HENNIG®

PROTECT YOUR SUCCESS

TELESCOPIC STEEL WAY COVERS

DURABLE PROTECTION OF SLIDEWAYS AND PRECISION MACHINE COMPONENTS

Safe processes are profitable processes. We make our customers successful by protecting people and machines from the manufacturing environment and waste.

AT HENNIG, YOUR SUCCESS ALWAYS COMES FIRST.

Hennig Worldwide has been a global leader since 1950, specializing in chip and coolant management, machine protection, and facility safety. We work with a wide variety of manufacturers and other facilities worldwide, helping them create and maintain safe and efficient workplaces. Our commitment to excellence extends beyond our services—we actively contribute to local communities, create regional jobs, and support the global needs of machine tool customers.

TABLE OF CONTENTS

PROTECT YOUR SUCCESS

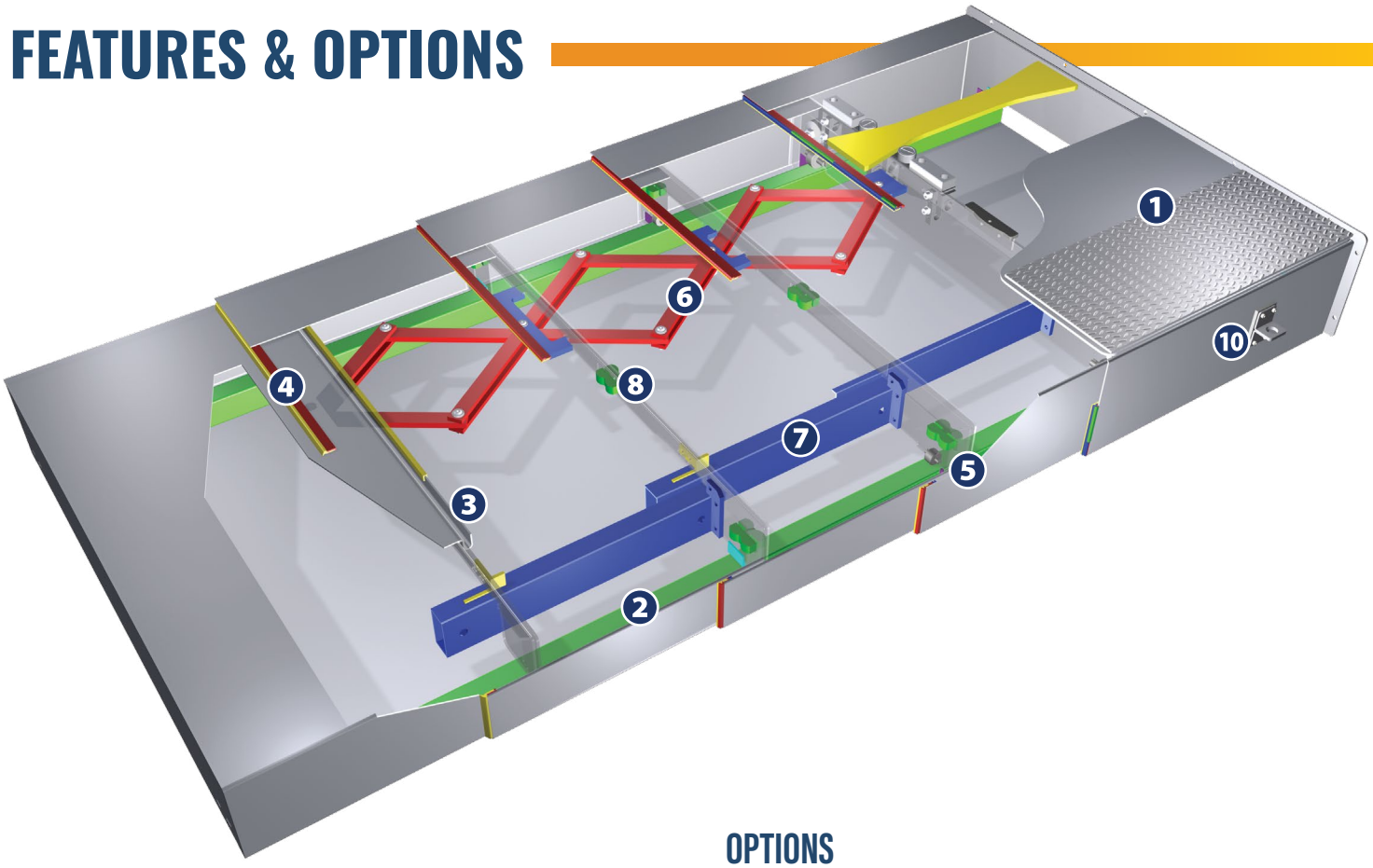
The range of steel way covers manufactured by Hennig is close to unlimited. With over 70 years of experience in the industry, there is little that we haven't seen or built.

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. Our extensive knowledge allows us to service and repair any way cover on the market, keeping your downtime to a minimum.

OVERVIEW

- All forms are made from rolled commercial quality steel sheets
- Standard gauges 1.5 mm (16 gauge) to 3 mm (11 gauge) (other gauges available depending on the application)
- Corrosion-resistant stainless steel can be used for extreme conditions
- Speeds from 6 to 200 m/min (19.69 to 656.17 ft/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
- Service, repair, and reverse engineering for all Hennig and non-Hennig telescopic steel covers

FEATURES & OPTIONS



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 gauges available depending on the application.

