Cargo control and transport systems

Cargo control elements, Shoring poles / locking bars, Lashing straps and Garment rails
# Cargo control and transport systems

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Principles of cargo control

Legal basis
Article 22 of the German road traffic regulations (StVO)

(1) The load, including its cargo control and load-handling equipment, is to be stowed and secured in such a way as to prevent it slipping, falling over, rolling back and forth or creating avoidable noise, even in the event of an emergency stop or sudden evasive manoeuvre. The applicable technical standards are to be observed at all times.

Article 23 StVO

(1) The driver of a vehicle is responsible for ensuring that his vision and hearing are not impaired by occupants, animals, the load, equipment or condition of the vehicle. The driver of a vehicle must furthermore ensure that the vehicle or towing combination and its load and occupants fully comply with the corresponding regulations, and that the load or occupants do not jeopardise the vehicle’s roadworthiness.
### Principles of cargo control

#### Overview of standards, guidelines and directives

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Principles of cargo control

Physical principles

Weight force G
Weight force G of a body is the gravitational force acting on its mass.

- It is calculated from the mass (M) of the body (in kg) and gravitational acceleration \( g \approx 9.81\text{m/s}^2 \)
- The unit of measurement for weight force is the newton (N). The decanewton (daN) is used for cargo control purposes.

The following forces act on a vehicle’s load during normal operation:

A: Braking deceleration 0.8 g corresponds to 80% of the weight of the load
B: Static weight force 1 g
C: Initial drag 0.5 g corresponds to 50% of the weight of the load
D: Centrifugal force 0.5 g corresponds to 50% of the weight of the load

Load distribution plan
A: Limited by max. permissible load on front axle
B: Limited by max. permissible total load
C: Limited by max. permissible load on rear axle
D: Limited by ability to steer safely

The load distribution plan can be used to spread the weight in an optimum manner for each specific vehicle. The maximum front and rear axle loads shown in the load distribution plan must not be exceeded. Driving can become subject to technical and dynamic force problems if the vehicle is overloaded or its cargo is unevenly distributed.
Round-hole cargo control tracks

Original BISON® round-hole cargo control tracks - top-hat profile

Cargo control pan for horizontal and/or vertical installation.

Overall measurements: 80 x 12 x 3000 x 3 mm (B x H x L x S)
Anchoring holes: 22 mm round holes with lug, Spacing 40 mm
Installation holes: Ø 5.1 mm und 6.5 mm alternating
Material: Aluminium F-22 technisch eloxiert
Weight: approx. 0.7 kg/m
Article No.: 612 042 000 - Aluminium

Original BISON® round-hole cargo control tracks - top-hat profile

Overall measurements: 80 x 11 x 3000 x 2 mm (B x H x L x S)
Installation: Horizontal and/or vertical
Anchoring holes: 22 mm round holes with lug, Spacing 40 mm
Installation holes: Ø 5.1 mm and 6.5 mm alternating
Material: Steel S 350 GD+Z 275 MA
Weight: approx. 1.1 kg/m
Article No.: 612 033 000 - Steel, sendzimir galvanised

Original BISON® round-hole cargo control tracks - top-hat profile

Overall measurements: 80 x 11 x 3000 x 2 mm (B x H x L x S)
Installation: Horizontal and/or vertical
Anchoring holes: 25 mm round holes with lug, Spacing 40 mm
Installation holes: Ø 5.1 mm and 6.5 mm alternating
Material: Steel S 350 GD+Z 275 MA
Weight: approx. 1.1 kg/m
Article No.: 612 034 000 - Steel, sendzimir galvanised
Round-hole cargo control tracks

**Original BISON® round-hole cargo control tracks - flat strip**

- Overall measurements: 80 x 3000 x 3 mm (B x L x S)
- Installation: Horizontal and/or vertical
- Anchoring holes: 22 mm round holes with lug, Spacing 40 mm
- Installation holes: ø 5.1 mm and 6.5 mm alternating
- Material: Steel S 235 JR (similar ST37)
- Weight: approx. 1.5 kg/m
- Article No.: 612 002 000 – Steel, electro galvanised

*Original BISON® cargo control tracks are suitable for*
- Round shoring poles
- Rectangular locking bars
- Lashing straps
- Garment rails

*When carrying out installation, ensure that the nose-shaped cutouts ALWAYS point diagonally upwards, regardless of the actual position (horizontal or vertical) in which the cargo control tracks are attached.*

**Round-hole cargo control tracks - top-hat profile**

- Overall measurements: 80 x 11 x 3000 x 2 mm (B x H x L x S)
- Installation: Horizontal and/or vertical
- Anchoring holes: 20 mm round holes
- Spacing 35 mm
- Installation holes: ø 5.1 mm
- Material: Steel S 350 GD+Z 275 MA
- Weight: approx. 1.1 kg/m
- Article No.: 612 025 000 – Steel, sendzimir galvanised

**Roof cargo control tracks**

- Overall measurements: 68 x 14.3 x 3048 x 2 mm (B x H x L x S)
- Installation: Horizontal and/or vertical
- Anchoring holes: 25 mm round holes
- Installation holes: ø 5.0 mm
- Material: Steel S 235 JR+AR
- Weight: approx. 3.58 kg/m
- Article No.: 612 030 000 Steel, electro galvanised
Combination cargo control tracks - top-hat profile

Overall measurements: 80 x 7 x 3040/5760/6080 x 2 mm (BxHxLxS)
Installation: Horizontal and/or vertical
Anchoring holes: 22 mm round holes and double window for direct lashing of straps without end fittings. Spacing 80 mm
Installation holes: Ø 5 mm
Material: Steel 350 GD+Z 275 MA
Weight: approx. 1.65 kg/m
Article No.: 612 051 000 - Steel, sendzimir galvanised, 6080 mm
612 053 000 - Steel, sendzimir galvanised, 3040 mm

Combination cargo control tracks - top-hat profile

Overall measurements: 130 x 11.5 x 3005 x 2.5 mm (B x H x L x S)
Installation: Horizontal
Anchoring holes: Slots 12.6 x 61 mm and 20 mm round holes alternating, Spacing 60 mm
Installation holes: Ø 5.1 mm
Additional hole: Triangle every 120 mm notch allows condensation water to drain.
Material: Steel 350 GD+Z 275 MA
Weight: approx. 2.33 kg/m
Article No.: 612 055 000 - Steel, sendzimir galvanised
Combination cargo control tracks

Combination cargo control tracks - top-hat profile

Overall measurements: 130 x 11.5 x 3005 x 2.5 mm (B x H x L x S)
Installation: Horizontal
Anchoring holes: Slots 12.6 x 61 mm and 25 mm round holes alternating, spacing 60 mm
Installation holes: ø 5.1 mm
Additional hole: Triangle every 120 mm notch allows condensation water to drain.
Material: Steel S 350 GD+Z 275 MA
Weight: approx. 2.33 kg/m
Article No.: 612 058 000 - Steel, sendzimir galvanised

Combination cargo control tracks - top-hat profile

Overall measurements: 130 x 12 x 3000 x 3 mm (B x H x L x S)
Installation: Horizontal
Anchoring holes: Slots 14 x 61 mm and 20 mm round holes alternating, spacing 40 mm
Installation holes: ø 5.1 mm
Additional hole: Triangle every 120 mm notch allows condensation water to drain.
Material: Aluminium AlMgSi 0,5
Weight: approx. 1.0 kg/m
Article No.: 612 066 000 - Aluminium, anodised

Combination cargo control tracks - top-hat profile

Overall measurements: 130 x 11.5 x 3005 x 2.5 mm (B x H x L x S)
Installation: Horizontal
Anchoring holes: Slots 14 x 61 mm and 25 mm round holes alternating, spacing 40 mm
Installation holes: ø 5.1 mm
Additional hole: Triangle every 120 mm notch allows condensation water to drain.
Material: Stahl S 350 GD+Z 275 MA
Weight: approx. 2.33 kg/m
Article No.: 612 057 000 - Steel, sendzimir galvanised
Combination cargo control tracks

Combination cargo control tracks - top-hat profile

Overall measurements: 130 x 11.5 x 3005 x 2.5 mm
(B x H x L x S)

Installation: Horizontal

Anchoring holes: Slots 12.6 x 61 mm and 25 mm round holes alternating,
Spacing 50 mm

Installation holes: ø 5.1 mm

Additional hole: Triangle every 120 mm notch allows condensation water to drain.

