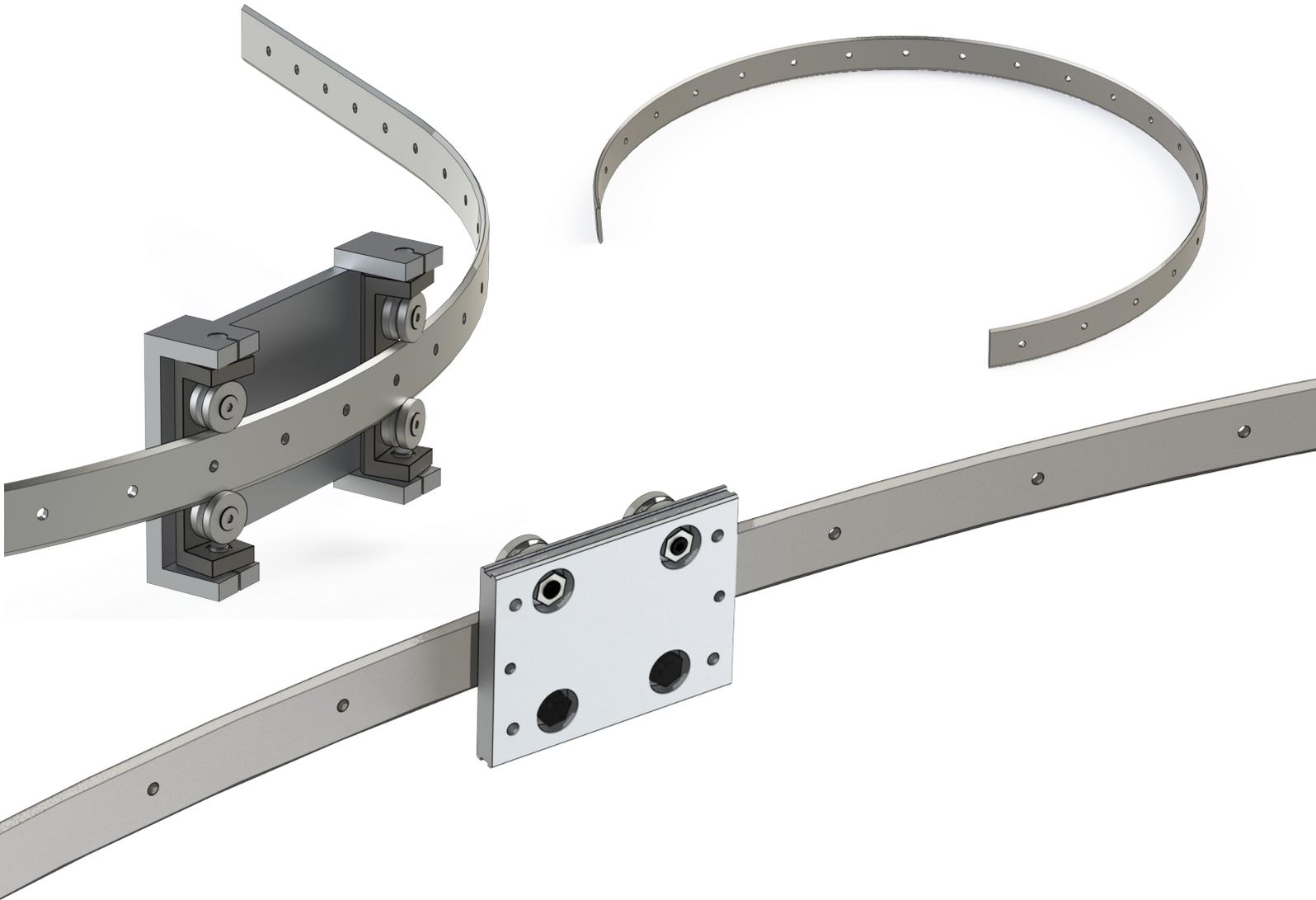


PRT2 Rolled Rings & Segments



HepcoMotion Rolled Rings are a cost-effective means of achieving circular guidance of unlimited maximum diameter in commercial grade applications. Hepco Flat Slides can be rolled to any diameter above 2000mm for hardened Slides or 600mm for unhardened Slides (available for special order).