2. **GUIDES**
   Brass or non-metallic guides can be used on the covers. Small and medium size covers can be 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.

4. **WIPER SYSTEMS**
   High endurance, insertable polyurethane wipers keep the cover clean and seal out chips, dust, and coolants.

5. **SUPPORT ROLLERS**
   To ensure smooth, accurate operation, large covers can be provided with rollers. Ball bearing, needle bearing, and many other roller options are also 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 2 g over the entire traverse path. Ideal for linear motor machines.

8. **DAMPING ELEMENTS (BUMPERS)**
   Bumpers are used based on machine speeds.

9. **WEDGE DAMPENER (ME MODULE)**
   Used to soften impact on the boxes. See page 7 for more information.

10. **LIFTING LUGS**
    For ease of installation, lifting lugs can be provided.

11. **INTERNAL GUTTER (NOT PICTURED)**
    Additional protection for machines with a hydrostatic guide. The internal water channel reliably prevents contamination of the hydrostatic machine bed with cooling lubricants. This reliably directs any coolant that has penetrated into the chip conveyor.

12. **WAY EXTENSION BRACKETS (NOT PICTURED)**
    Extend from the machine ways to provide support for the cover while it is in a compressed position.

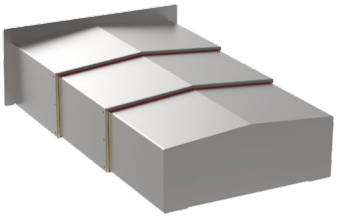
13. **INSPECTION OPENINGS (NOT PICTURED)**
    For quick, easy inspections hinged or Plexiglas® panes may be specified.

SHAPES

All shapes can be customized to fit your application.

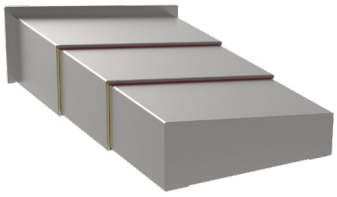
FLAT (AA)

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



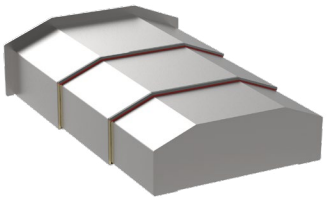
PEAK (BB)

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. Available in horizontal or vertical format.



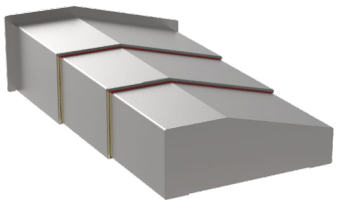
SLANT (CC)

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.



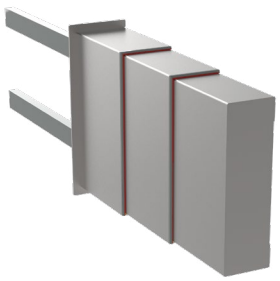
HIP ROOF (DD)

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



FLAT/SLOPE (EE)

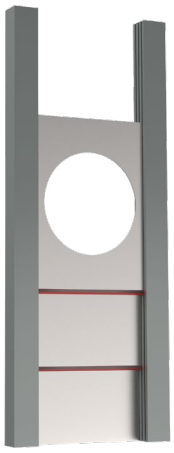
The pent-roof design meets special geometric requirements and improves the draining of coolant and swarf, depending on the angle of inclination. The additional folded edge increases the rigidity of the boxes. Available in horizontal or vertical format.



CROSS BEAM

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

SHAPES



VERTICAL SLIDING PLATE

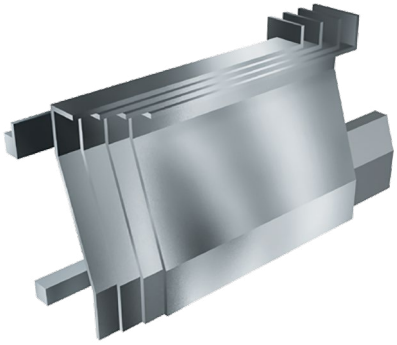
In this type of cover, the individual plates slide in separate guide rails. Since these types of covers do not require slideways, they are particularly suited for the protection of column recesses. In the presence of swarf and coolant, the vertical sliding plate covers can only be mounted vertically.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

XY 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 effect machine uptime and accuracy. Based on space availability, these covers can be designed with telescopic steel boxes, stainless steel, fabric, aluminum extruded aprons, or bellows with steel plate protection (lamellas).

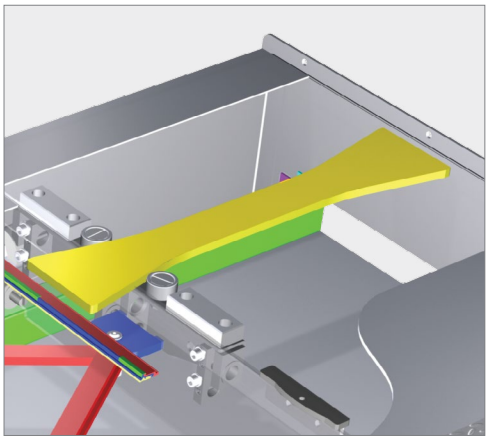
SPECIAL DESIGNS



CUSTOM DESIGNS

FOR COMPLICATED SLIDEWAY FORMS

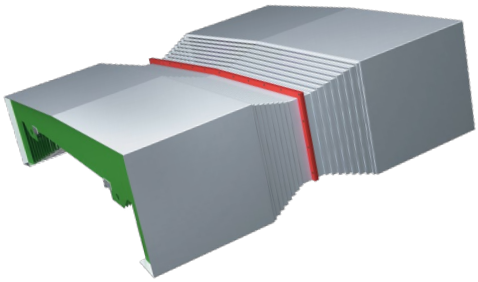
Different requirements and environmental conditions, complicated slideway forms, and less than ideal spacial conditions of special machines demand close cooperation between our design engineers and the machine tool manufacturers. Our engineers design your covers with knowhow, creativity, and an attractive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



