

INSTRUCTIONS FOR ZBN COMPRESSION FITTINGS

The delivered compression fittings are the 28mm type from Mapress. Please use an appropriate pressing tong or equipment for correct fitting.

1. The ZBN is supplied with tube end protective caps. Please remove the protective caps before pressing the tubes. The compression fittings are packed in separate plastic bags.



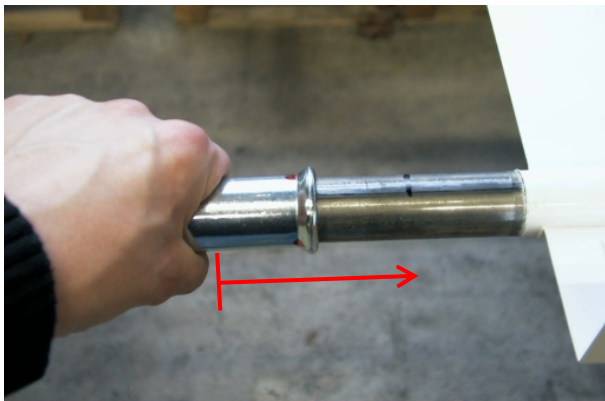
2. Before mounting the compression fittings it is necessary to mark the ends of the tubes equally so that the compression fitting can be fitted centrally. By doing this, a mechanically stable and correct fixing is achieved.



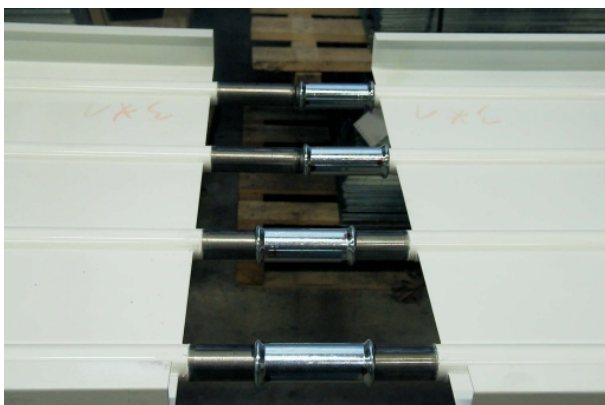
3. Before attempting to use the compression fitting, ensure that the joint ring is in place and that the fitting is clean. This will ensure a clean sound joint.



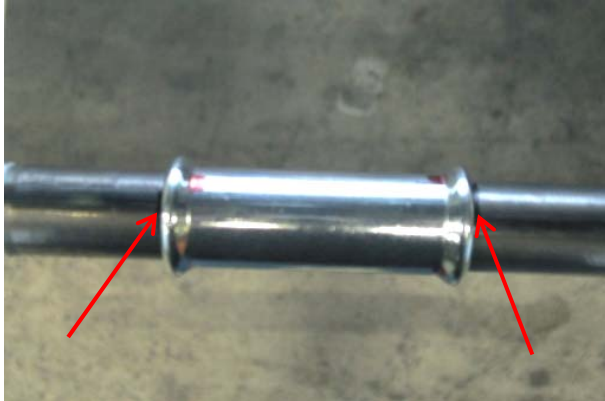
4. When assembling the first compression fittings, always push the fitting gently onto the tube, up to the pre-marked position.



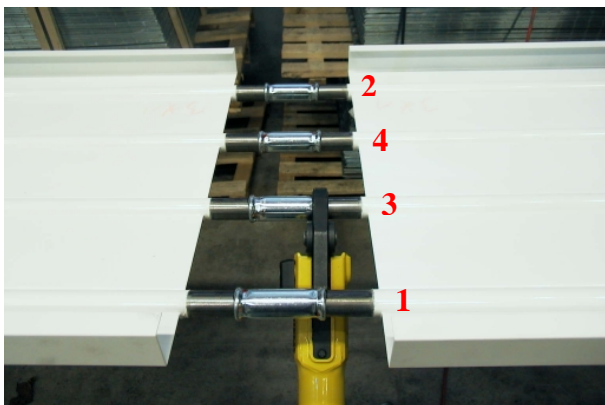
5. Offer the second panel to the pre-assembled compression fittings. Gently align and push the panels together. If any of the compression fittings move during assembly, make sure that they are re-aligned centrally and are in line. **THIS IS VERY IMPORTANT!**