Four-bearing Carriages can be mounted to guide the movement of a fixture around Rolled Slides with a constant diameter. The bearings are angled in the carriage plate so they run parallel to the curved slide.

Bogie Carriages are available for Rolled Slides with straight and curved sections. Thanks to a pivoting mechanism in the Carriage assembly, each pair of Bearings is able to rotate as the Carriage travels between straight and curved sections of Slide.

Features & Benefits

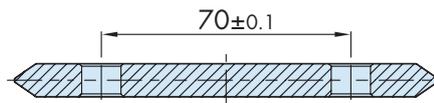
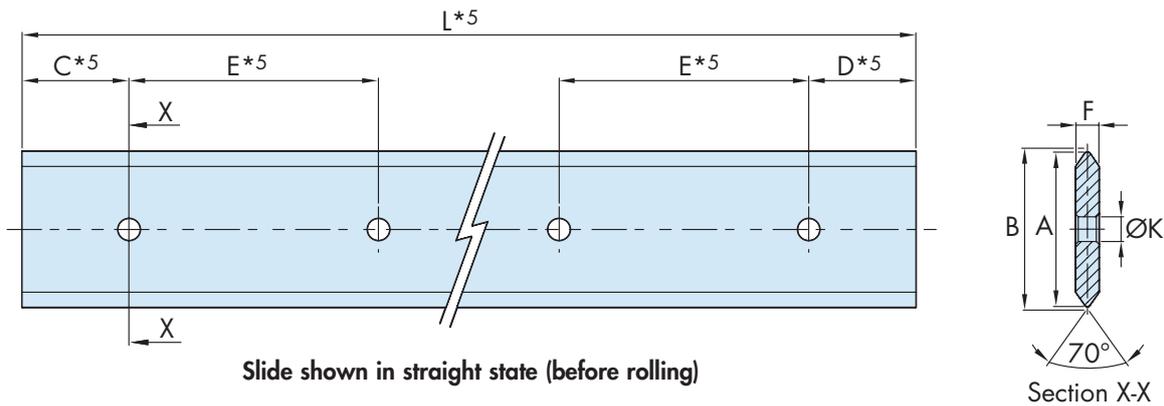
- Any diameter above 2000mm for hardened Slides (or 600mm for unhardened Slides) can be manufactured.
- A tighter bend radius can be achieved with unhardened Slides compared to hardened Slides.
- Slides can be supplied in single lengths up to 3500mm long and butted to create very large diameter Rings and Segments.
- Slides are supplied in P3 precision grade only.
- Four-bearing Carriages (compatible with constant diameter Slides) are designed to suit each application. Carriages can often be fitted with lubricators to extend life. (N.B. Lubricators are not suitable for all bend radii.)
- Bogie Carriages are available for Rolled Slides with a combination of curved and straight sections. The Bearings are mounted such that they can swivel as the Carriage transitions between straight and curve.

Rolled Rings & Segments - Slide Specification

HepcoMotion Rolled Rings and Segments are available in P3 grade*¹ precision-drawn high quality bearing steel and hardened on the 'V' running faces to provide an extremely hard-wearing surface. Other areas remain soft for customising. Rings and Segments manufactured from unhardened Slides are available for special order.

Rolled Rings and Segments are manufactured from a range of GV3 Double Edge Flat Slides. GV3 Spacer Slide can also be supplied rolled depending on the required diameter - please discuss specifications with our Sales department. Fixing holes are machined after the slide has been rolled and are available as standard as through-holes*².

A slide in its straight state (before rolling) is shown below to illustrate typical slide and hole dimensions in the standard range.