ME MODULE

FOR HEAVY LOADS

High feed rates and accelerations are no longer excluded with large, heavy telescopic steel way 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 2 g 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

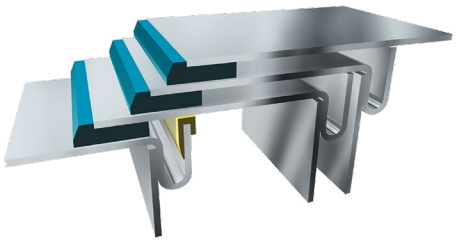
FOR LONGER TRAVEL

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.

SPECIAL DESIGNS

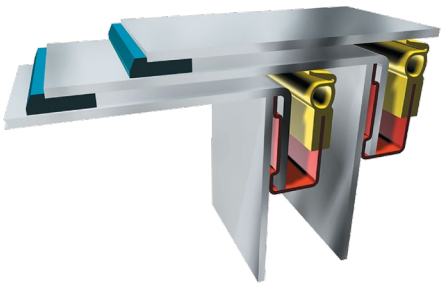
WATER-TIGHT TELESCOPIC STEEL WAY COVERS

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 coolant optimally.

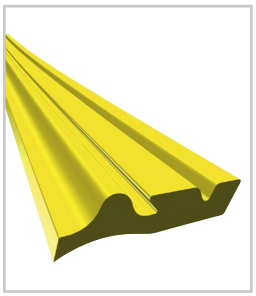
SCHEDULED GULLET

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

WIPER SYSTEMS

wiper lip | profile support | sheet metal box | damping material | profile support

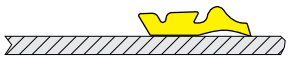
All dimensions shown in mm.



C SERIES

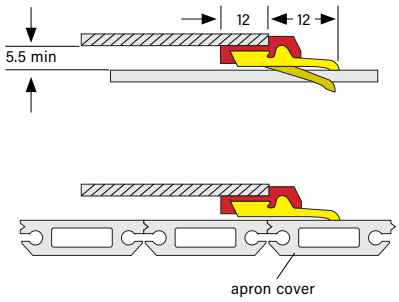
- Same design for all types of C wipers (except CL1—see below)
- Highly wear-resistant polyurethane lips ensuring optimum resistance to water, coolants, chemicals and oil

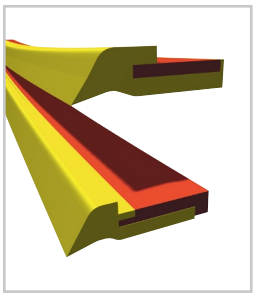
See page 11 for variations and dimensions



C SERIES - CL1

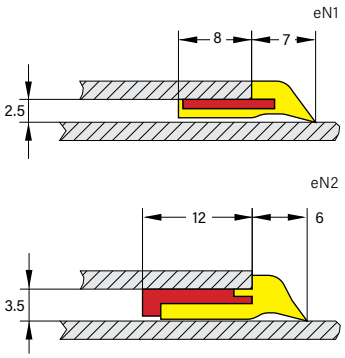
- Usable for large surfaces and aluminum apron systems for manifold applications
- Optimum wiping effect: will wipe uneven surfaces up to 4 mm
- Highly durable and resistant against all common coolants
- Exchangeable and suitable for all profiles of series C2, C3, C5, and C6 profiles from the C Series (Illustration: CL1 with C2 profile)





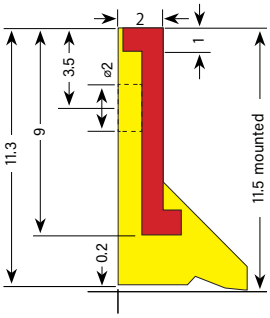
eN SERIES

- Used on telescopic steel way 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: 500 mm



F (mini)

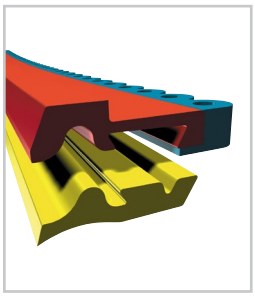
- Compact wiper with a height of only 11.5 mm
- Especially useful where space is limited, e.g. on extractors or slides
- The wiper lip is vulcanized on a steel profile
- Low priced wiper based on the proven SK-series
- Standard length: 500 mm



WIPER SYSTEMS

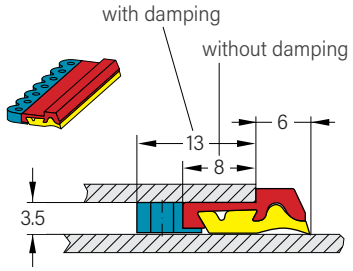
wiper lip | profile support | sheet metal box | damping material | profile support

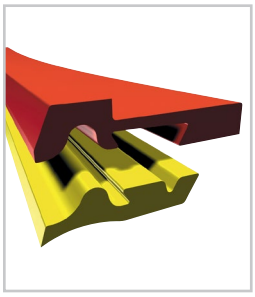
All dimensions shown in mm.



