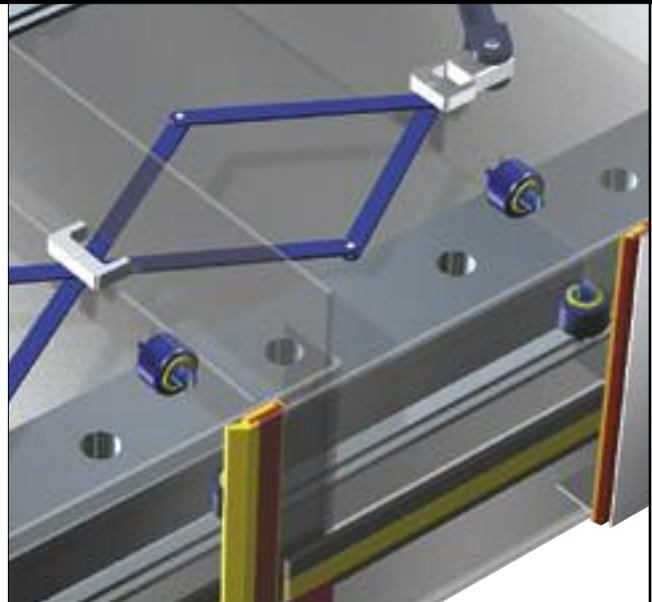


TELESCOPIC STEEL COVERS

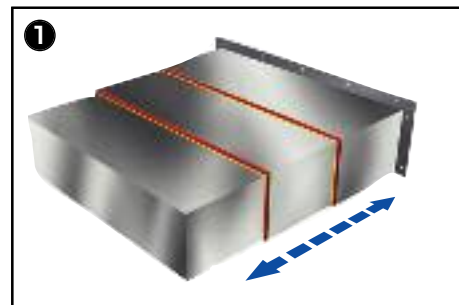
TELESCOPIC STEEL COVERS FOR ALL REQUIREMENTS

The range of steel way covers manufactured by HENNIG is unlimited. With over 50 years of experience in the industry, there is little that we haven't seen and built. With manufacturing facilities located worldwide, HENNIG is knowledgeable of nearly every telescoping steel way cover application in the world. This experience also enables HENNIG to design and manufacture custom steel way covers for new, state of the art equipment as well as for unusual or unique applications.



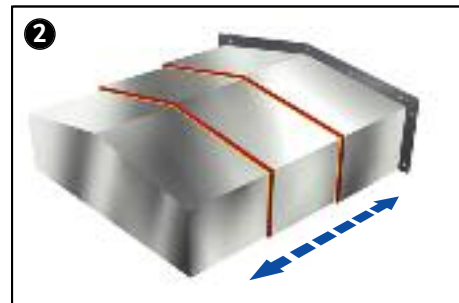
Technical Data

- Valid for all forms of telescopic steel covers shown.
- All forms are made from rolled High-grade steel sheets from 1.5 mm (16 gauge) to 3 mm (11 gauge) thick.
- Corrosion-proof stainless steel can be used for extreme conditions.
- Depending on space availability, speeds of up to 150 m/min can be attained by steel covers of all shapes. 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.



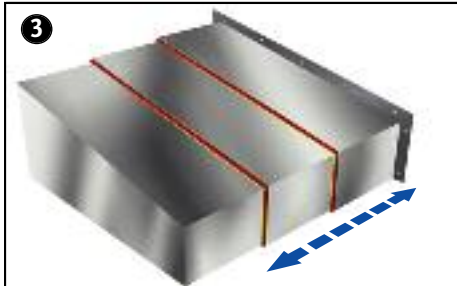
FLAT - TYPE AA

The flat, u-shaped design represents the best economical solution for the protection of slideways.



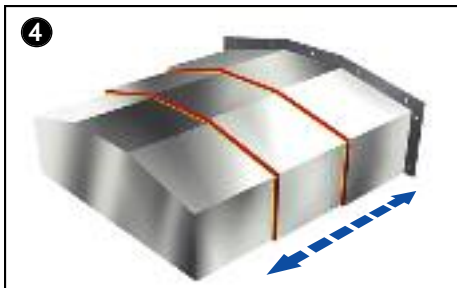
PEAK - TYPE BB

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 guidance of the boxes.



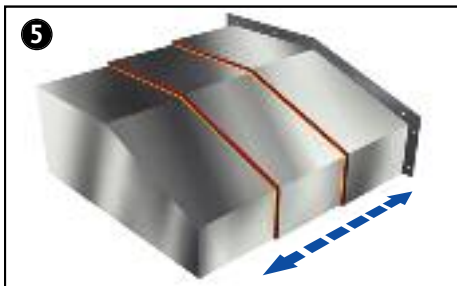
SLANT - TYPE CC

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



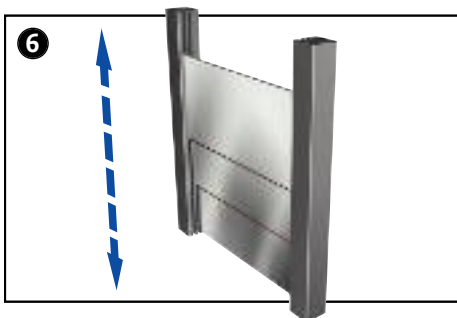
HIP ROOF - TYPE DD

The flat-roof form is used for broad covers to provide maximum rigidity of the box surfaces.



