Quantity Number of Boxes	Make
EXISTING COVER	Model
Manufacturer ☐ Hennig ☐ Enomoto ☐ Other	Photos Available? ☐ Yes ☐ No
Hennig or Enomoto Part #	DWGs or Sketches available? ☐ Yes ☐ No
OEM Part #	Operating Temperature Pange
OLIVIFAIL#	Maximum Travel Speed
	Movements/Day
3 DIMENSIONS	
Cover extended	H Cut-out around column width
Cover compressed	J Extension beyond column depth
A Max vertical extension of slide	
B Vertical slide travel	L Width of cover
C Min compressed vertical slide length	
D Min compressed horizontal slide length	N Distance between guide bars
E Max horizontal extension of slide	
F Horizontal slide travel	Mounting Option - Upper (see below)
G Width of trough	M O
4 MOUNTING OPTIONS	
WOUNTING OPTIONS	
UPPER A1	A2 A3
LOWER	
B1 B2	B3 B4 B5

VERTICAL SLIDING PLATE QUOTE REQUEST



Please complete this form and email or fax to your desired location (see pages 1-2 for contact info)

www.hennigworldwide.com

COMPANY (complete address)			
	Name		
	Phone	Fax	Date//
2 APPLICATION	MACHINE TYPE		
Quantity			
EXISTING COVER			
Manufacturer ☐ Hennig ☐ Enomoto ☐ Other	Photos Available?	☐ Yes ☐ No	
Hennig or Enomoto Part #	DWGs or Sketches available?	☐ Yes ☐ No	
OEM Part #	On avating Tananawatura Danas		
<u></u>			
	Movements/Day _		
3 DIMENSIONS			
A Overall length	1.	_	
B Top compressed		F_	
B1 Number of top plates		Е	-
C Travel			
D Lower compressed			
D1 Number of lower plates			
E Width	🖟 🗁		
F Width with rails			
G Rail width			н
H Diameter or rectangular opening			7
I Rail type ☐ Type 1 ☐ Type 2 ☐ Other		+)) [
J Rail thickness			ا نـ
K Mounting hole pattern			
L Scissor option	Å <u> </u>		
Top:			
Bottom: ☐ none ☐ single ☐ double	¢		
Please include additional sketches or CAD files if availa	ible.		
TYPE 1 TYPE 2			
	<u> </u>		
<u>+ L </u>			

STEEL COVER REPAIRS QUOTE REQUEST

Please complete this form and email or fax to your desired location (see pages 1-2 for contact info)



HENNIG WAY COVER SERVICE & REPAIR

- Service & Repairs for Hennig & non-Hennig Way Covers
- Repair & Refurbishment of All Way Cover Components
- Training for Maintenance & Repair of Way Covers
- Quick Turnaround & Expedited Service Available
- Reverse Engineering of Existing Way Covers
- On-Site Maintenance & Repair





					Date/	
2 TECHNICAL DATA / EXIS		ENSIONS				
Quantity Number of Boxes Width of Cover (WOC) Extended Length	Height of Cover (HOC)		Height (Over Ways (F	etches Available 🗌 Ye	
	Colores Cottos					
Brand ☐ Hennig ☐ Enomoto ☐ Serme						
Brand Hennig Enomoto Serme Hennig / Enomoto / Sermeto / Cobsen Part # _ MACHINE TYPE		OEM	1 Part #			
Brand		Model	l Part #			
Brand Hennig Enomoto Serme Hennig / Enomoto / Sermeto / Cobsen Part # _ MACHINE TYPE Make Axis X Y Z Other		Model OEN	1 Part #			
Brand	☐ Cross Rail ☐ Slant Bed	Model OEN Maximum Travel Sp □ Column / Table	eed	er		
2 APPLICATION Brand	☐ Cross Rail ☐ Slant Bed	Model OEN Maximum Travel Sp □ Column / Table	eed	er		
Brand	☐ Cross Rail ☐ Slant Bed	Model Maximum Travel Sp □ Column / Table □ Heavy Coolant	eed e	er ner		

SERVICE & REPAIR

scope of services

WE KNOW HOW EXPENSIVE DOWNTIME CAN BE

That's why we offer quick, responsive, service for the following products:

- Telescopic Steel Covers (see next page for details)
- Bellow Covers
- Aprons & Roll Ups
- Modular Face Shield Systems
- Wiper Systems
- Walk-On Pit Covers

We provide repairs and replacement parts for all the products we sell. With our experienced technicians, it doesn't matter who manufactured the original product, the end result absolutely must meet Hennig standards for quality and safety before we will consider it finished.

OUR SCOPE OF SERVICES:

- Preventative and Predictive Maintenance Training
- Way cover diagnostics and troubleshooting
- Extensive replacement spare parts inventory
- On-Site repairs of waycovers of any make on the market
- Logistics services for minimum downtime

SERVICE & REPAIR CENTERS WORLDWIDE

We have 17 service centers located throughout the world, enabling us to provide fast, localized service no matter where you are. Below is a snapshot of our service & repair locations.

For more details and contact info, see pages 1-2.



SERVICE & REPAIR

for telescopic steel covers

REPAIR & REFURBISHING SERVICES

At Hennig we service everything we sell.
Our repair and refurbishment facilities are located in regions worldwide, so you get fast, localized service from experts who speak your language and deeply understand the systems you're using. We have the resources to keep your systems running - and running right - so you minimize downtime and get the greatest possible return from your machine investment.

services offered

- Repairs for all Hennig and non-Hennig way covers
- Same-day turn-around on diagnosis and repair estimates
- Reverse engineering of existing way covers
- Fast, local access to spare parts and supplies
- Customer training for in-house way cover repair
- Service and repair of Hennig Chip Conveyors
- Preventive maintenance service contracts available
- Service initiated within 48 hours in most locations
- On-site services available
- 90-day warranty on parts and labor

service. where you need it.

Hennig has way cover repair facilities located throughout the world to better serve our customers.

See pages 1-2 for a complete list of our repair facilities and contact information.







www.hennigworldwide.com

For over 50 years, Hennig Worldwide has been defining Excellence in Machine Protection, creating regional jobs, serving their local communities, and supporting the global needs of machine tool customers.

Specializing in chip management, machine protection, and facility safety, Hennig products optimize production and keep your shop floor clean and safe.

MACHINE PROTECTION

Telescopic Steel Covers

Modular Face Shields (XYZ Shields)

Bellows

Aprons

Roll Up Covers

Walk-On/Pit Covers

Wiper Systems

Telescopic Springs

Cable Conduits

CHIP SOLUTIONS

Chip Conveyors

Chip Disc Filtration (CDF)

Coolant Tanks

Turnkey Chip Systems

Conveyor Networks

FACILITY SAFETY

Walk-On Pit Covers

Scissor Lift Bellows

Rooftop Systems

Platforms and Enclosures

Guarding and Fencing

Special Fabrications

See pages 1-2 for contact information