The L120 section has 2 rows of holes

Part Number	Use With ³	A	B	F	K		L
		~Slide Width	P3	P3	Ø	Screw Size	max.
S 25 ...	... J 25 ...	25	26.58	4.93	7	M6	3500
S 35 ...		35	36.58				
S 50 ...		50	51.58				
M 44 ...	... J 34 ...	44	45.58	6.42	7	M6	3500
M 60 ...		60	61.58		9	M8	
M 76 ...		76	77.58				
L 76...	... J 54 ...	76	77.58	9.43	11.5	M10	3500
L 120 ...		120	121.58				

Notes

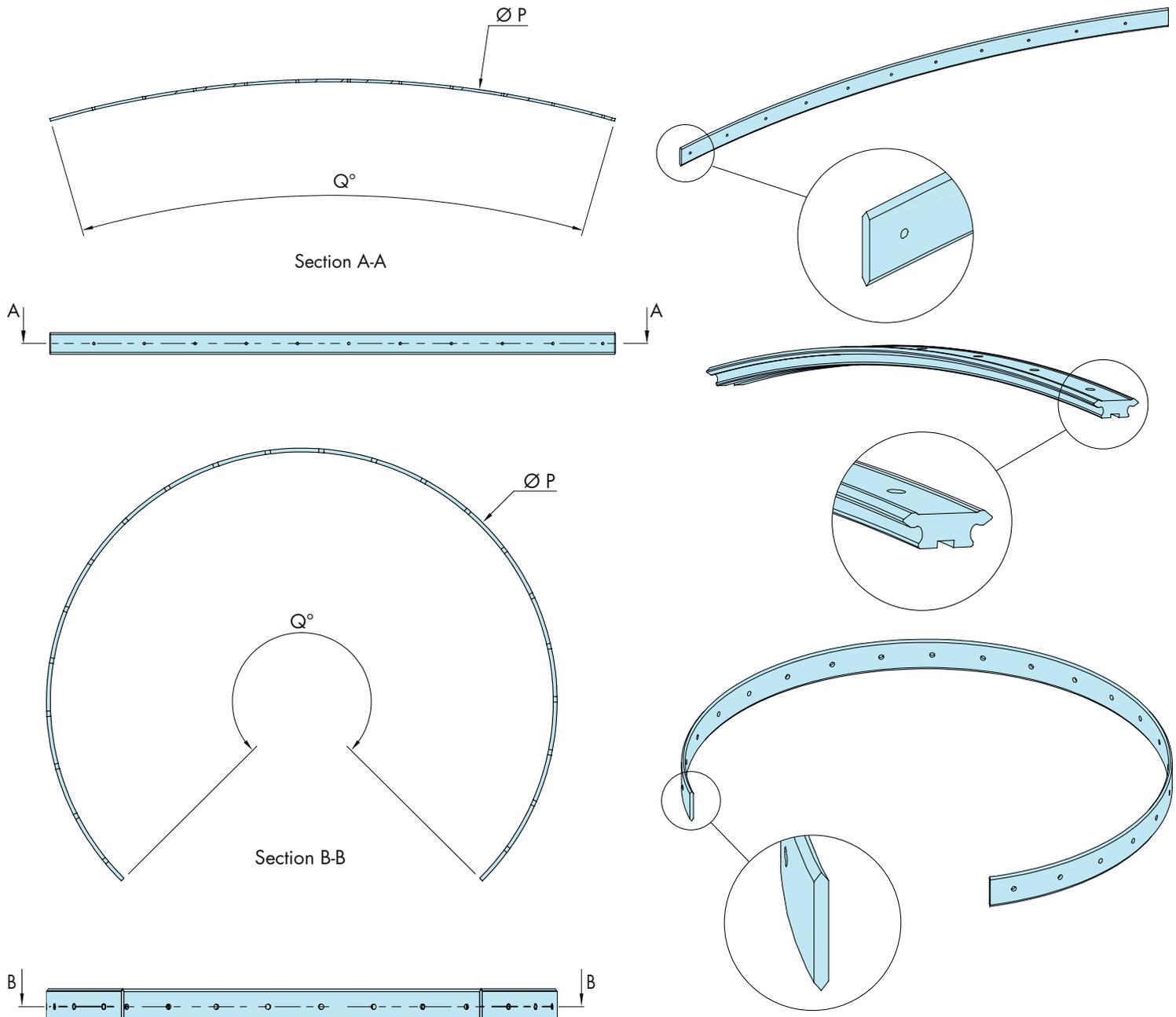
1. Please refer 'System Selector' in the GV3 Catalogue for information on slide precision grades. Rolled Rings and Segments are supplied in P3 grade only.
2. In some instances, counter-bored or counter-sunk holes can be machined in the slide. Please discuss your requirements with our Sales team.
3. In the table, the preferred choice of Bearings to use with each Slide is listed. However, other combinations are possible (please see 'Mix & Match Component Compatibility' in the GV3 Technical Guide).
4. The bend diameter that can be achieved is dependent on the slide section size and hardened state of the slide. Please contact our Sales team to discuss your application requirements.
5. Dimensions L, C, D & E will vary depending on the requirements of your application. State the desired quantity and pitch between holes when making an enquiry with our Sales team.