C2

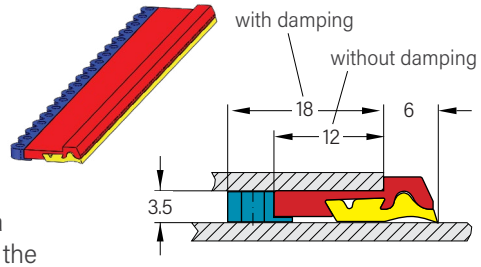
- Smallest wiper of the "C" series
- Replaceable wiper lips
- Very little space required (regarding the mounting height and depth)
- Also available with a rubber profile vulcanized on the profiled support, for optimum damping properties at high traverse speeds (illustrations show C2 with damping)

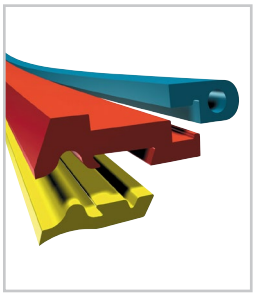




C3

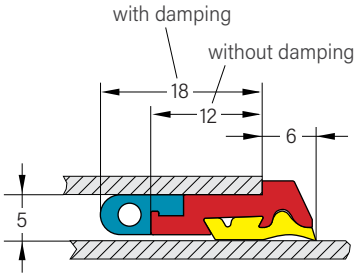
- Wider profile to ensure a better adhesion when spot-welding it to the box
- Replaceable wiper lips
- Mounting height requires very little spacing
- Can be screwed onto the cover box
- Optimum rigidity of the cover box in the wiper area
- Available with and without damping (illustration to the left shows wiper without damping, illustration to the right shows wiper with damping)
- Assembly dimension with damping 18 mm

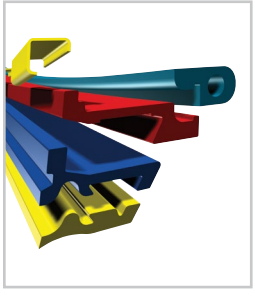




C5

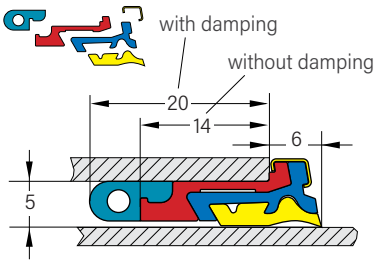
- Designed for large covers
- Replaceable wiper lips
- A combination of C5 and C3 wipers is possible
- Optimum rigidity of the cover box in the wiper area
- Enlarged return gutter to ensure a rapid draining of the coolant
- Available with and without damping (illustrations show C5 with damping)





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 (illustrations show 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



SERVICE & REPAIR

INDUSTRY LEADING WAY COVER SERVICE

We offer quick, responsive, service and repair for all Hennig and non-Hennig machine covers, chip conveyors, and any other machine tool components that experience wear and tear. With our experienced technicians, it doesn't matter who manufactured the original product, the end result must absolutely meet Hennig standards for quality and safety before we will consider it finished.

REPAIR

- For Hennig & non-Hennig way covers
- For all way cover components

SERVICE

- Reverse engineering of existing way covers
- On-site maintenance and repair

> *"I love your customer service. Thank you for the great experience. The cover your team repaired fit perfectly. You have always been a positive support in the effort to keep our machine equipment functioning smoothly."*

Rick Lesco
Maintenance Manager, United Airlines

SERVICE & REPAIR

The failure of a telescopic steel way cover is usually indicated in advance by certain signs. Below are seven points that indicate a defective cover. If your cover needs repair, please inform Hennig's service team at info@hennig-inc.com.

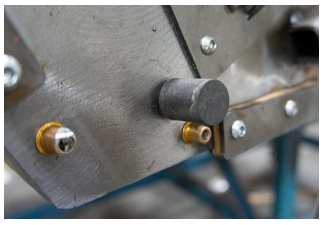
1. Streaks forming on the cover, chips collecting under the sealing lip, or the wipers becoming porous are indicators that it is time to change the scrapers. Wipers should be inspected at least weekly and replaced if necessary.

2. Does the cover squeak when processing your parts? If so, then the glide and roller elements inside the cover should be examined.

3. Does the cover shake or vibrate when moving? If so, then you should have the geometry checked.

4. If you have dropped a tool or workpiece on the cover or crashed the cover, a new box element may be necessary.

5. Does your positively-guided cover move unevenly? If so, then part of the guide elements could be defective.



6. If you hear loud impact noises when the cover is closed or pulled out, this may indicate defective damping elements in the cover.

7. Sometimes issues are as simple as a rusty surface, which not only spoils the visual impression, but also has a negative impact on the service life of the wipers/sealing elements.

QUOTE REQUEST (NEW WAY COVERS)

Please complete this form and email to info@hennig-inc.com.