Material: Steel S 350 GD+Z 275 MA

Weight: approx. 2.33 kg/m

Article No.: 612 061 000 - Steel, sendzimir galvanised

Plastic end-piece for size 130 cargo control tracks

Color: Light grey, RAL 7035

Article No.: 612 010 000
GETO® Rail recessed lashing rail

This recessed lashing rail for plywood or sandwich panels is a true all-rounder when it comes to load safety. The aluminium lashing rail lies flush with the wall of the vehicle’s body. The rail has no corners or edges, so nothing protrudes, thereby guaranteeing damage-free transport. And what’s more, the load can occupy the entire width of the vehicle. Multi-drop deliveries in an urban environment demand versatility. Combined transport involving different goods in various sizes requires a universal solution.

The GETO Rail lashing rail combines all the advantages of conventional slotted cargo control tracks and pans (locking strips), thereby allowing the use of a complete range of standard load-securing equipment.

The hole pattern of the recessed lashing rail has the following special features:
- 20 and 25 mm round holes
- Slotted (13 x 61 mm)
- Polygonal windows
- Connection between polygonal windows
GETO® Rail recessed lashing rail

For plywood panels
- Suitable for use as a binding strip
- Rail is bonded in place
- Round holes
- Slotted
- Polygonal windows
- Connection between polygonal windows

Length: 3000 mm
Width: 184 mm
Height: 14 mm
Strength: 250 daN
(Max. permissible tensile force (With a minimum lashing distance of 400mm), 250 mm in both directions, without subjecting straps to sudden strain)

Anchoring holes: 20 and 25 mm round holes
Slots: 13 x 61 mm
Material: Aluminium powder coated, RAL 7035 light gray
Weight: 5.49 kg
Article No.: 612 081 002

GETO® Rail recessed lashing rail

For sandwich panels, in offset configuration
- Rail is bonded in place
- Round holes
- Slotted
- Polygonal windows
- Connection between polygonal windows

Length: 3000 mm
Width: 184 mm
Height: 14 mm
Strength: 250 daN
(Max. permissible tensile force (With a minimum lashing distance of 400mm), 250 mm in both directions, without subjecting straps to sudden strain)

Anchoring holes: 20 and 25 mm round holes
Slots: 13 x 61 mm
Material: Aluminium powder coated, RAL 7035 light gray
Weight: 5.44 kg
Article No.: 612 082 002
Cargo control and transport systems / Cargo control elements / Cargo control tracks / BISON® Cityline cargo control tracks

BISON® Cityline cargo control tracks

BISON® Cityline

Cargo control tracks in high-strength steel BISON Cityline is a newly patented cargo control track designed for floor, wall or ceiling installation in box trucks and large vans. It comes with the same 20 mm hole pattern as the well-known BISON Airline cargo control track, repeated at 25 mm intervals and connected via a slot.

BISON® Cityline, made of special high-strength steel, offers the following advantages:

- The matching structural constituents of ferrite and martensite create a particularly attractive combination of features in terms of high strength, low yield-to-tensile ratio, good flexibility and suitability for welding, with high tensile strength (Rm) ≥ 1,000 MPa
- The higher modulus of elasticity (e-modulus) of steel (210 GPa/mm²) results in less deflection for a given cross-section and load in comparison to aluminium profiles (70 GPa/mm²)
- BISON Cityline cargo control tracks are also more resistant to wear than aluminium profiles. This is particularly useful when they are configured as floor rails for the sliding movement of items such as pallets.
- The outstanding material properties of BISON Cityline cargo control tracks make them stronger than their aluminium counterparts, although they weigh the same.
- BISON Cityline cargo control tracks are more suitable for bonding in position than aluminium rails. BISON Cityline cargo control tracks can also be welded.
- Suitable quantities of BISON Cityline cargo control tracks can likewise be supplied in different lengths (e.g. 13.6 m long)
- If load limits are ever exceeded, the damage to aluminium tracks tends to show up abruptly (sudden material failure). BISON Cityline tracks, which are made of steel, show the same signs gradually, in the form of bending and stretching, for example.

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BISON® Cityline cargo control tracks

BISON® Cityline cargo control tracks - top-hat profile

Length: 2997 mm
Width: 54 mm
Height: 10 mm
Wall thickness: 1.2 mm
Material: High-strength steel
Surface: Coil galvanized
Weight: 2.424 kg/each
Article No.: 612 098 000

BISON® Cityline cargo control tracks - rectangular profile

Length: 2997 mm
Width: 54 mm
Height: 10 mm
Wall thickness: 1.2 mm
Material: High-strength steel
Surface: Coil galvanized
Weight: 3.142 kg/each
Article No.: 612 099 000

BISON Cityline
BISON Cityline is suitable for welding, as well as screwing, riveting and bonding.
BISON® Airline cargo control tracks

Basic: The BISON® Airline cargo control tracks

- Available in semi-circular, rectangular and standard options
- High-strength aluminium alloy for safety
- Contemporary design
- 25 mm increments (measured between centres of holes) allow the track to be positioned close to the load
- The shape of the profile ensures trouble-free cleaning
- Standard length: 2998 mm
- Other lengths available on request
- Available with anodised finish
- Can be secured with screws, rivets or adhesive

Semi-circular BISON® Airline cargo control tracks

Semi-circular track profile

Dimensions: 42 x 3000 x 9.6 mm without fixing holes

Maximum permissible tensile force: 680 daN in straight line
Material: Aluminium, finish
Weight: 1.99 kg
Article No.: 612 095 000

Particularly suitable for installation on vehicle side-walls. No sharp edges. This ensures gentle handling when loading, unloading or securing the cargo. Packing materials remain free of damage.
BISON® Airline cargo control tracks

Standard BISON® Airline cargo control tracks

Track profile with fixing flanges on both sides

Dimensions: 54/30 x 3000 x 9.6 mm
without fixing holes
Material: Aluminium, finish
Weight: 2.3 kg
Article-No.: 612 091 000

The presence of a fixing flange on both sides makes this track particularly suitable for upright installation on a vehicle’s side-walls. The flange also provides for a smooth transition between recessed profiles.

Rectangular BISON® Airline cargo control tracks

Rectangular track profile

Dimensions: 34 x 3000 x 7.6 mm
without fixing holes
Maximum permissible tensile force: 360 daN in straight line
Material: Aluminium, finish - 612 093 100
Aluminium, anodised - 612 094 100
Weight: 1.29 kg
Article No.: 612 093 100 - Aluminium, finish
612 094 000 - Aluminium, anodised

The all-rounder of our Airline range of tracks. Ideal for use as a recessed lashing rail. Its slimline design likewise makes it ideal for fixing to stanchions and near to dropside sections.
BISON® Airline cargo control tracks

**BISON® Airline cargo control tracks**

Lateral profile with flange on one side, designed as lower-belt/floor surface joining profile

**Dimensions:**
- 75/50 x 3000 x 21 mm
- Floor recess 18 mm
- without fixing holes

**Maximum permissible tensile force:** 800 daN (Floor installation)

**Material:** Aluminium, finish

**Weight:** 3.54 kg

**Article No.:** 612 096 000

---

**BISON® Airline cargo control tracks**

Centre profile with flange on both side for customised use

**Dimensions:**
- 90 x 3000 x 21 mm
- Floor recess 18 mm
- without fixing holes

**Maximum permissible tensile force:** 800 daN (Floor installation)

**Material:** Aluminium, finish

**Weight:** 3.54 kg/each

**Article No.:** 612 097 000
Accessories for BISON® Airline cargo control tracks

The connectors: BISON® Airline studs

These connectors allow cargo control items such as load-securing nets to be fastened to our Airline tracks. The ring in the stud can also be used for attaching items such as the claw hooks employed to secure lashing straps and nets. And best of all, the studs can be positioned anywhere along the length of the Airline track and locked in place at 25 mm intervals. This locking function is automatic.