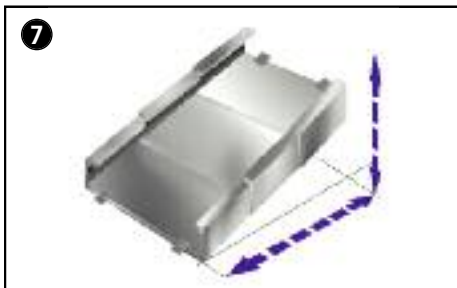
FLAT/SLOPE - TYPE EE

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.



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.



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.

FEATURES AND OPTIONS

Wiper System:

High endurance, insertable polyurethane wipers keep the cover clean and seal out chips, dust and coolants. Special mounting features eliminate wiper lip distortion and make maintenance a quick easy process.

Wipers:

The standard "C" style wiper and casing provides protection of the wiper from hot chips.

Steel:

Special, high quality heavy-gauge sheet steel is used to withstand the abuses of the shop environment. Sheet thicknesses range from 1.5 mm (16 gauge) to 3 mm (11 gauge) depending on the application.

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

Guidance Option: 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.

Guidance Option: Support rollers. To ensure smooth, accurate operation, large covers are provided with ball or needle bearing rollers. Covers utilizing support rollers require a hardened way surface or auxiliary guidance track.

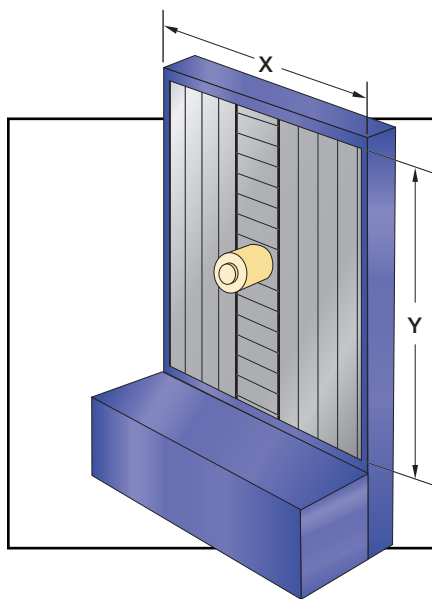
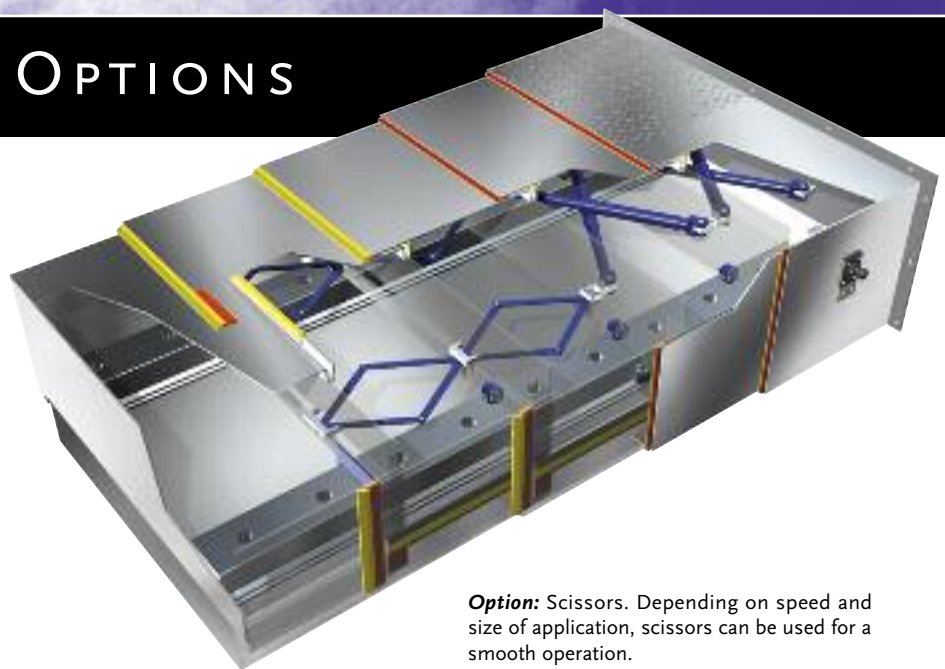
Option: Way extension brackets extend from the machine ways to provide support for the cover while it is in a compressed position.

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

Option: Inspection openings. For quick, easy inspections hinged or Plexiglass® panes may be specified.

Option: Lifting lugs. For ease of installation lifting lugs are provided on all covers weighing over 150 pounds.

Option: Telescopic damping elements. Bumpers are used based on machine speeds.

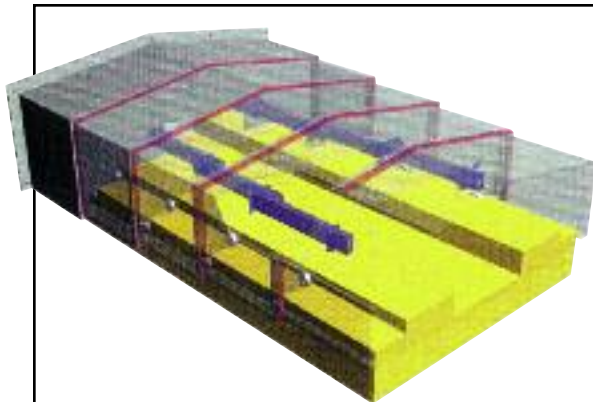


X-Y Shield "Vertical Wall" protection

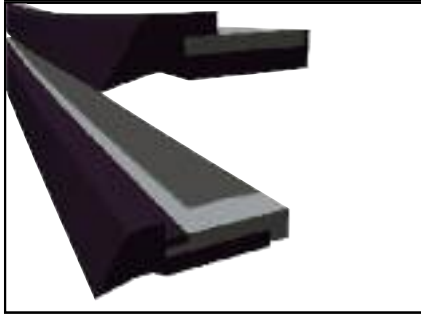
Hennig manufactures vertical-wall telescoping steel covers to deliver full protection of the X and Y-axes on horizontal-spindle machining centers. The precision ways and CNC feedback devices are completely protected against the hot chips and flood coolant that can potentially affect machine uptime and accuracy. Based on space availability, these covers can be designed with telescoping steel boxes, stainless steel or fabric roll-up aprons, bellows with steel plate protection (lamellas), or our new Aluminum FlexProtect system.