Rolled Rings & Segments - Constant Diameter

Straight slides are rolled to achieve the desired diameter. The finished angle of the curved slide should be specified at time of order. From this, the length of the slide in its straight state can be determined.

Individual slides are available in a single piece up to a maximum straight length of 3500mm. The quantity of slides required to form an arc/circle will depend on the rolled diameter and the total angle required. Slides can be butted to form longer arc lengths or full Rings with a large diameter. Production of 360° Rings requires special consideration with regard to installation; please discuss any requirement for a 360° Rolled Ring with our Engineers.

Flat slides can be rolled to any single diameter over 2000mm for hardened slides and 600mm for unhardened slides*⁴, depending on the slide section.



To specify a HepcoMotion Rolled Ring or Segment with a single, constant diameter:

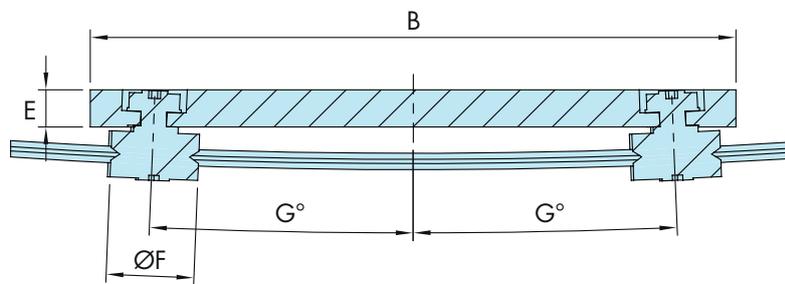
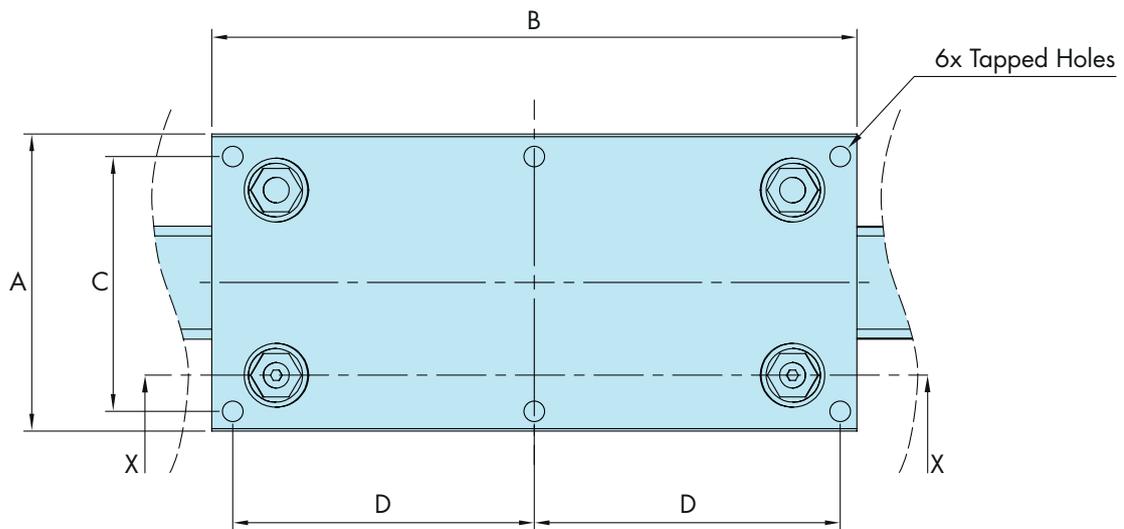
1. Select the appropriate Slide and Bearing size.
2. Specify the total Slide angle (Q°) (up to 360°/a full ring) and bend diameter ($\varnothing P$).
3. Indicate the type and number of holes required in the Slide, including the desired pitch (E) and end hole positions (C, D).
4. Our Technical Sales team will determine the number of Slides required to complete the form. The maximum straight length of a single Slide is 3500mm - it may be necessary to use several Slides to create a full 360° Ring or large diameter Segment. Installation of full 360° Rolled Rings may require special consideration to ensure joints between Segments are acceptable.