Single stud

With ring, ø 5 mm, inside diameter of ring 29.5 mm

Maximum permissible tensile force: 400 daN
Weight: 0.05 kg/each
Article No.: 612 400 000

Double stud

Without ring

Maximum permissible tensile force: 800 daN
Weight: 0.11 kg/each
Article No.: 612 401 000

Double stud

With ring, ø 7 mm, inside diameter of ring 44 mm

Maximum permissible tensile force: 800 daN
Weight: 0.16 kg/each
Article No.: 612 402 000

Quattro stud

Foldable

Maximum permissible tensile force: 2000 daN
Weight: 0.38 kg/each
Article No.: 612 403 000
Universal bolt lashing strip

Universal bolt lashing strip, Aluminium
Open on both sides, the bar is fixed by a notch. 40 Bars on 5000 mm length.

**Installation:** Horizontal  
**Material:** AlMgSi 0.5 F 22, mill finish  
**Weight:** approx. 0.96 kg/m  
**Article No.:** 612 212 000

Universal bolt lashing strip, steel
Open on both sides, weld in bar, 23 Bars on 3000 mm length.

**Installation:** Horizontal  
**Material:** Profile sheet steel, compressed, hot galvanised  
Bolt fully steel, hot galvanised  
**Weight:** approx. 3.07 kg/m  
**Article No.:** 612 202 000

Bolt lashing strip, aluminium
For horizontal attachment to the side wall, supplied with rubber edge protectors and two push-in end-pieces made of plastic.

**Material:** Aluminium  
**Length:** 6000 mm  
**Weight:** approx. 0.83 kg/m  
**Article No.:** 612 223 000
Bolt lashing strip for GETO Van® and GETO® City

Cargo control pans for GETO Van and GETO City body kits, recess lengths matched to GETO Van / GETO City pillar layouts

Material: Steel, galvanised

<table>
<thead>
<tr>
<th>B [mm]</th>
<th>Number of studs [each]</th>
<th>L-recess [mm]</th>
<th>L-strip [mm]</th>
<th>Weight approx. [kg/each]</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>5</td>
<td>476</td>
<td>680</td>
<td>1.56</td>
<td>612 296 100</td>
</tr>
</tbody>
</table>

Note: Z = 4 holes, ø 12 mm, for customs inspection of wall cavities

Suitable for: Round shoring poles page 61.05.02. Lashing straps page 61.11.
Bolt lashing strip for GETO Van® and GETO® City

Material: Steel, galvanised

<table>
<thead>
<tr>
<th>Cargo control pans, l.h./r.h. side wall compensation at front</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>B [mm]</td>
<td>Number of studs [each]</td>
<td>L-recess [mm]</td>
<td>L-strip [mm]</td>
<td>Weight approx. [kg/each]</td>
</tr>
<tr>
<td>400</td>
<td>5</td>
<td>476</td>
<td>585</td>
<td>1.42</td>
</tr>
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</table>

Note: Z = 4 holes, ø 12 mm, for customs inspection of wall cavities

Suitable for: Round shoring poles Lashing straps page 61.05.02. page 61.11.
Bolt lashing strip for GETO Van® and GETO® City

Cargo control pans for GETO Van and GETO City body kits, recess lengths matched to GETO Van / GETO City pillar layouts

Material: Steel, galvanised

<table>
<thead>
<tr>
<th>Cargo control pan compensation, offset</th>
<th>B [mm]</th>
<th>Number of studs [each]</th>
<th>L-recess [mm]</th>
<th>L-strip [mm]</th>
<th>Y Compensation flange [mm]</th>
<th>Weight approx. [kg/each]</th>
<th>Article No.</th>
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</thead>
<tbody>
<tr>
<td>100</td>
<td>2</td>
<td>176</td>
<td>410</td>
<td>124</td>
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<tr>
<td>200</td>
<td>3</td>
<td>276</td>
<td>552</td>
<td>166</td>
<td>1.14</td>
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<tr>
<td>300</td>
<td>4</td>
<td>376</td>
<td>610</td>
<td>124</td>
<td>1.34</td>
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<td>400</td>
<td>5</td>
<td>476</td>
<td>710</td>
<td>124</td>
<td>1.60</td>
<td>612 298 140</td>
<td></td>
</tr>
</tbody>
</table>

Note:
Z = 4 holes, ø 12 mm, for customs inspection of wall cavities
Cargo control pans with 2 and 3 studs have only 2 holes (ø 12 mm) for customs inspection

Suitable for:
Round shoring poles page 61.05.02.
Lashing straps page 61.11.
Cargo control pans

BISON® 500 cargo control pan

Compact design: Installation depth only 16 mm (including recessed edge), max. diameter of just 75 mm. Circular design for extremely easy installation. Hook attachment rotates through 360°; ideal for attachment of lashing straps.

Installation type: Recessed installation

Maximum permissible tensile force: Tested in accordance with DIN EN 12640: 500 daN

Material: Steel, with hardened and tempered load-bearing components
Corrosion-protected finish

Weight: approx. 0.18 kg/unit

Suitable for: Lashing straps page 61.11.

Article No.: 612 375 000
Cargo control pans

Cargo control pans with return spring

Installation: Sunken mounting
Maximum permissible tensile force: Tested in accordance with DIN EN 12640: 800 daN
Material: Steel, electro galvanised
Weight: approx. 0.455 kg/each
Suitable for: Lashing straps page 61.11.
Article No.: 612 350 000

Cargo control pans, compleet

Installation: Sunken mounting
Maximum permissible tensile force: Tested in accordance with DIN EN 12640: 1500 daN
Material: Steel, electro galvanised
Weight: approx. 0.435 kg/each
Spare parts: Ring, Article No. 612 312 000
Strap, Article No. 612 302 000
Indent, Article No. 612 322 000
Suitable for: Lashing straps page 61.11.
Article No.: 612 352 000

Cargo control ring with strap

Installation: Surface mounting
Maximum permissible tensile force: Tested in accordance with DIN EN 12640: 1500 daN
Material: Steel, electro galvanised
Weight: approx. 0.185 kg/each
Spare parts: Ring, Article No. 612 312 000
Strap, Article No. 612 302 000
Suitable for: Lashing straps page 61.11.
Article No.: 612 342 000
Cargo control pans

**BISON® 2000+ cargo control pan**

Compact design. Installation depth only 21 mm (including recessed edge), max. diameter 86 mm. Circular design for extremely easy installation. Hook attachment rotates through 360°. Ideal for use with lashing straps.

- **Maximum permissible tensile force:** Tested in accordance with DIN EN 12640: 2000 daN
- **Material:** Steel, Delta Seal and Delta Protect passivated
- **Weight:** approx. 0.4 kg/each
- **Suitable for:** Lashing straps page 61.11.
- **Article No.:** 612 372 001

---

**TIPP**

Our BISON 2000+ cargo control pan, which conforms to DIN EN 12 640, can withstand loads of up to 2000 daN. The vehicle manufacturer is responsible for proper attachment to the load-bearing components of the vehicle concerned.
Cargo control pans

Cargo control pan 2000

Installation: Welded sunken mounting
Maximum permissible tensile force: 2000 daN
Material: Steel, raw
Weight: approx. 0.865 kg/each
Suitable for: Lashing straps page 61.11
Article No.: 612 382 000

Drob-Down cargo control ring narrow

Installation: Welded sunken mounting
Maximum permissible tensile force: 2000 daN
Material: Steel, raw
Weight: approx. 0.565 kg/each
Suitable for: Lashing straps page 61.11.
Article No.: 612 366 000
Cargo control lashing bars

**Lashing bar with fixing plate**

With 2 x M 12 lock nuts

**Maximum permissible tensile force:** Tested in accordance with DIN EN 12640:
- 2000 daN

**Material:** Steel, galvanised

**Weight:** 0.3 kg/each

**Article No.:** 218 530 000

---

**Lashing shackle**

For side rave profiles 218 528 750 / 218 525 750 and for GETO Sider Frame base assemblies.

**Advantages:** The lateral handles allow the lashing bar to be lifted out of the side rave profile even under difficult circumstances.