HENNIG's High-Speed TSC

Hennig's new-patented TSC (Telescoping Cover) ensures a perfectly impact-free extending movement at speeds of up to 150 m/min (6000ipm) and accelerations exceeding 2g over the entire traverse path. The system can be manufactured with up to eight telescoping boxes and can be used for traverse paths of variable lengths. It's ideal for the speeds and acceleration/deceleration rates found on linear motor machines.

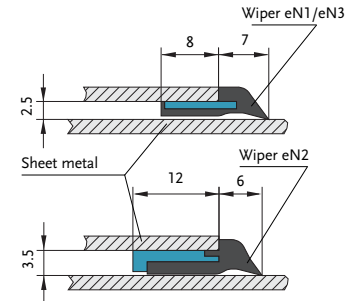


WAY WIPER SYSTEMS



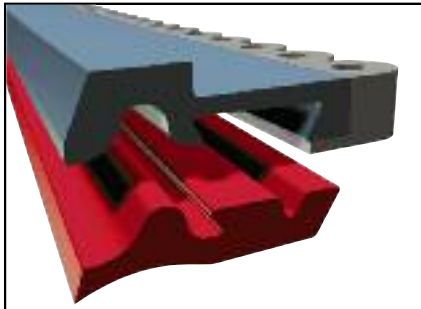
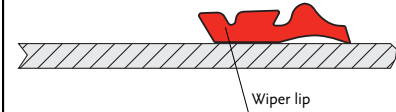
eN Series

- 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



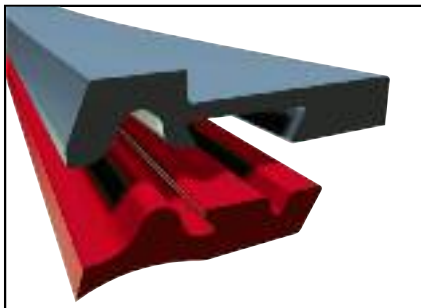
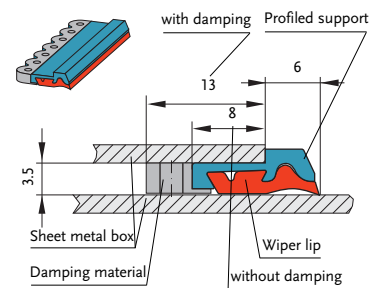
C Series Wiper Lip

- Universal lip design for all types of C wiper casings
- Highly wear-resistant polyurethane lips ensuring optimum resistance to water, coolants, chemicals and oil
- Various Shore hardness's available as required (dry, fluid and mixed machining, as well as native oils)



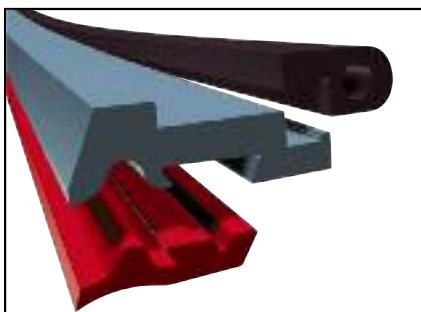
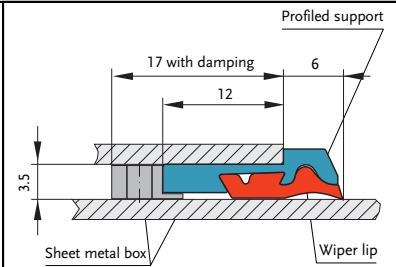
C2

- C2 is designed for minimal cover extension/compression lengths
- Replaceable wiper lips
- Minimal horizontal space required
- Also available with a rubber profile vulcanized on the profiled support (shown), for optimum damping properties at high traverse speeds



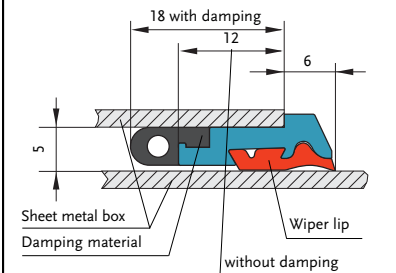
C3

- Wider profile to ensure a better overlap between boxes when spot welding it to the box
- Replaceable wiper lips
- Minimal vertical space (mounting height) required
- Available with and without damping as shown on C2 profile



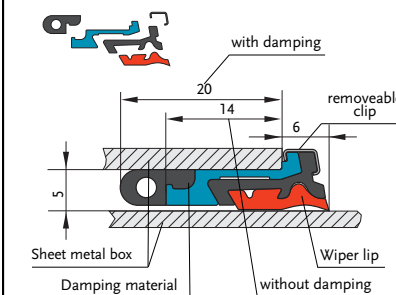
C5

- Designed for large covers
- Replaceable wiper lips
- Taller casing design allows for easily replaceable dampers
- Optimum rigidity of the cover box in the wiper area
- Available with and without damping