COMPANY

Company Name _____
Company Address _____
_____
_____

Name _____
Title _____
E-mail _____
Phone _____ **Fax** _____

EXISTING COVER INFO (if you have an existing cover, please provide the details found on the product identification tag)

Do you have an existing cover? ○ yes ○ no
Manufacturer ○ Hennig ○ Enomoto ○ Sermeto (Hennig France) ○ Cobsen ○ Other _____
Part # _____ **OEM Part #** _____
Quantity _____ ○ each ○ set **Number of Boxes** _____ **Photos Available** ○ yes ○ no **DWGs or Sketches** ○ yes ○ no

TECHNICAL DATA / COVER DIMENSIONS

UOM ○ inch ○ mm
Cover Type _____
Mounting Type _____

Width of Cover (WOC) _____
Height of Cover (HOC) _____
Angle (α) _____

Height Over Ways (HOW) _____
Height of Side (HOS) _____
Width of Top (WOT) _____

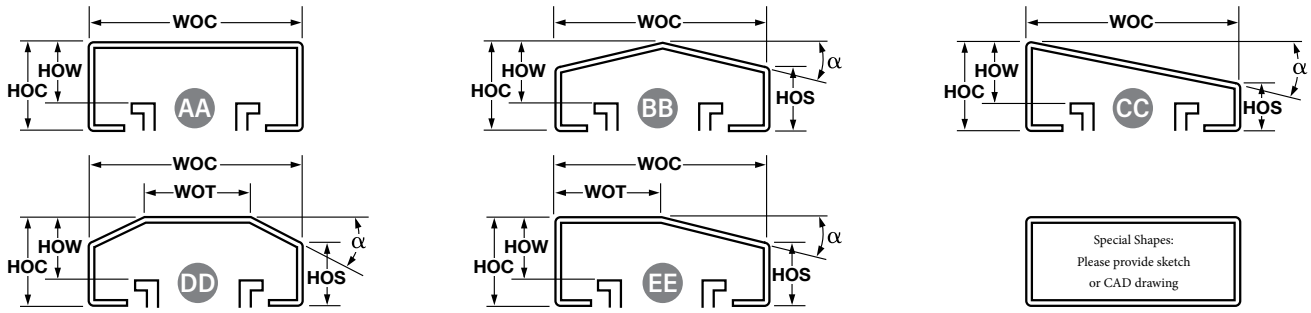
APPLICATION

Machine Make _____ **Machine Model** _____ **Axis** ○ X ○ Y ○ Z ○ Other _____
Operating Temperature Range _____ **Maximum Travel Speed** _____
Cover Orientation ○ horizontal ○ vertical ○ cross rail ○ slant bed ○ column/table ○ other _____
Operating Environment ☐ dry ☐ grinding ☐ hot chips ☐ heavy coolant ☐ other _____

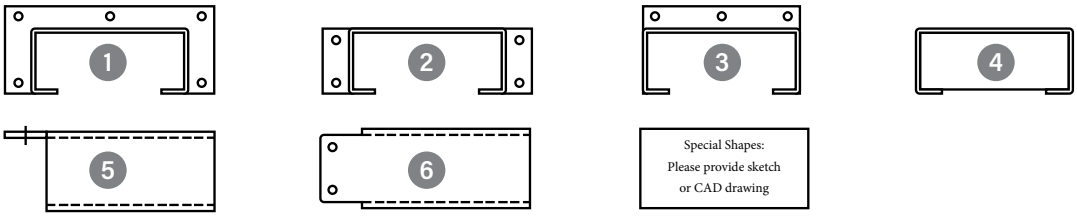
DIMENSIONS

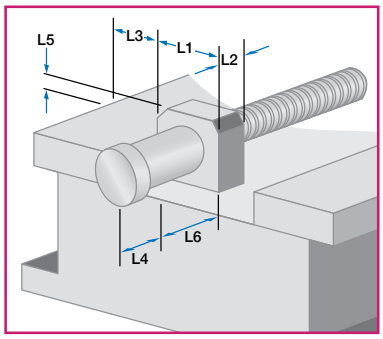
A Extended length _____
B Compressed length _____
C Travel _____
D1 End of way to table when compressed _____
D2 End of way to table at over travel _____
E1 Table width _____
E2 Table height _____
E3 Table height above way _____
E4 Side of way to side of table _____
F1 Way wiper height above way _____
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 _____
K1 Individual width of way _____
K2 Individual height of way _____
K3 Side of way to side of casting _____
K4 Casting distance below way _____
L1 Width of drive mount _____
L2 Depth of drive mount _____
L3 Side of way to side of drive mount _____
L4 End of way to front of motor _____
L5 Drive mount height above way _____
L6 End of way to drive mount _____
M Rail type _____
M1 Width over linear rails _____
M2 Rail width (top) _____
M3 Rail width (bottom) _____
M4 Rail height _____
M5 Side of casting to side of rail _____
W1 Way extension length _____
W2 Way height to floor _____
W3 Way to bed offset _____
W4 Bed to way offset _____