**Maximum permissible tensile force:** Tested in accordance with DIN EN 12640:
- 2500 daN, including certificate for use in conjunction with GETO Sider Frame base assembly

**Material:** Steel, galvanised

**Weight:** 0.272 kg

**Article No.:** 218 533 000

---

**Note:**

Only lashing bar configurations supplied by us as article numbers 218 530 000 and 218 533 000 may be used in conjunction with the envisaged side rave profiles with article numbers 218 528 000/218 525 000.
Cargo control lashing bars

Drob-Down cargo control ring  3000

(Mating part to 612 362 000)

Installation: With strap-ring recess
Maximum permissible tensile force: Tested in accordance with DIN EN 12640: 3000 daN
Material: Steel, raw
Weight: approx. 0.345 kg/each
Suitable for: Lashing straps page 61.11.
Article No.: 612 360 000

Cargo control ring pocket

(Mating part to 612 360 000)

Installation: Welded sunken mounting
Maximum permissible tensile force: Tested in accordance with DIN EN 12640: 3000 daN
Material: Steel, raw
Weight: approx. 0.195 kg/each
Article No.: 612 362 000

Mounting instructions

Cut out a hole into the rave section (see drawing) and push the pocket (Article No. 612 362 000) together with the ring (Article No. 612 360 000) from below, into the opening (the lugs of the lashing hook must face down and the curve of the lashing eye must face down). Furthermore, the lashing eye pocket must be sufficiently welded to the rave, as well as to the hole at the top.
Cargo control lashing bars

Drob-Down cargo control ring 3000

Installation: Welded sunken mounting

Maximum permissible tensile force: Tested in accordance with DIN EN 12640: 3000 daN

Material: Steel, primed

Weight: approx. 1.25 kg/each

Suitable for: Lashing straps page 61.11

Article No.: 612 354 000

All technical specifications contained in this brochure are approximate and no guarantee is given as to their accuracy. Designs are subject to change.
Decals

Decals for maximum permitted lashing point loads

In compliance with DIN EN 12640
White text on a blue background, self-adhesive

Height: 150 mm
Width: 200 mm

Article No.: 612 392 000 -
Permitted load 800 daN

Article No.: 612 394 000 -
Permitted load 1000 daN

Article No.: 612 396 000 -
Permitted load 2000 daN

Article No.: 612 398 000 -
Permitted load 2500 daN
Keyhole panels

Aluminium keyhole sheet for GETO Van® body kits (symetrical)

Material: Aluminium, anodised

<table>
<thead>
<tr>
<th>Article No.</th>
<th>Width B [mm]</th>
<th>Width B1 [mm]</th>
<th>Number of the vertical rows of perforations</th>
<th>Height H [mm]</th>
<th>Height H1 [mm]</th>
<th>Height H2 [mm]</th>
<th>Number of the horizontal rows of perforations</th>
<th>Weight approx. [kg/each]</th>
</tr>
</thead>
<tbody>
<tr>
<td>611 263 242</td>
<td>1200</td>
<td>1140</td>
<td>20</td>
<td>2420</td>
<td>343</td>
<td>2000</td>
<td>25</td>
<td>17.1</td>
</tr>
<tr>
<td>611 263 282</td>
<td>2820</td>
<td>263</td>
<td>29</td>
<td>3120</td>
<td>643</td>
<td>2400</td>
<td>31</td>
<td>19.9</td>
</tr>
<tr>
<td>611 263 312</td>
<td>3120</td>
<td>643</td>
<td>31</td>
<td>3120</td>
<td>643</td>
<td>2400</td>
<td>31</td>
<td>22.2</td>
</tr>
</tbody>
</table>
Keyhole panels

Aluminium keyhole sheet for GETO Van® body kits (with flange for attachment at front right and back left)

Material: Aluminium, anodised

<table>
<thead>
<tr>
<th>B</th>
<th>B1</th>
<th>Number of the vertical rows of perforations</th>
<th>H</th>
<th>H1</th>
<th>H2</th>
<th>Number of the horizontal rows of perforations</th>
<th>Weight approx. [kg/each]</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1250</td>
<td>1080</td>
<td>19</td>
<td>2420</td>
<td>343</td>
<td>2000</td>
<td>26</td>
<td>18.0</td>
<td>611 261 242</td>
</tr>
<tr>
<td>2820</td>
<td>2420</td>
<td>2820</td>
<td>423</td>
<td>2320</td>
<td>30</td>
<td>21.0</td>
<td>611 261 282</td>
<td></td>
</tr>
</tbody>
</table>

All technical specifications contained in this brochure are approximate and no guarantee is given as to their accuracy. Designs are subject to change.
Keyhole panels

Aluminium keyhole sheet for GETO Van® body kits (with flange for attachment at front left and back right)

Material: Aluminium, anodised

<table>
<thead>
<tr>
<th>B</th>
<th>B1</th>
<th>Number of the vertical rows of perforations</th>
<th>H</th>
<th>H1</th>
<th>H2</th>
<th>Number of the horizontal rows of perforations</th>
<th>Weight approx. [kg/each]</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1250</td>
<td>1080</td>
<td>19</td>
<td>2420</td>
<td>343</td>
<td>2000</td>
<td>26</td>
<td>18.0</td>
<td>611 262 242</td>
</tr>
<tr>
<td>2820</td>
<td>423</td>
<td>30</td>
<td>2320</td>
<td></td>
<td></td>
<td>30</td>
<td>21.0</td>
<td>611 262 282</td>
</tr>
</tbody>
</table>
Keyhole strip

Keyhole strip horizontal

- For horizontal mounting
- Flat 3 mm thick.
- Punching according to the current types of clothes transport bars

**Material:** Steel, thin sheet DIN 1541, continuously galvanised

**Weight:** approx. 1.67 kg/m

**Suitable for:** Clothes transport bars page 61.12.01.5 and 61.12.01.6

**Article No.:** 612 132 000
### Round shoring poles

For cargo control tracks with round holes

- For cargo control tracks with round holes (ø 20, 22, 25 mm)
- One-piece, with telescopic spring at one end; end-pieces pressed at both ends

**Made to measure:** Supplied ready-cut to size

**Surface finish:** All steel components are electrolytically galvanised

**Mill-finish aluminium components**

**Blocking capacity (BC):** All shoring poles remain free of permanent deformity up to an evenly distributed load of:

- 450 daN, for shoring poles ø 45 mm
- 500 daN (with certificate)

**Suitable cargo control tracks:**

- With round holes page 61.01.
- BISON Airline cargo control tracks page 61.01.05.

(Shoring pole for round hole ø 20 mm)

---

### Round shoring poles for cargo control tracks with round holes ø 20, 22, 25 mm

<table>
<thead>
<tr>
<th>For round hole ø</th>
<th>Dimensions</th>
<th>Material</th>
<th>Endpieces</th>
<th>Weight approx.</th>
<th>Article No. Standard clearance between lashing elements 2410 - 2510</th>
<th>Customised dimensions</th>
<th>One-sided, assembled: 1 x end-piece in separate pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>35</td>
<td>35 x 2.25</td>
<td>Support Tube</td>
<td>C-35</td>
<td>St-52</td>
<td>Kon.</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>35 x 2.25</td>
<td>Support Tube</td>
<td>C-35</td>
<td>St-52</td>
<td>Zyl.</td>
<td>5.1</td>
</tr>
<tr>
<td>22</td>
<td>35</td>
<td>35 x 2.25</td>
<td>Support Tube</td>
<td>C-35</td>
<td>St-52</td>
<td>Kon.</td>
<td>5.1</td>
</tr>
<tr>
<td>25</td>
<td>35</td>
<td>35 x 2.25</td>
<td>Support Tube</td>
<td>C-35</td>
<td>St-52</td>
<td>Zyl.</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>35 x 2.25</td>
<td>Support Tube</td>
<td>C-35</td>
<td>St-52</td>
<td>Kon.</td>
<td>5.1</td>
</tr>
</tbody>
</table>

**Markings**

BISON shoring poles can be supplied marked with customer-specific details such as a company name or logo. This permits the fast, trouble-free sorting of these items while cargoes are being handled, without any risk of confusion.
## Round shoring poles