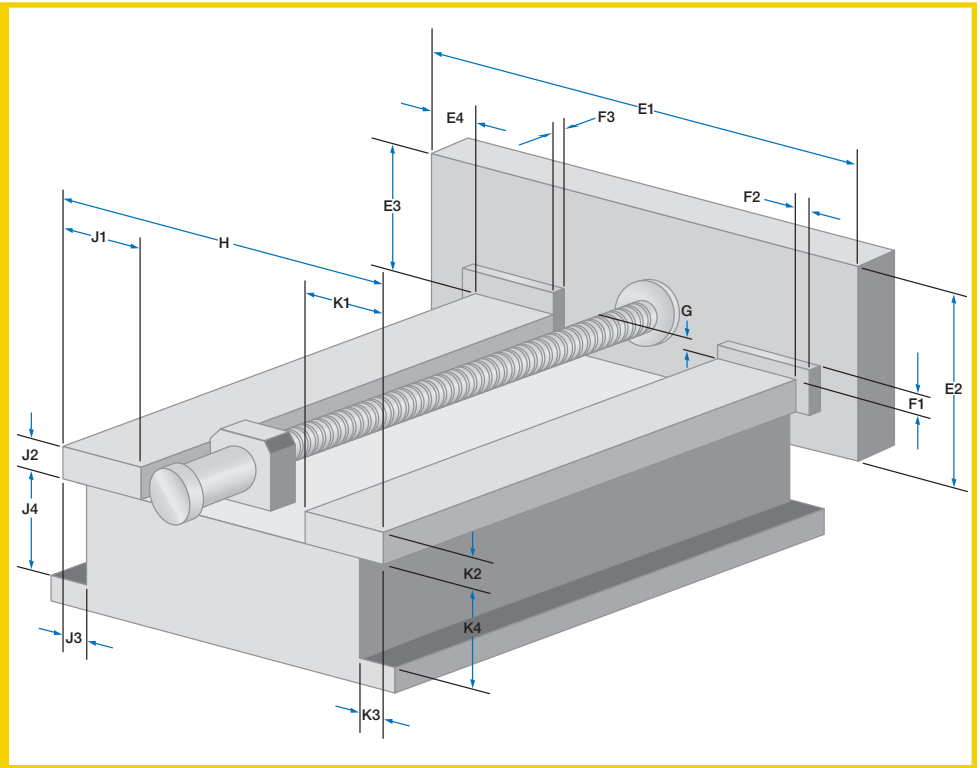
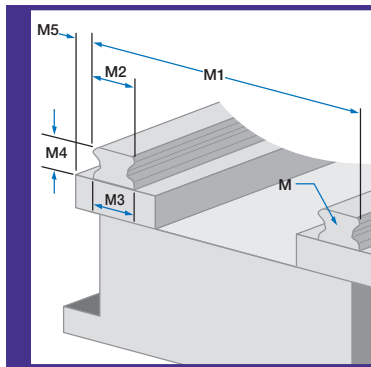
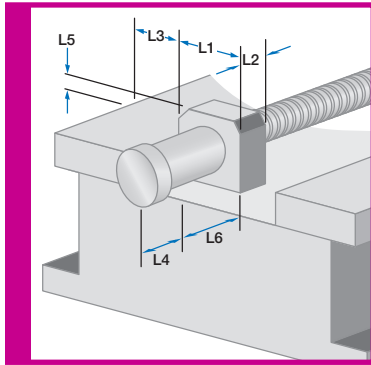


C6

- Latest wiper generation – can be replaced directly on the machine, without disassembling the steel cover
- Replaceable wiper lips
- Time saving and cost-effective
- Available with and without damping

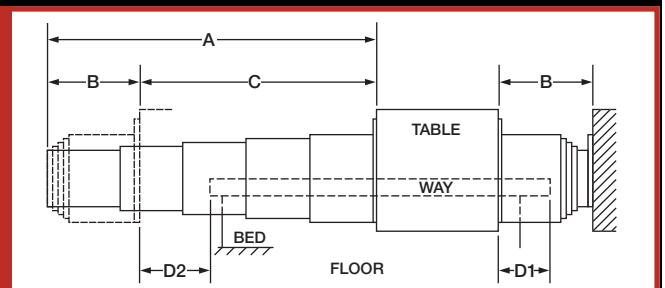
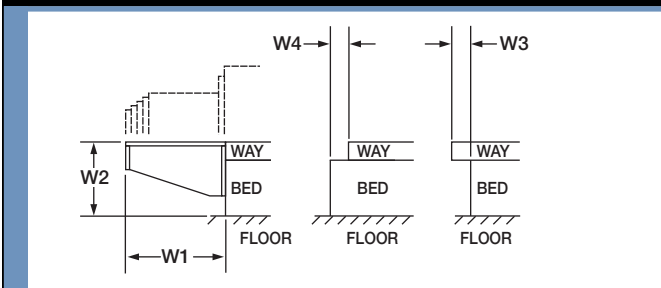