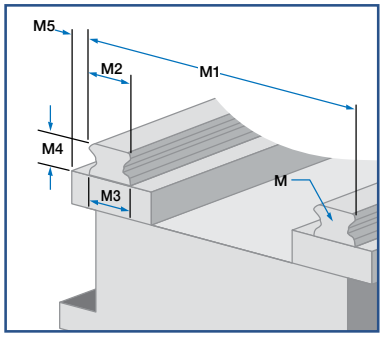
COVER TYPES

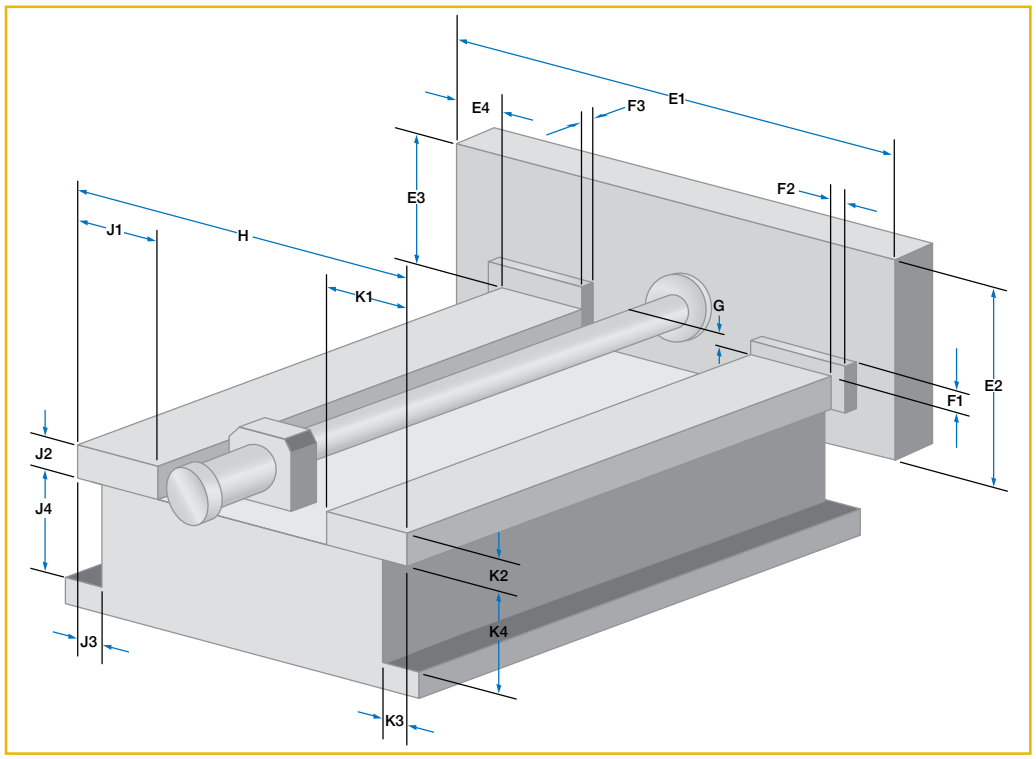


MOUNTING TYPE

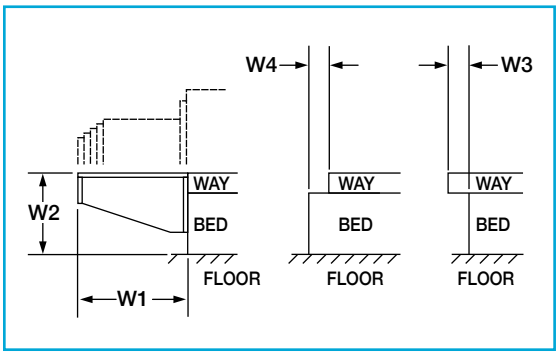




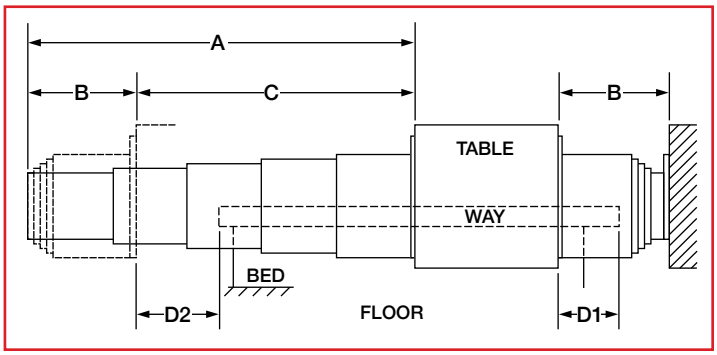




WAY EXTENSION BRACKETS



SIDE VIEW



QUOTE REQUEST (WAY COVER REPAIR)

Please complete this form and email to info@hennig-inc.com.

COMPANY

Company Name _____
Company Address _____
_____
_____

Name _____
Title _____
E-mail _____
Phone _____ **Fax** _____

EXISTING COVER INFO (please provide the details found on the product identification tag)

Manufacturer ○ Hennig ○ Enomoto ○ Sermeto (Hennig France) ○ Cobsen ○ Other _____
Part # _____ **OEM Part #** _____
Quantity _____ ○ each ○ set **Number of Boxes** _____ ***Photos Available** ○ yes ○ no **DWGs or Sketches** ○ yes ○ no

TECHNICAL DATA / COVER DIMENSIONS

UOM ○ inch ○ mm

Width of Cover (WOC) _____
Height of Cover (HOC) _____
Height Over Ways (HOW) _____

Extended Length _____
Compressed Length _____
Travel _____

APPLICATION

Machine Make _____ **Machine Model** _____ **Axis** ○ X ○ Y ○ Z ○ Other _____
Operating Temperature Range _____ **Maximum Travel Speed** _____
Cover Orientation ○ horizontal ○ vertical ○ cross rail ○ slant bed ○ column/table ○ other _____
Operating Environment ☐ dry ☐ grinding ☐ hot chips ☐ heavy coolant ☐ other _____
Rollers ○ yes ○ no **Scissors** ○ yes ○ no

ADDITIONAL INFO/NOTES

_____
_____
_____
_____
_____
_____
_____
_____

*IN ORDER TO RECEIVE A QUOTE, PLEASE PROVIDE PICTURES OF THE DAMAGED WAY COVER.