### For bolt lashing strip

- One-piece, with telescopic spring at one end
- End-pieces pressed at both ends

### Made to measure:
- Supplied ready-made to size

### Surface characteristic:
- All steel components are galvanised

### Blocking capacity (BC):
- Free of permanent deformity up to an evenly distributed load of 500 daN (with certificate)

### Suitable for:
- Bolt lashing strip page 61.02.01 and 61.02.02

## Round shoring poles for bolt lashing strip

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Material</th>
<th>Endpieces</th>
<th>Weight approx.</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube ø</td>
<td>Support tube</td>
<td>Telescopic tube</td>
<td>Support tube</td>
<td>Telescopic tube</td>
</tr>
<tr>
<td>[mm]</td>
<td>[mm]</td>
<td>[mm]</td>
<td>[mm]</td>
<td>[mm]</td>
</tr>
<tr>
<td>35</td>
<td>35 x 2.25</td>
<td>30 x 2</td>
<td>C-35</td>
<td>St-52</td>
</tr>
</tbody>
</table>
Round alu-shoring pole, adjustable

For bolt lashing strip and cargo control tracks with round holes ø 20, 25 mm

- One-piece, with telescopic spring at one end
- End-pieces pressed at both ends

Made to measure: Supplied ready-made to size
Surface characteristic: All steel components are galvanised
Aluminium components are anodized

Blocking capacity (BC):
- 200 daN with concentrated load at centre (with certificate)
- 400 daN with load applied along length (with certificate)

Suitable for:
- Cargo control tracks with round holes ø 20 and 25 mm
  page 61.01.01.1 to 61.01.03.2
- Bolt lashing strip page 61.02.01 and 61.02.02

---

Round alu-shoring poles for bolt lashing strip and cargo control tracks with round holes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube ø</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>[mm]</td>
<td>42</td>
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<td>Al</td>
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<tr>
<td>Support</td>
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<tr>
<td>tube</td>
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<td></td>
<td>Al</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telescopic</td>
<td></td>
<td></td>
<td>Stahl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tube</td>
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<td>Support</td>
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<tr>
<td>tube</td>
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<td></td>
</tr>
<tr>
<td>Telescopic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard clearance between lashing elements 2385 – 2760 [mm]

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BISON® rectangular locking bars

For cargo control tracks with slots or round holes ø 22 mm

- One-piece, with non-sprung telescoping sections, both ends
- End-pieces assembled at both ends

Made to measure: Supplied ready-made to size
Surface characteristic: All steel components are galvanised
Aluminium components are mill finish
Blocking capacity (BC):
- 700 daN with concentrated load at centre with certificate
- 1250 daN with evenly distributed load applied along length (with certificate)

Suitable cargo control tracks:
- Slotted page 61.01.02.
- With 22 mm round holes at 40 mm intervals (BISON) page 61.01.01.

### Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Material</th>
<th>Weight approx.</th>
<th>Article No.</th>
<th>Standard clearance between lashing elements</th>
<th>Standard clearance between lashing elements</th>
<th>Customised dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support tube,</td>
<td></td>
<td></td>
<td></td>
<td>2410 - 2460</td>
<td>2460 - 2510</td>
<td></td>
</tr>
<tr>
<td>[mm]</td>
<td>[mm]</td>
<td>[kg/each]</td>
<td></td>
<td>[mm]</td>
<td>[mm]</td>
<td>[mm]</td>
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<tr>
<td>60 x 60 x 4.0</td>
<td>613 223 000</td>
<td>7.8</td>
<td></td>
<td></td>
<td></td>
<td>613 243 000</td>
</tr>
</tbody>
</table>

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Cargo control and transport systems / Shoring poles/locking bars / Round shoring poles / For slotted cargo control tracks
BISON® rectangular locking bars

For cargo control tracks with slots or round holes ø 22 mm

– One-piece, with telescopic spring at one end
– End-pieces assembled at both ends

Made to measure: Supplied ready-made to size
Surface characteristic: All steel components are galvanised
Aluminium components are mill finish

Blocking capacity (BC): 1000 daN (evenly distributed load)
Suitable cargo control tracks:

– Slotted page 61.01.02.
– With 22 mm round holes at 40 mm intervals (BISON) page 61.01.01.

BISON® rectangular locking bars for cargo control tracks with slots or round holes ø 22 mm

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Material</th>
<th>Weight approx.</th>
<th>Article No., two-sided, assembled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support tube</td>
<td>Telescopic tube</td>
<td>Support tube, rectangular</td>
<td>Telescopic tube</td>
</tr>
<tr>
<td>[mm]</td>
<td>[mm]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 x 60 x 4</td>
<td>38 x 4</td>
<td>F-31 (Al)</td>
<td>Steel</td>
</tr>
</tbody>
</table>
BISON® rectangular locking bars

For slotted rails

**Length:** 2403 – 2560 mm

**Characteristics:**
- Telescopic section at one end
- Non-sprung

**Surface characteristic:** Main tube: aluminium
End pieces: galvanised steel

**Blocking capacity (BC):** 1000 daN (evenly distributed load, with certificate)

**Suitable cargo control tracks:** Combination cargo control tracks page 61.01.02.
GETO® Rail
BISON® SafeSide

TÜV-certified

### Rectangular locking bars for slotted cargo control tracks

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Material</th>
<th>Weight approx.</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main tube</td>
<td>Telscopic section</td>
<td>Al</td>
<td>613 250 000</td>
</tr>
<tr>
<td>[mm]</td>
<td>[mm]</td>
<td>[kg/each]</td>
<td></td>
</tr>
<tr>
<td>92 x 68</td>
<td>83.5 x 60</td>
<td>6.74</td>
<td></td>
</tr>
</tbody>
</table>

### Rectangular locking bars for slotted rails

**Length:** 2310 – 2590 mm

**Characteristics:**
- Telescopic sections at both ends (measuring 150 mm at each end)
- Non-sprung

**Surface characteristic:** All steel components are galvanised
Aluminium components are mill finish

**Blocking capacity (BC):** 750 daN with concentrated load at centre (with certificate) 1000 daN with load applied along length (with certificate)

**Suitable cargo control tracks:** Combination cargo control tracks page 61.01.02.

### Rectangular locking bars for cargo control tracks with slots

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Material</th>
<th>Weight approx.</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main tube</td>
<td>Telscopic section</td>
<td>Al</td>
<td>613 220 000</td>
</tr>
<tr>
<td>[mm]</td>
<td>[mm]</td>
<td>[kg/each]</td>
<td></td>
</tr>
<tr>
<td>82 x 67</td>
<td>Double-T</td>
<td>8.95</td>
<td></td>
</tr>
</tbody>
</table>
Vertical shoring pole

**BISON® Atlas vertical shoring pole**

- For the ceiling-to-floor segregation of loads in box bodies

**Characteristics:**

- Quick, step-free adjustment
- Length between 2000 and 2700 mm
- A braking device retains the adjustment setting of the telescopic tube
- Outer tube ø: 45 mm
- Compensation spring at the foot of the pole prevents overloading. Max. 160 daN contact pressure (without damaging the roof insulation of the box body)
- Secured close to the load by small round plates in the floor area
- The size of the pressure plates minimises strain on the roof structure
- Can also be fitted at an angle! Up to 15°, without any loss of contact pressure
- Pressure plates are fitted with an anti-slip material to prevent friction wear
- Modular design (plate size can be varied)
- Can also be supplied with bolts for flush locking purposes
- Ergonomic design for better health and safety

**Blocking capacity (BC):** 140 daN (certified)

Special sizes and configurations available on request

**Material:**
Steel tubes St 52, electro galvanised
Stainless steel tubes 1.4301 (V2A)

**Configuration as vertical shoring pole with**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Steel, galvanised</td>
</tr>
<tr>
<td>1 x large rubber buffer at top; 1 x small rubber buffer at bottom</td>
<td>613 413 000&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>1 x steel bolt, 19.6 mm, at top, 1 x large rubber buffer at bottom</td>
<td>613 417 000</td>
</tr>
<tr>
<td>1 x steel bolt, 19.6 mm, at top, 1 x steel bolt, 19.6 mm, at bottom</td>
<td>613 414 000</td>
</tr>
</tbody>
</table>

<sup>1</sup> Blocking capacity (BC): 140 daN with concentrated load at centre or applied along length (with certificate)

Accessories see page 61.13.01.2
Frames for vertical shoring pole

Standard frames 600 mm x 1200 mm (W x H)

- For a vertical clamping rail

Comprising:
- 3 through horizontal frame stretchers
- 2 through vertical frame stretchers
- 4 tube elbows (corners)
- 2 tee pieces (centre piece)
- 2 tube clip
- 1 tube clip with nut and bolt.