HENNIG STEEL WAYCOVERS

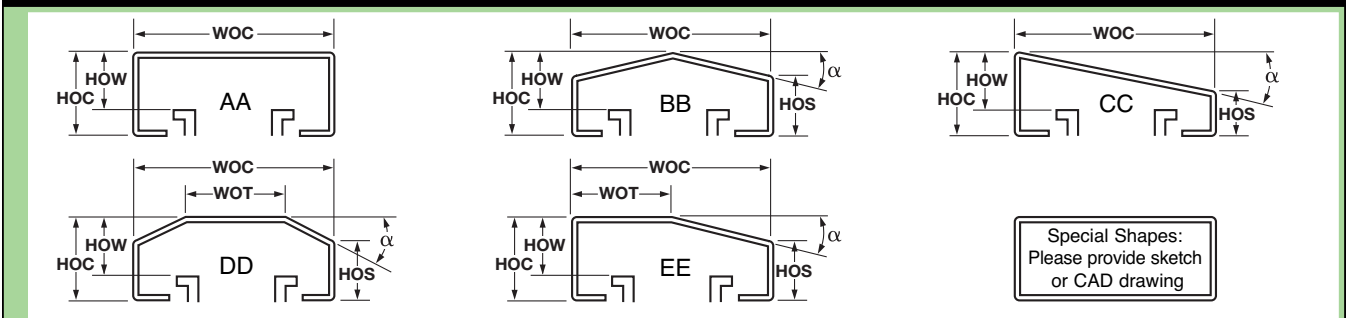


WAY EXTENSION BRACKETS

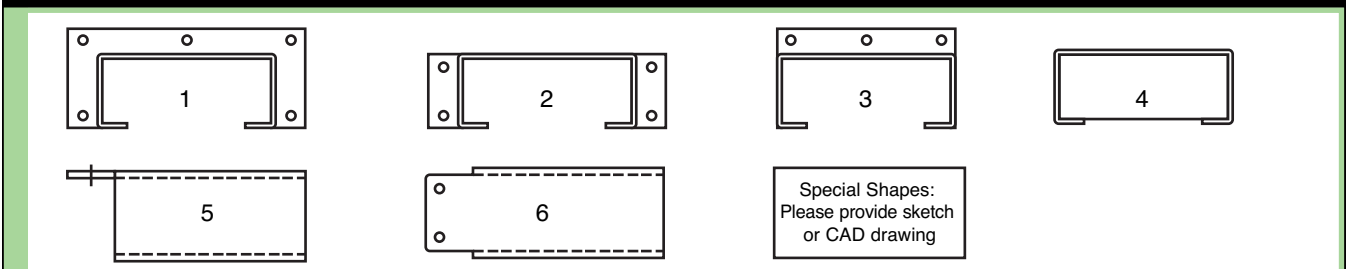
SIDE VIEW



COVER TYPES



MOUNTING CONFIGURATIONS



Hennig Telescoping Steel Covers Order Form

1 Company (complete address)

Your Name _____
 E-Mail _____
 Phone _____
 Fax _____

2 Technical Data / Existing Cover Dimensions

Quantity Each Set

Number of Boxes

Cover Type (See page 6 for examples)

Mounting Configurations

WOC Width of cover

HOC Height of cover

HOW Height over ways

α Angle

HOS Height of side (types BB,CC,DD,EE)

WOT Width of top (types DD & EE)

3 Application

Manufacturer Hennig Enomoto Other

Hennig or Enomoto Part#

OEM Part#

Machine Type:

Make

Model

Axis: X Y Z Other

Photos available? Yes No

DWGs or sketches available? Yes No

Cover Orientation: (check one)

Horizontal Vertical Cross Rail

Slant Bed Column/Table _____

Operating environment of the cover:

Dry Grinding Hot Chip

Heavy Coolant Other:

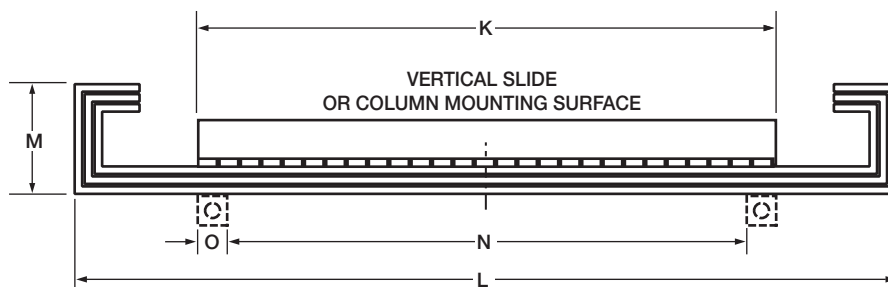
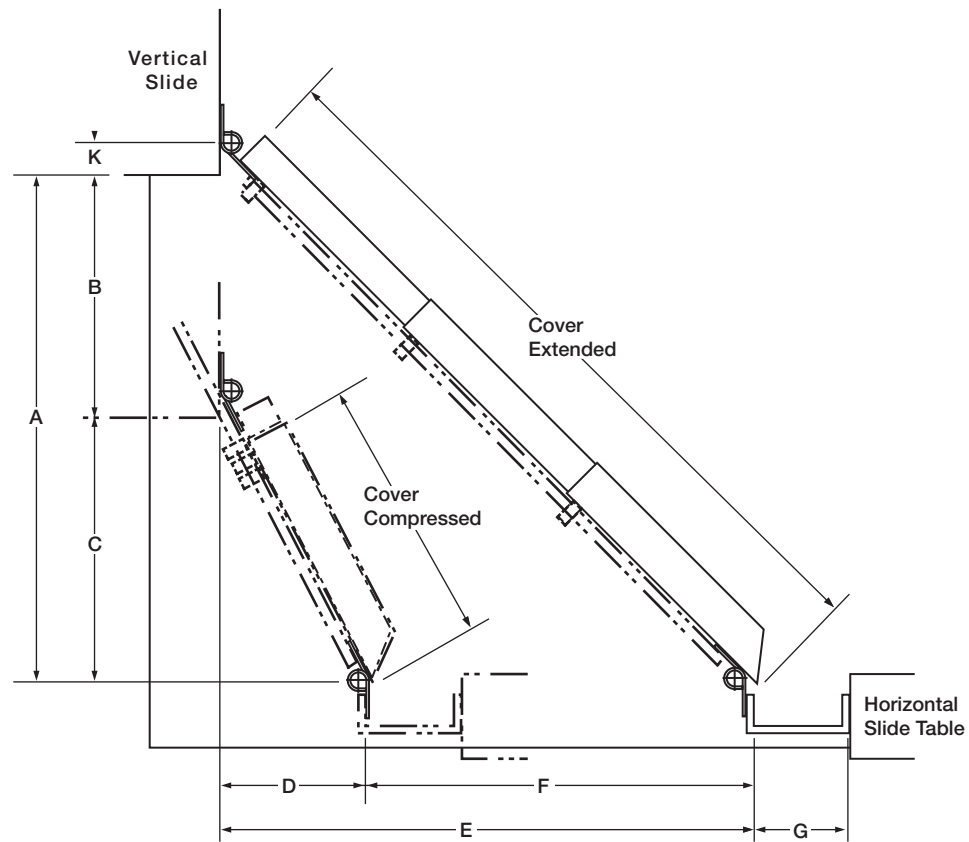
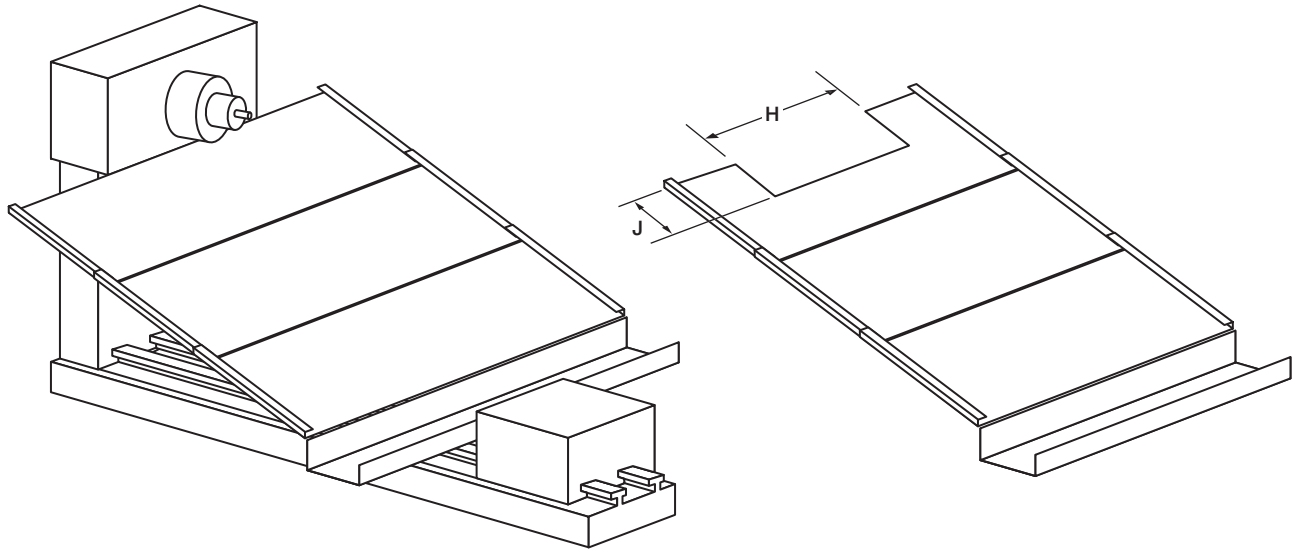
Operating Temperature Range

Maximum Travel Speed

4 Dimensions

A Extended length	<input type="text"/>	K2 Individual height of way	<input type="text"/>
B Compressed length	<input type="text"/>	K3 Side of way to side of casting	<input type="text"/>
C Travel	<input type="text"/>	K4 Casting distance below way	<input type="text"/>
D1 End of way to table when compressed	<input type="text"/>	L1 Width of drive mount	<input type="text"/>
D2 End of way to table at overtravel	<input type="text"/>	L2 Depth of drive mount	<input type="text"/>
E1 Table width	<input type="text"/>	L3 Side of way to side of drive mount	<input type="text"/>
E2 Table height	<input type="text"/>	L4 End of way to front of motor	<input type="text"/>
E3 Table height above way	<input type="text"/>	L5 Drive mount height above way	<input type="text"/>
E4 Side of way to side of table	<input type="text"/>	L6 End of way to drive mount	<input type="text"/>
F1 Way wiper height above way	<input type="text"/>	M Rail type	<input type="text"/>
F2 Side of way wipers to side of way	<input type="text"/>	M1 Width over linear rails	<input type="text"/>
F3 Way wiper to table (depth)	<input type="text"/>	M2 Rail width (top)	<input type="text"/>
G Height of ball screw above way	<input type="text"/>	M3 Rail width (bottom)	<input type="text"/>
H Width over ways	<input type="text"/>	M4 Rail height	<input type="text"/>
J1 Individual width of way	<input type="text"/>	M5 Side of casting to side of rail	<input type="text"/>
J2 Individual height of way	<input type="text"/>	W1 Way extension length	<input type="text"/>
J3 Side of way to side of casting	<input type="text"/>	W2 Way height to floor	<input type="text"/>
J4 Casting distance below way	<input type="text"/>	W3 Way to bed offset	<input type="text"/>
K1 Individual width of way	<input type="text"/>	W4 Bed to way offset	<input type="text"/>