Carriages for Fixed Diameter Rolled Rings

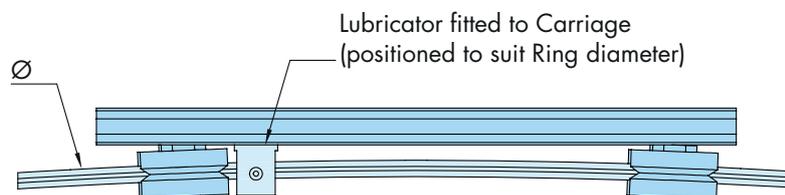
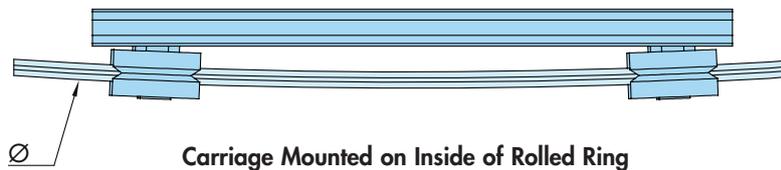
Four Bearing Carriages are available for Rolled Rings and Segments with a single, constant diameter. The Carriages use standard GV3 bearings, mounted at an angle to ensure the Bearings run parallel to the Slide. Floating Bearings may be of use in some applications where a pair of Rolled Slides is mounted in parallel.

A typical Carriage design is illustrated below. The design is similar GV3 and PRT2 Carriages, but Bearings are mounted at an angle to the carriage plate, to suit the Rolled Slide. Carriages can be configured to sit on the inside or outside of the Rolled Slide and will vary dimensionally depending on the geometry of the Slide. Each carriage design is specific to the application and custom carriage designs are possible. In some instances, a standard GV3 Carriage (with Twin Bearings mounted parallel to the Carriage plate) is suitable, providing the diameter of the Rolled Ring is of sufficient magnitude.

Lubricators can be fitted to Carriage assemblies but are not suitable for all bend radii. The position of Lubricators changes depending on the geometry of the Carriage/Ring assembly. Please discuss application requirements with our Technical Sales team.