Material:
- Tubes – Aluminium anodised
- Connectors – Plastic

Weight: approx. 1.65 kg/each

Article No.: 613 430 000

Other sizes and versions are available on request (e.g. frames/nets for 2 clamping barrier bars, see illustration).
Spreader bar SmartBar

For flexible and rigid walls

- Simple operation: Push-button for simple extension and retraction of the telescope
- Telescope can be locked in place by hand lever (with plastic coating)
- Long range due to telescope

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holding force</td>
<td>bis zu 138 daN</td>
</tr>
<tr>
<td>Range</td>
<td>1220 – 2740 mm</td>
</tr>
<tr>
<td>Main tube</td>
<td>44 mm</td>
</tr>
<tr>
<td>End piece</td>
<td>Rubber</td>
</tr>
<tr>
<td>Material</td>
<td>Steel</td>
</tr>
<tr>
<td>Surface</td>
<td>Galvanized</td>
</tr>
<tr>
<td>Weight</td>
<td>7 kg</td>
</tr>
<tr>
<td>Article No.</td>
<td>02 440 00 2740</td>
</tr>
</tbody>
</table>

All technical specifications contained in this brochure are approximate and no guarantee is given as to their accuracy. Designs are subject to change.
Dropside locking bars

**INTERWALL dropside locking bars**

- Supplied pre-cut
- Shoring pole with fast, non-stepped adjustment for securing loads between one dropside and the other or for partitioning the load area into different zones
- Special sizes available on request
- Al-profiles in silver-coloured anodised finish available on request

**Adjustment range:** 2400 – 2700 mm

**Blocking capacity (BC):**
- 200 daN with concentrated load at centre (with certificate)
- 220 daN with load applied along length (with certificate)
- 400 daN with load applied along length, in conjunction with RHM\(^1\) (with certificate)

**Material:**
- Aluminium mill-finish profiles
- Galvanised steel latch

**Weight:** 7.5 kg

**Spare part:** Protective rubber cap

**Article No.:** 613 491 000

\(^1\) RHM = slip-resistant material
Dropside locking bars

Individual clamp lock components

- For the production of dropside locking bars for bodywork systems, or as spare parts for existing dropside locking bars Article No. 613 491 000.
- Setting range of the clamp for dropside thicknesses of 25 – 35 mm, adjusted by pre-tensioning the spring.

Material:  
- Steel, drop-forged and galvanised
- Plastic-covered clamp

Weight:  2.8 kg/unit

Spare part:  Protective rubber cap

Article No.:  613 495 000

Dropside locking bars

- Telescopic sections at both ends
- For dropsides 20 – 40 mm thick

Length:  1896 – 2910 mm

Blocking capacity (BC):  
- 100 daN with concentrated load at centre (with certificate)
- 100 daN with load applied along length (with certificate)
- 200 daN with load applied along length, in conjunction with RHM1 (with certificate)

Material:  
- Steel S 235 JR + AR

Weight:  7.16 kg/each

Article No.:  613 493 000

1 RHM = slip-resistant material
BISON® SafeSide cargo control system

BISON® SafeSide – the fast and reliable cargo control system designed for use with curtainsiders (complies with the requirements of DIN EN 12 642 Code XL when used with lateral curtainsiders)

- BISON SafeSide provides flush-fitted cargo control both in the direction of travel and crosswise to it.
- BISON SafeSide cargo control battens can be used with a choice of round shoring poles, rectangular locking bars, lashing straps or even garment rails. Can be combined with standard cargo-control components.
- The BISON SafeSide system forms segregated loading compartments for the purposes of flush-fitting cargo control.
- The BISON SafeSide system lets you eliminate virtually all wasted loading space.
- BISON SafeSide lets you secure items (such as awkwardly shaped objects) which would normally be difficult, or even impossible, to tie down with lashing straps.
- The cargo control battens are made of steel or aluminium.
- The locking bars are made of aluminium.

Safety

All our cargo control battens have successfully undergone TÜV testing. The system’s strength performance is thus officially proven as part of the overall certification of TITGEMEYER GETO Sider curtainsider installations.

Cargo control items

All cargo control battens and locking bars are supplied with hole-combinations consisting of

- One 14 x 61 mm slot
- With integrated 25 mm and 20 mm round hole

These dimensions are identical to those of the familiar cargo control items used with box bodies:

- Combination cargo control tracks
- Round shoring poles
- Rectangular locking bars
- Lashing straps (inner lashing) e.g. with slotted track attachment

What this means for you: You can use standard cargo control items with the BiSON® SafeSide range.
### BISON® SafeSide cargo control system

#### Cargo control battens

BISON SafeSide cargo control battens are inserted into the batten recesses on the pillars to offer an optimised anchoring-point for the required cargo-control elements. The cargo control battens can be used with a choice of round shoring poles, rectangular locking bars, lashing straps or even garment rails.

BISON® SafeSide cargo control battens in lengths of up to 3567 mm fulfil the requirements of DIN EN 12642 Code XL.  

#### Technical specifications Cargo control battens

<table>
<thead>
<tr>
<th>Component type</th>
<th>Length [mm]</th>
<th>Material</th>
<th>Diameter [mm]</th>
<th>Surface</th>
<th>Weight approx. [kg/each]</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cargo control batten</td>
<td>3200</td>
<td>Aluminium</td>
<td>165 x 25</td>
<td>mill finish</td>
<td>6.5</td>
<td>613 765 320</td>
</tr>
<tr>
<td></td>
<td>3567</td>
<td>Steel</td>
<td>142 x 25</td>
<td>electro galvanised</td>
<td>14.4</td>
<td>613 760 357</td>
</tr>
<tr>
<td></td>
<td>3567</td>
<td>Aluminium</td>
<td>165 x 25</td>
<td>mill finish</td>
<td>7.4</td>
<td>613 765 357</td>
</tr>
<tr>
<td></td>
<td>4000</td>
<td>Aluminium</td>
<td>165 x 25</td>
<td>mill finish</td>
<td>9.2</td>
<td>613 765 450</td>
</tr>
<tr>
<td>Customised &gt;3567</td>
<td>Aluminium</td>
<td>165 x 25</td>
<td>mill finish</td>
<td>-</td>
<td>613 765 001</td>
<td></td>
</tr>
<tr>
<td>Customised</td>
<td>Aluminium</td>
<td>168 x 25</td>
<td>mill finish</td>
<td>-</td>
<td>613 765 002</td>
<td></td>
</tr>
</tbody>
</table>

#### Locking bars

The above-mentioned cargo control battens are compatible for use with BISON SafeSide locking bars, inserted cross-wise to the direction of travel for flush-fitting cargo control. They can be installed in front of the load (as an artificial bulkhead), or for securing the cargo at the back. And what’s more: These locking bars can also be used in box bodies. They can furthermore be complemented with additional bars installed lengthwise to the direction of travel in order to form segregated loading units / sections. This allows you to secure the load tightly and eliminate wasted space, while also letting you secure items that cannot be tied down with lashing straps, such as Big Bags, bales of peat or sacks of cement, etc.

#### Technical specifications Locking bars

<table>
<thead>
<tr>
<th>Component type</th>
<th>Length [mm]</th>
<th>Material</th>
<th>Diameter [mm]</th>
<th>Surface</th>
<th>Weight approx. [kg/each]</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locking bars</td>
<td>2462 – 2519</td>
<td>Aluminium</td>
<td>165 x 25</td>
<td>mill finish</td>
<td>7.4</td>
<td>613 715 000</td>
</tr>
</tbody>
</table>

Strength rating in accordance with DIN EN 12640: up to 1250 daN per locking bar in conjunction with BISON SafeSide cargo control battens. Our cargo control battens and locking bars can be supplied in different lengths. We can also supply our cargo control battens and locking bars in customised sizes (subject to minimum-order quantities).
BISON® SafeSide cargo control system

Connection piece for individual lengths

– Dovetailed steel connection piece for fastening steel cargo control battens.
– Set includes a pack of rivets for the secure fastening of cargo control battens.