HENNIG DUAL-AXIS MOTION



Hennig Dual Axis Cover Order Form

1 Company (complete address)

Your Name	
E-Mail	
Phone	
Fax	

2 Application

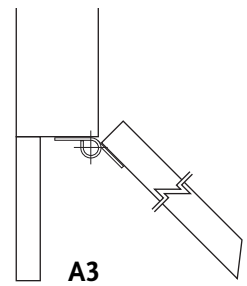
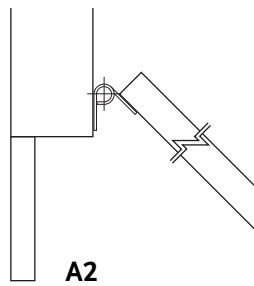
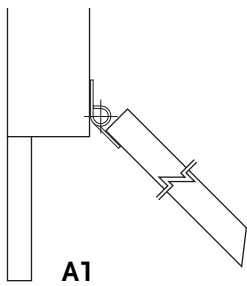
Quantity		Number of Boxes		Model	
Existing Cover		Photos available?	<input type="checkbox"/> Yes <input type="checkbox"/> No	DWG's or sketches available?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Manufacturer	<input type="checkbox"/> Hennig <input type="checkbox"/> Enomoto <input type="checkbox"/> Other _____	Operating temperature range			
Hennig or Enomoto Part#		Maximum travel speed			
OEM Part#		Movements/Day			
Machine Type:					
Make					

3 Dimensions

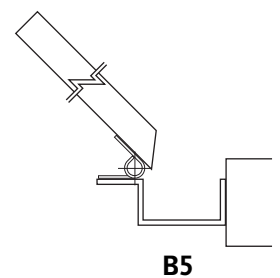
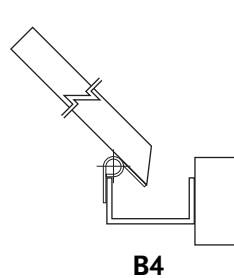
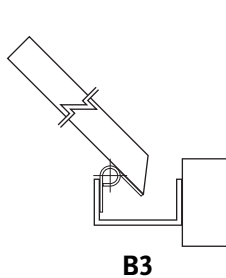
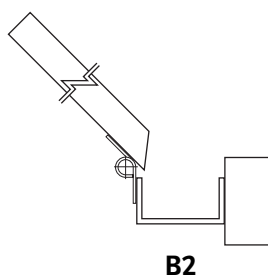
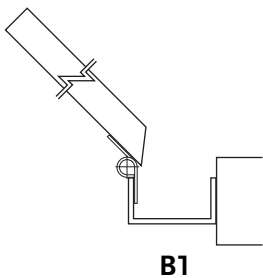
Cover extended		H	Cut-out around column width	
Cover compressed		J	Extention beyond column depth	
A	Max vertical extention of slide	K	Vertical slide	
B	Vertical slide travel	L	Width of cover	
C	Min compressed vertical slide length	M	Height of cover	
D	Min compressed horizontal slide length	N	Distance between guide bars	
E	Max horizontal extention of slide	O	Guide bar width	
F	Horizontal slide travel		Mounting Option - Upper (see below)	
G	Width of trough		Mounting Option - Lower (see below)	

Please include additional sketches, drawings, or CAD files if available.

4 Mounting Options - Upper



Mounting Options - Lower



Hennig Sliding Plate Order Form

1 Company (complete address)

Your Name _____
 E-Mail _____
 Phone _____
 Fax _____

2 Application

Quantity _____

Photos Available? Yes No

Existing Cover _____

DWG's or sketches Available? Yes No

Manufacturer Hennig Enomoto Other _____

Hennig or Enomoto Part# _____

Operating Temperature Range: _____

OEM Part# _____

Maximum Travel Speed: _____

Machine Type: _____

Movements/Day: _____

Make _____

Model _____

3 Dimensions

A. Overall length _____

B. Top compressed _____

B1. Number of top plates _____

C. Travel _____

D. Lower compressed _____

D1. Number of lower plates _____

E. Width _____

F. Width with rails _____

G. Rail width _____

H. Diameter or rectangular opening _____

I. Rail type Type 1 Type 2 Other _____

J. Rail thickness _____

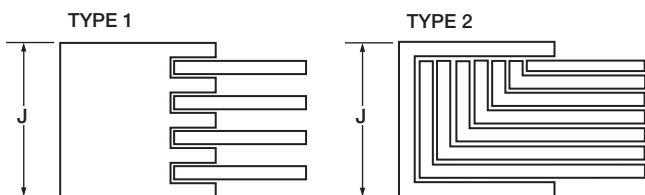
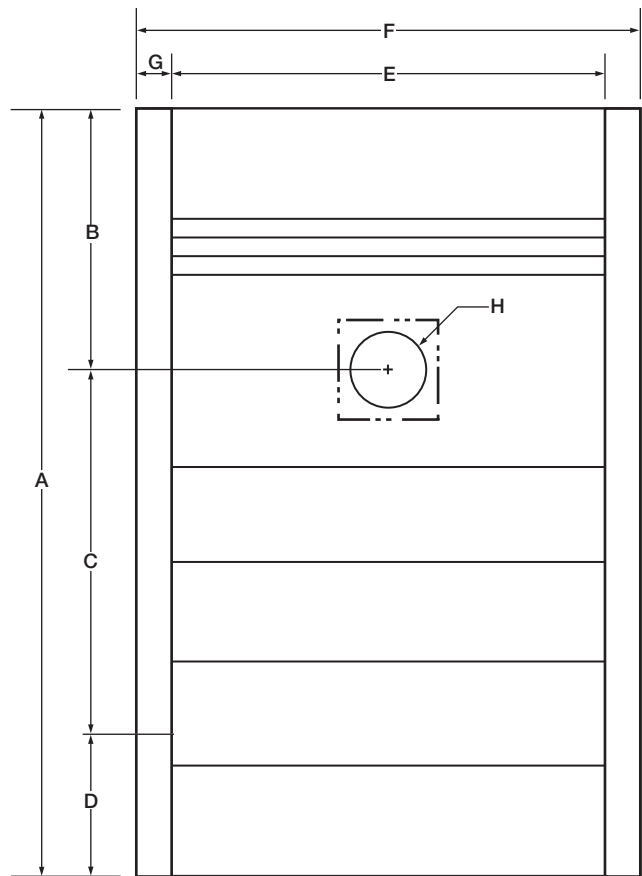
K. Mounting hole pattern _____

L. Scissor options:

Top: none single double

Bottom: none single double

Please include additional sketches or CAD files if available.