Section X-X

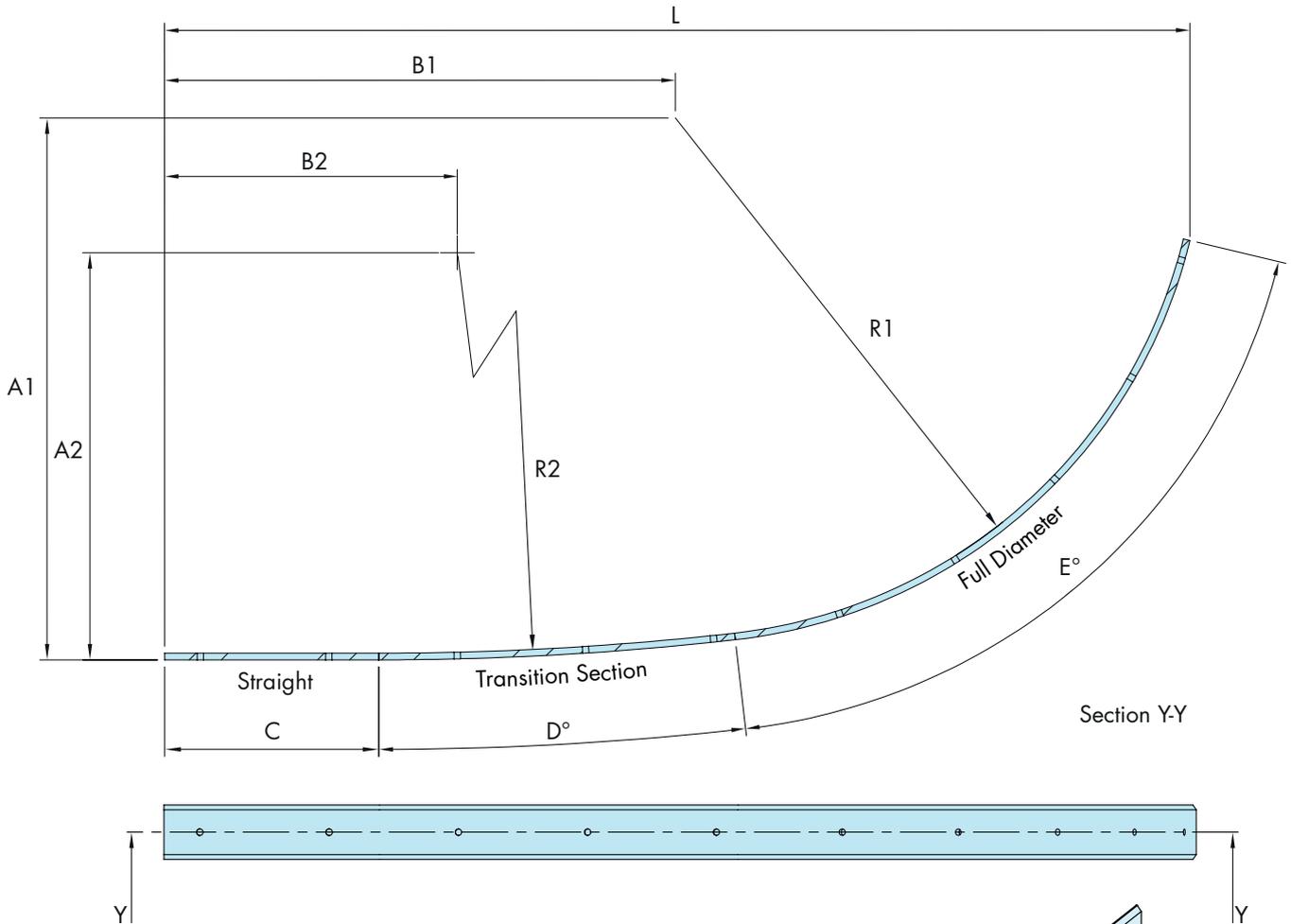


Carriage Mounted on Outside of Rolled Ring

Roller Rings & Segments - Combination of Straight and Curve

In some applications, a Slide with a combination of straight and curved sections will be necessary. A short transition section is required between the straight and full diameter as a result of the process used to manufacture this type of Rolled Slide. The geometry of this transition section will vary depending on the slide size and requirements of the application.

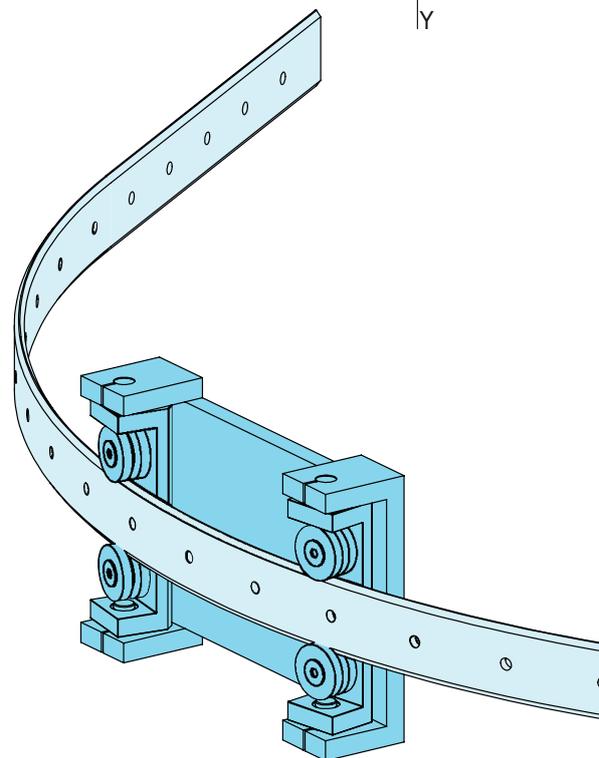
The illustration below shows the dimensions typically required to specify a Rolled Slide with a straight and curved section. Please discuss the requirements of your application with our Technical Sales team.