Wall thickness: 2.5 mm
Material: S235JRG2, electrolytically galvanised / blue chromated
Weight: 1.128 kg
Article No.: 613 750 000

BISON® SafeSide Bar

Our SafeSide Bar shoring pole has been specially designed for use with the BISON SafeSide range. It is fitted with a tension spring and round pin for use with either cargo control battens or locking bars. The tension spring guarantees pressure-free insertion in the cargo control battens, as it pulls on (rather than pushing against) the batten.

Strength: 500 daN (BC=400daN)
Length: 2425 – 2525 mm

Technical specifications Shoring pole

<table>
<thead>
<tr>
<th>Component type</th>
<th>Length [mm]</th>
<th>Surface</th>
<th>Material</th>
<th>Weight approx. [kg/each]</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoring pole</td>
<td>2425 – 2525</td>
<td>electrolytically galvanised</td>
<td>Steel</td>
<td>5.3</td>
<td>613 720 000</td>
</tr>
</tbody>
</table>
BISON® SafeSide cargo control system

DIN EN 12 642 Code XL assumes the flush-fitting loading of the vehicle, although this is not always the case. The dimensions of the items loaded and the internal width of the body might be such, for example, that flush loading can no longer be guaranteed. The weight of the loading units (Europallets designed to carry 1.2 t) and the requirements of the load distribution plan (VDI 2700 sheet 4) might also make it impossible to fit the load exactly into the space between the front bulkhead and tailgate.

BISON SafeSide lets you create segregated loading compartments and sections. These are just a few of the countless possibilities. BISON SafeSide cargo control battens, in green BISON SafeSide locking bars, in red
Anti-slip mats

- Designed to provide an anti-slip base or intermediate layer
- Anti-slip mats increase the coefficient of friction between the items in the load, thereby reducing the required clamping force of the lashing elements used to secure them. They are ideal for securing rolls of paper, material supplied in coils, concrete components, tubes and pipes, barrels, print rollers or hazardous goods.
- Designed for use in accordance with VDI 2700.
- Min. tensile strength 0.6 newton/mm²; min. elongation at break 60%.
- Anti-slip mats are supplied in 5000 mm rolls.
- We can also supply smaller mats (e.g. 300 x 200 mm) in material thicknesses of 3 -10 mm on request.
- Other configurations (e.g. acid/alkaline/oil-resistant, or with higher sliding friction coefficients) are available on request.

**Sliding friction**
- **coefficient:** 0.6 µ
- **Material:** fine-pore polyurethane rubber
- **Color:** black

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5000</td>
<td>250</td>
<td>8</td>
<td>7.5</td>
<td>615 010 000</td>
</tr>
</tbody>
</table>
| 500         | 8          | 15             | 615 015 000              | 8

All technical specifications contained in this brochure are approximate and no guarantee is given as to their accuracy. Designs are subject to change.
BISON® System 550

BISON® System 550 EN 12195-2

Tensile force rating LC 250 daN

Lashing strap for securing low to medium weight loads in the interior of the vehicle body:
- Supplied as two-part lashing strap with Plyfix hook

Clamping buckle with automatic catch operated by pre-tensioned spring in the clamping plate. Open side of hook faces top side of strap.

Material: Lashing strap in 100% polyester, Die-cast zinc alloy clamping buckle

Strap width: 25 mm

Length: 5.0 m, other lengths on request

Length of fixed end LFE: 1.0 m

Colour: red

Suitable lashing elements: Article No. 615 245 000,
For pin-type cargo control pan

<table>
<thead>
<tr>
<th>Strap designation</th>
<th>Article No. Total length of straps 5.0 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-part lashing strap:</td>
<td>615 245 000</td>
</tr>
<tr>
<td>(Length of fixed end LFE, standard 1.0 m)</td>
<td>For pin-type cargo control pan (Fig. 1)</td>
</tr>
</tbody>
</table>

Special lengths available, subject to minimum order quantity of 50 units.
**BISON® System 800**

**BISON® System 800 EN 12195-2**

Tensile force rating LC 500 daN

Lashing strap for securing low to medium weight loads in the interior of the vehicle body:
- As a one-piece wrapping/bundling strap (not shown)
- As a two-piece lashing strap with a selection of available studs

Ratchet tensioner secured with automatic, spring-loaded catch permits high pre-stressing forces. Open side of hook faces top side of strap.

| Material: | Lashing strap in 100% polyester, Ratchet in steel galvanised |
| Strap Width: | 25 mm |
| Length: | 5.0 m, other lengths on request |
| Length of fixed end LFE: | 1.0 m |
| Colour: | red |

**Suitable lashing elements:**
- Article No. 615 315 000  
  Cargo control tracks with round holes page 61.01.01.
- Article No. 615 335 000  
  Combination cargo control tracks page 61.01.02. and Cargo control tracks with round holes page 61.01.01.
- Article No. 615 355 000  
  Universal bolt lashing strip page 61.02.01.

**Strap designation**

<table>
<thead>
<tr>
<th>Wrapping / bundling strap (not shown)</th>
<th>Single-part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length of straps 5.0 m</td>
<td>615 305 000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Two-part lashing straps: (Length of fixed end LFE, standard 1.0 m)</th>
<th>Article No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>with BISON rail anchor (Fig. 1)</td>
<td>615 315 100</td>
</tr>
<tr>
<td>with round-hole anchor (round hole ø 20 mm) (Fig. 2)</td>
<td>615 335 000</td>
</tr>
<tr>
<td>with claw hook (for cargo control pans) (Fig. 3)</td>
<td>615 355 000</td>
</tr>
<tr>
<td>with Airline stud (Fig. 4)</td>
<td>615 366 000</td>
</tr>
</tbody>
</table>

Special lengths available, subject to minimum order quantity of 50 units.
BISON® System 3001

BISON® System 3001 EN 12195-2

Tensile force rating LC 500 daN

Lashing straps for securing heavy loads in the interior of the vehicle body:
- As a two-piece lashing strap with a selection of available studs

Ratchet tensioner secured with automatic, spring-loaded catch permits high pre-stressing forces. Open side of hook faces top side of strap.

Material:
- Lashing strap in 100% polyester,
- Ratchet in steel galvanised

Strap width:
50 mm

Length:
5.0 m, other lengths on request

Length of fixed end LFE:
1.0 m

Colour:
red

Suitable lashing elements:
- Article No. 615 515 000
  Cargo control tracks with round holes page 61.01.01.
- Article No. 615 525 000
  Combination cargo control tracks page 61.01.02. and
- Article No. 615 535 000
  Combination cargo control tracks page 61.01.02. and Cargo control tracks with round holes page 61.01.01.

Strap designation

<table>
<thead>
<tr>
<th>Strap designation</th>
<th>LC [daN]</th>
<th>Article No.</th>
<th>Total length of straps 5.0 [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-part lashing straps: (Length of fixed end LFE, standard 1.0 m)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with BISON rail anchor (Fig. 1)</td>
<td>750</td>
<td>615 515 100</td>
<td></td>
</tr>
<tr>
<td>with slotted-rail anchor (Fig. 2)</td>
<td>1000</td>
<td>615 525 100</td>
<td></td>
</tr>
<tr>
<td>with round-hole anchor (round hole ø 20 mm) (Fig. 3)</td>
<td>1000</td>
<td>615 535 100</td>
<td></td>
</tr>
<tr>
<td>with Airline stud (Fig. 4)</td>
<td>1000</td>
<td>615 566 000</td>
<td></td>
</tr>
</tbody>
</table>

Special lengths available, subject to minimum order quantity of 50 units.
BISON® System 5000

BISON® System 5000 EN 12195-2

Tensile force rating LC 500 daN

Lashing straps for securing heavy loads in the interior of the bodywork systems:
- As a one-piece wrapping/bundling strap (not shown)
- As a two-piece lashing strap with a selection of available studs

Long/wide-handled ratchet tensioner secured with automatic, spring-loaded catch permits high pre-stressing forces. Open side of claw hook faces top side of strap.