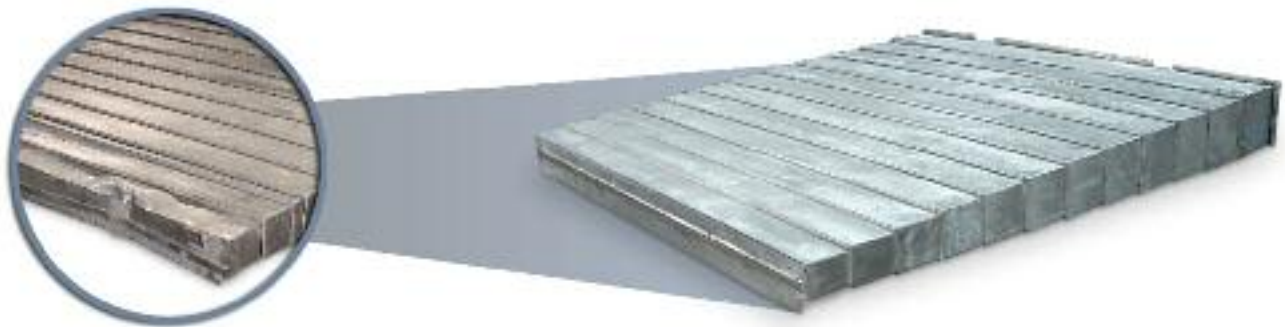


REPAIR & REFURBISHING SERVICES

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.

- On-site way cover 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
- 90-day warranty on parts and labor



Service Where You Need It

Hennig has 6 way cover repair facilities located throughout North America to serve our customers. Call our Service and Repair Department in Machesney Park for the service facility best suited for your repair requirements. Or contact the nearest facility from the list below.

Midwest

Hennig, Inc.

North American Headquarters
9900 North Alpine Road
Machesney Park, Illinois 61115
P: 815-636-9900
F: 815-637-1390
Email: info@hennig.ame.com

West & Southwest

Hennig - Oklahoma Repair Center

900395 S. 3420 Road
Chandler, Oklahoma 74834
P: 405-258-6702
F: 405-258-9971
Email: oklahoma@hennig.ame.com

East

Hennig - Cincinnati Repair Center

11431 Williamson Road
Blue Ash, Ohio 45241
P: 513-247-0838
F: 513-247-0840
Email: cincinnati@hennig.ame.com

North

Hennig - Detroit Repair Center

11879 Brookfield Road
Livonia, Michigan 48150
P: 734-523-8274
F: 734-523-8263
Email: livonia@hennig.ame.com

Mexico

Hennig - Mexico City Repair Center / GADEN, s.a. de c.v.

Silca No. 4
Col. Vista Hermosa
C.P. 54080
Tlanepantla de Baz, Estado de Mexico, Mexico
P: (55) 53 18 41 46
F: (55) 53 19 32 83
Email: Gadensadecv@aol.com

Hennig - Mexico Saltillo Repair Center / GADEN, s.a. de c.v.

Calle Primera No. 1037
Col. Ministro Nazario Ortiz Garza.
C.P. 25100
Saltillo, Coahuila, Mexico
P: (52) 844 180 02 94
F: (52) 844 180 02 95
Email: Gadensadecv@aol.com



(HSC) - Telescopic Steel Covers
Chip Conveyors
Chip Disc Filtration (CDF) Systems
Folded Bellows
Flex-Protect Systems
Machine Enclosures
Power Generator Enclosures
Roll-up & Flexible Apron Covers
Wiper Systems
Stabilastic Telescopic Springs
Stabiflex Cable Conduits
XYZ-Modules
Customer Specific Designs

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Hennig Inc.

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Machesney Park, IL 61115

Phone: +1 815 636 9900

Fax: +1 815 636 9737

Email: info@hennig-inc.com

Worldwide:

Hennig CZ, Úvaly, CZ

Hennig GmbH, Kirchheim, Germany

Hennig UK, Coventry, UK

Cobsen-Hennig, Boituva, Brazil

Sur Hennig, Bangalore, India

Enomoto, Gifu, Japan

Gaden-Hennig, Mexico City, Mexico

Osung Mechatronics Co., Masan, South Korea

Sermeto EI, Creuzier le Neuf, France

Service Centers:

Machesney Park, Illinois

Chandler, Oklahoma

Cincinnati, Ohio

Livonia, Michigan

Mexico City, Mexico

Saltillo, Mexico

Global Excellence in Machine Protection

For 50 years, Hennig, has been designing and producing custom machine protection and chip / coolant management products for state-of-the-art machine tools. Hennig products are reliable, durable, and perfectly tailored to protect against corrosion, debris and common workplace contaminants. There's no better way to protect your investment on the shop floor.

Innovative Products and Services

AME, Hennig's sister company, provides innovative and precision engineered components, machines and services. To learn more about AME and our innovative approach to precision machining, please call 815-962-6076 or visit www.ame.com.



www.hennigworldwide.com

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global excellence in machine protection

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