QUOTE REQUEST (VERTICAL SLIDING PLATE)

Please complete this form and email to info@hennig-inc.com.

COMPANY

Company Name _____
Company Address _____
_____
_____

Name _____
Title _____
E-mail _____
Phone _____ **Fax** _____

EXISTING COVER INFO (if you have an existing cover, please provide the details found on the product identification tag)

Do you have an existing cover? ○ yes ○ no
Manufacturer ○ Hennig ○ Enomoto ○ Sermeto (Hennig France) ○ Cobsen ○ Other _____
Part # _____ **OEM Part #** _____
Quantity _____ ○ each ○ set **Number of Boxes** _____ **Photos Available** ○ yes ○ no **DWGs or Sketches** ○ yes ○ no

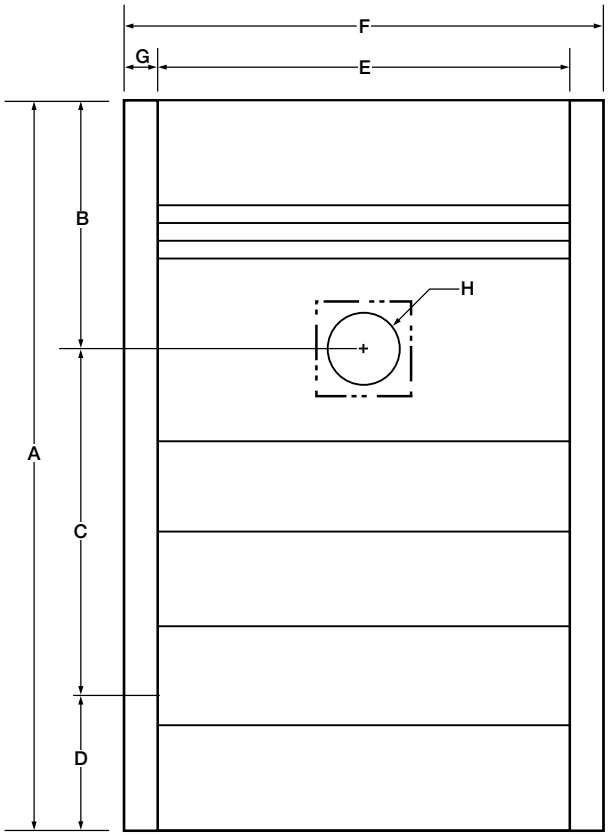
APPLICATION

Machine Make _____ **Machine Model** _____ **Axis** ○ X ○ Y ○ Z ○ Other _____
Operating Temperature Range _____ **Maximum Travel Speed** _____ **Movements/Day** _____
Cover Orientation ○ horizontal ○ vertical ○ cross rail ○ slant bed ○ column/table ○ other _____
Operating Environment ☐ dry ☐ grinding ☐ hot chips ☐ heavy coolant ☐ other _____

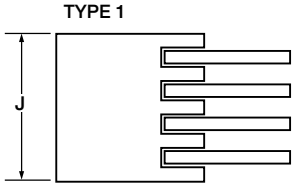
TECHNICAL DATA / COVER DIMENSIONS

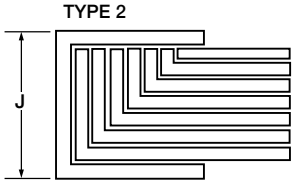
UOM ○ inch ○ mm

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 option	
	Top ○ none ○ single ○ double	
	Bottom ○ none ○ single ○ double	