Bogie Carriages for Rolled Rings with Straight-Curve Combination

A Bogie Carriage is required for any Rolled Slide with a straight-curve combination. The Bogie Carriage uses standard GV3 Bearings mounted to pivoting arms. These arms allow each pair of Bearings to remain parallel to the Slide as the Carriage transitions between straight and curve.

Bogie Carriages are designed to suit the requirements of each application.

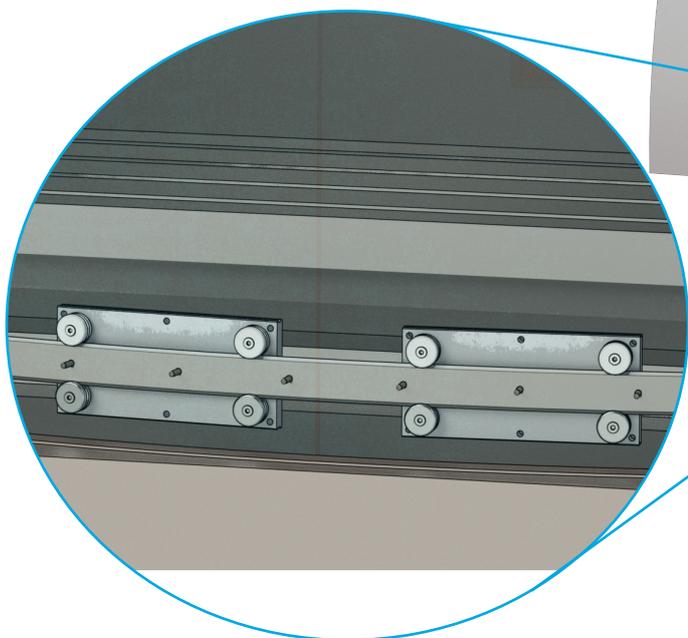
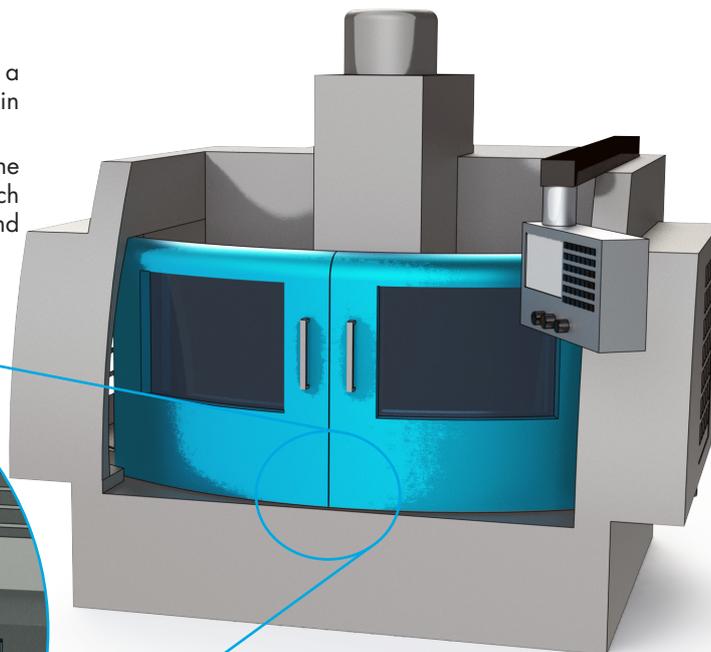


Application Examples

CNC MACHINE DOORS

A single length of **GV3 Double Edge M44 Slide** rolled to a $\text{Ø}4000$ diameter and mounted to a CNC milling machine in a 90° arc.