Material:
- Lashing strap in 100% polyester,
- Ratchet in steel galvanised

Characteristics:
- Pre-stretched and thermally attached
- Minimal elongation (approx. 5% at rated tensile force)
- Moisture absorption < 1%
  (does not freeze)

Strap width: 50 mm
Length: 8.0 m, other lengths on request
Length of fixed end LFE: 0.5 m
Colour: red

Suitable lashing elements: Cargo control pans page 61.03.01.

Strap designation

<table>
<thead>
<tr>
<th>Article No.</th>
<th>Total length of straps 5.0 [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Special lengths available, subject to minimum order quantity of 50 units.
Garment rails

**Optimum utilisation of vehicle height**
Given the low pivot point of the fixing rod, it only requires clearance of approx. 45 mm to swivel above the top edge of the support tube. The top row of garment rails can be attached just under the roof structure. This means that an extra row of rails to be added under certain circumstances.

**Optimum utilisation of vehicle width**
As the fixing rod is normally held in place by its own telescopic mechanism, rather than by attachment to the support tube, thereby allowing it to move totally in parallel with the same, the garment rail (with optimised hanger attachments) can be used along its entire length for unrestricted, wall-to-wall utilisation of available capacity.

**Anti-twist end-pieces**
End-pieces designed not to twist, and therefore to remain in parallel at all times, considerably facilitate and speed up handling procedures.

**Customs-approved**
All garment rails are equipped with an opening of ≥ 10 x 15 mm to allow inspection of the items hanging from the rail. Approved by the German customs and excise agency (ZKA)

**Chromium VI-free**
All our garment rails are free of chromium VI in compliance with the corresponding VDA provisions and European Directives.
Garment rails

BISON® Style garment rails

For keyhole-type rail plates with surrounding lip

Characteristics:
- Teardrop shape reduces weight
  4.3 kg – extra lightweight
- Easy to handle
- Wall-to-wall hanging possible
- Spring-loaded telescopic end
- Anti-twist end-pieces at both ends
- Fixing rod telescopic at both ends
- Customs-approved (can be inspected even when loaded with garments)
- Chromium VI-free
- Protected to prevent end-piece penetration

Clothes-hanger fixing:
- The fixing rod prevents the clothes hangers from dropping.
- Fixing rod held in place by two Velcro strips

Material characteristics:
- Main tube made of special steel with extremely high tensile/yield strength
- Chrome-plated
- Teardrop shape
- Rectangular fixing tube made of powder-coated aluminium
- End-pieces made of special plastic with steel core

Weight: 4.3 kg

Load capacity: The garment rail remains free of permanent deformation when subjected to evenly distributed loads of up to 400 daN. Verformung

Spare parts:
- Velcro strip 614 474 000

A minimum clearance of 20 mm behind the anchoring elements (SL plate) on both sides is required for attachment of the garment rail. From a purchase quantity of 500 pieces, a version with abrasion-resistant powder-coated main pipe (in customer-specific colour) is possible.

Markings
BISON garment rails can be supplied marked with customer-specific details such as a company name or logo. This permits the fast, trouble-free sorting of these items while cargoes are being handled, without any risk of confusion.
Garment rails BISON® Revision

**BISON® Revision garment rails**

For lipped aluminium keyholes and oval holes

**Characteristics:**
- Wall-to-wall hanging possible
- Spring-loaded telescopic end
- Flush-fitting
- Anti-twist telescopic configuration
- Fixing rod telescopic at both ends
- Customs-approved (can be inspected even when loaded with garments)
- Chromium VI-free
- Protected to prevent end-piece penetration

**Clothes-hanger fixing:**
- The fixing rod prevents the clothes hangers from dropping.
- Fixing rod held in place by two Velcro strips

**Material characteristics:**
- Main tube made of special steel with extremely high tensile/yield strength
- Chrome-plated
- 35 x 2.25 x 2345 mm
- Rectangular fixing tube made of powder-coated aluminium
- End-pieces made of special plastic with steel core

**Weight:**
- approx. 5.93 kg/each

**Load capacity:**
The garment rail remains free of permanent deformation when subjected to evenly distributed loads of up to 400 daN.

**Lashing elements:**
- Page 61.04.01.

**Spare parts:**
- Velcro strip 614 474 000

A minimum clearance of 20 mm behind the anchoring elements on both sides is required for attachment of the garment rail.

In spring-loaded telescopic configuration with hooked plastic end-pieces, supplied in standard or customised versions.

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<table>
<thead>
<tr>
<th>Article description</th>
<th>Standard dimension 2402 - 2508 [mm]</th>
<th>Customised dimensions under 2423 [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISON Revision with 2 x Velcro strips</td>
<td>614 650 000</td>
<td>614 655 000</td>
</tr>
</tbody>
</table>

All technical specifications contained in this brochure are approximate and no guarantee is given as to their accuracy. Designs are subject to change.
Garment rails UNIVERSAL

**UNIVERSAL garment rails**

For combination (slotted) and BISON cargo control tracks (22 mm hole with nose, at 40 mm intervals)

**Characteristics:**
- Wall-to-wall hanging possible
- Non-spring-loaded telescopic section
- Flush fitting with securing catch
- Anti-twist end-pieces
- Fixing rod telescopic at both ends
- The end-pieces rotate through 90° for use with horizontal BISON tracks
- Customs-approved (can be inspected even when loaded with garments)
- Chromium VI-free

**Clothes-hanger fixing:**
- The fixing rod prevents the clothes hangers from dropping
- Fixing rod held in place by two Velcro strips

**Material characteristics:**
- Main tube made of special steel
- Chrome-plated
- 35 x 2.25 x 2345 mm
- Rectangular fixing tube made of powder-coated aluminium
- End-pieces made of steel
- Fixing latch made of special steel

**Gewicht:** approx. 6.9 kg/each

**Belastbarkeit:** The garment rail remains free of permanent deformation when subjected to evenly distributed loads of up to 400 daN.

**Lashing elements:** Page 61.01.01. and 61.01.02.

**Spare parts:** Velcro strip 614 474 000

A minimum clearance of 12 mm behind the anchoring elements on both sides is required for attachment of the garment rail.

<table>
<thead>
<tr>
<th>Article description</th>
<th>Standard dimension 2411 – 2521 mm</th>
<th>Customised dimensions under 2411 mm</th>
<th>Standard dimension 2411 – 2521 mm</th>
<th>Customised dimensions under 2411 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIVERSAL with 2 x Velcro strips</td>
<td>614 730 000</td>
<td>614 735 000</td>
<td>614 750 000</td>
<td>614 755 000</td>
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</tbody>
</table>
Garment rails BISON® Robust

**BISON® Robust garment rails**

For keyhole-type plates (with or without surrounding lip)

**Characteristics:**
- Wall-to-wall hanging possible
- Non-spring-loaded telescopic end
- Solid end-pieces made of special cast metal
- Protected to prevent end-piece penetration to outer shell
- Anti-twist end-pieces
- Fixing rod telescopic at both ends
- Customs-approved (can be inspected even when loaded with garments)
- Chromium VI-free

**Clothes-hanger fixing:**
The fixing rod prevents the clothes hangers from dropping.
- Fixing rod held in place by two Velcro strips

**Material characteristics:**
- Main tube made of special steel with extremely high tensile/yield strength
- Chrome-plated
- 35 x 2.25 x 2345 mm
- Rectangular fixing tube made of powder-coated aluminium
- End-pieces made of cast, steel, galvanised

**Weight:**
approx. 6 kg/each

**Packaging:**
Supplied ready-cut to size

**Lashing elements:**
Page 61.04.

**Load capacity:**
The garment rail remains free of permanent deformation when subjected to evenly distributed loads of up to 400 daN.
- Velcro strip 614 474 000

**Load capacity:**
The garment rail remains free of permanent deformation when subjected to evenly distributed loads of up to 400 daN.

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**Article description**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Standard dimension [mm]</th>
<th>Customised dimensions under 2423 [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISON Revision with 2 x Velcro strips</td>
<td>614 670 000</td>
<td>614 675 000</td>
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</tbody>
</table>
Die technischen Daten in dieser Drucksache geben einen Anhalt, sind aber ohne Gewähr! Konstruktionsänderungen vorbehalten. Unsere Konstruktionsvorschläge sind unverbindlich!

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