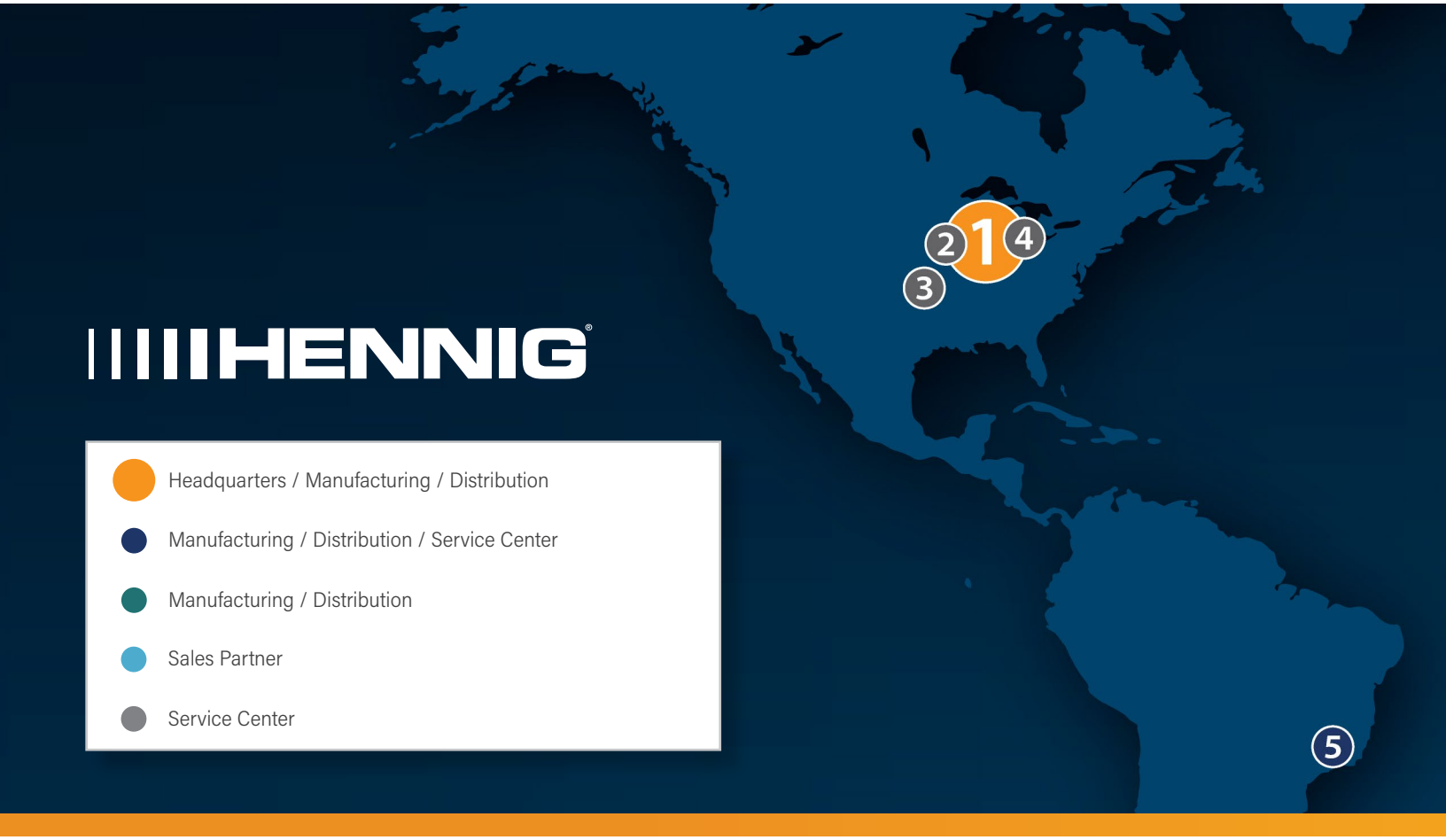
RAIL TYPE





PLEASE INCLUDE ADDITIONAL SKETCHES OR CAD FILES IF AVAILABLE.

FACILITIES & CONTACTS



1 Hennig, Inc. Global Headquarters
9900 North Alpine Road
Machesney Park, IL 61115
T: +1 815-636-9900
F: +1 815-636-1988
info@hennig-inc.com

2 Hennig, Inc. IL Service Center
4920 Marlin Drive
Machesney Park, IL 61115
T: +1 815-446-2357
info@hennig-inc.com

3 Hennig, Inc. OK Service Center
900395 S. 3420 Road
Chandler, OK 74834
T: +1 405-258-6702
info@hennig-inc.com

4 Hennig, Inc. MI Service Center
11879 Brookfield Road
Livonia, MI 48150
T: +1 734-523-8274
info@hennig-inc.com

5 Cobsen Ltda.
R. Benedito Mazulquim, 425
18550-000 Boituva CEP, Brazil
T: +55 15 3263-4042
F: +55 15 3263-4070
cobsen@cobsen.com.br

6 Hennig GmbH European Headquarters
Überrheinerstraße 5
85551 Kirchheim, Germany
T: +49 89 96096-0
F: +49 89 96096-120
info@hennig-gmbh.de

7 Hennig CZ s.r.o.
Klánovická 334
250 82 Úvaly, Czech Republic
T: +420 2810 91610
F: +420 2810 91625
info@hennig-cz.com

8 Hennig France sas
19, rue de Rebrillon
03300 Creuzier-le-Neuf, France
T: +33 470 58 4740
F: +33 470 58 0022
contact@hennig-france.com

9 Hennig U.K. Ltd.
Unit 6, Challenge Close
Coventry CV1 5JG, United Kingdom
T: +44 24 76555690
F: +44 24 76256591
sales@henniguk.com

10 Hennig BH doo.
Ciljuge II bb – poslovna zona
75270 Zivinice, Bosnia Herzegovina
T: +387 35 95 1876
kontakt@hennig-bh.com

11 BB & S Industrieel Onderhoud
Zirkoonstraat 7, 7554 TT Hengelo (Ov.)
Postbus 69
7550 AB Hengelo (Ov.), Netherlands
T: +31 74 8510600
F: +31 74 8510605
hinders@bs.nl

12 Svenska Maskinkomponenter AB
Brunnsäkersvägen 9
64593 Strängnäs, Sweden
T: +46 8 53470770
F: +46 8 53470775
info@svemako.se

13 Hennig Portugal Unipessoal Lda
Rua de Lages 386
4575-300 Paredes-Penafiel, Portugal
T: +49 172 6429207
a.dasilvaduarte@hennig-gmbh.de

14 Osung Mechatronics Co. Ltd.
Jinbuk-myun Shincon-li 413-2
Gyungnam Masan-city, South Korea
T: +82 55 271 1821
F: +82 55 271 1820
osgijeon@naver.com

15 Enomoto BeA Co., Ltd.
5-10 Sohara Koa-Cho
Kakamigahara-Shi,
Gifu 504-8551, Japan
T: +81 583 832178
F: +81 583 897435
kashida@enomotoweb.com

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