Two Carriages with $\text{Ø}34\text{mm}$ **GV3 Bearings** are mounted to the slide. Each door of the CNC is mounted to a carriage which guides the movement of the doors as they are opened and closed.



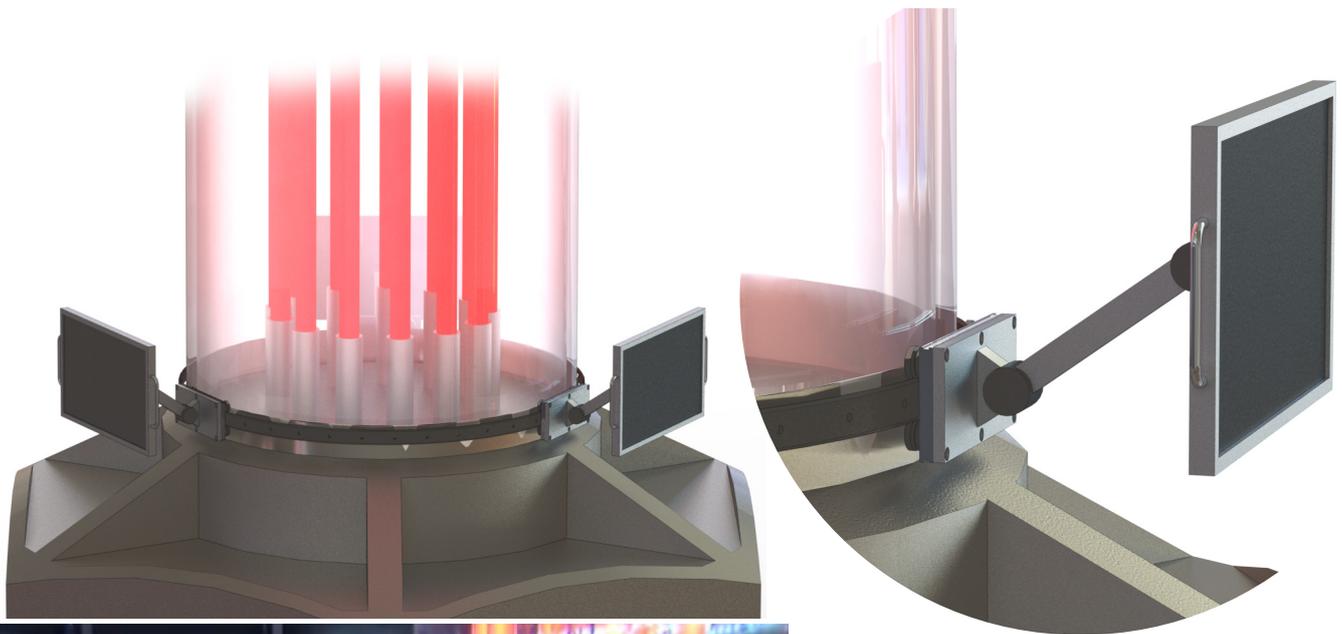
SLIDING LADDER

Two lengths of **GV3 Double Edge L76 Slide** rolled to a $\text{Ø}5900$ diameter and butted to form a 120° arc mounted to a wall.

A ladder is mounted to two custom four-bearing carriages with $\text{Ø}54\text{mm}$ **GV3 Bearings** and manually moved in to position anywhere along the slide.



Application Examples



BBC Dr. WHO TARDIS SCREEN



A series of **GV3 Double Edge M44 Flat Slides** were rolled to a $\text{Ø}1200\text{mm}$ diameter and assembled to create a 360° ring.

Movable display monitors are mounted to four-bearing carriages with **$\text{Ø}34\text{mm}$ GV3 Bearings** to create a movable prop for use in the TV industry.

The product is reliable enough to last for many years and does not require maintenance. The set is used continuously over long periods of time by multiple users.

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