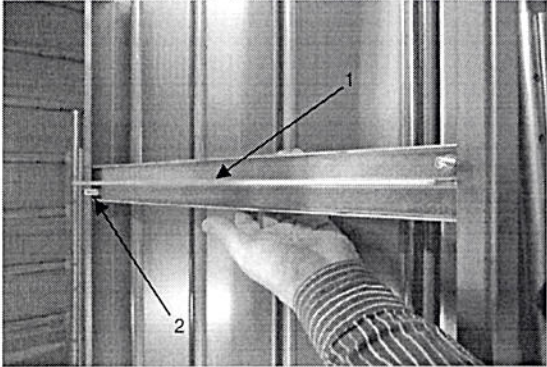
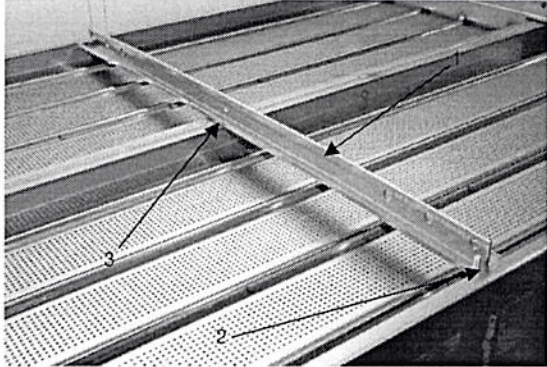
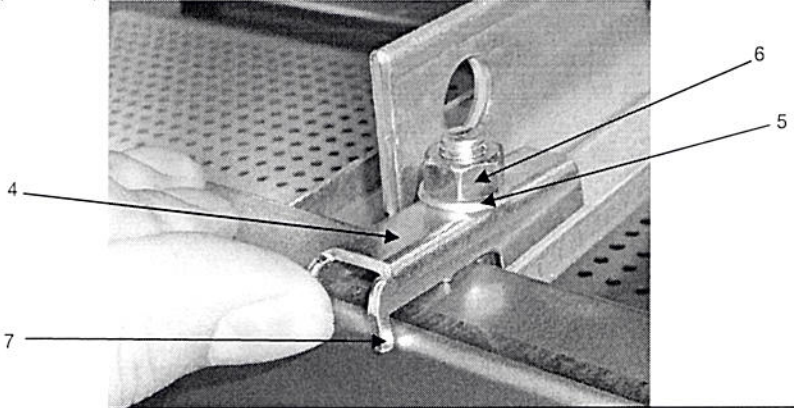
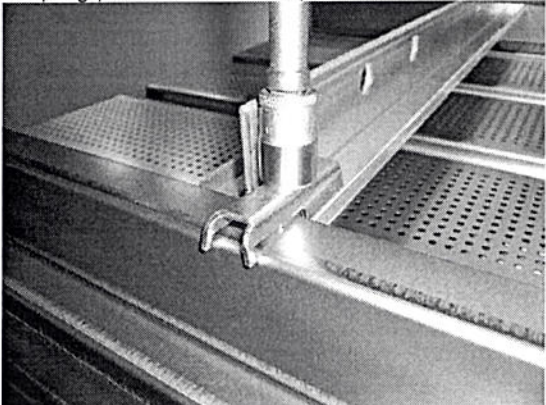
6. If fitted correctly, the compression fittings should be in line and central to the panels. The pre-marked lines should be visible at both ends.

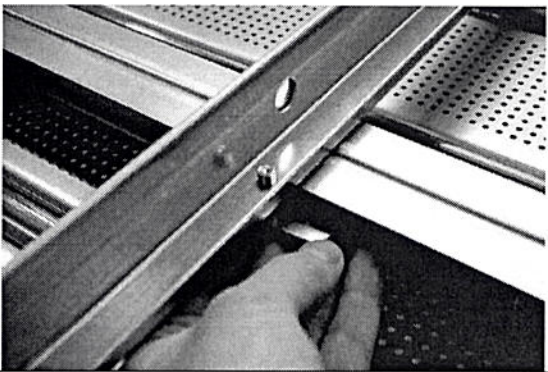
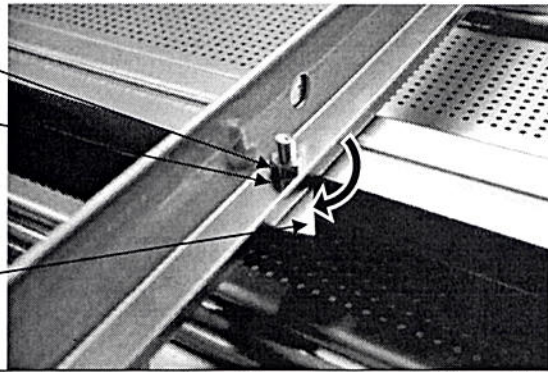
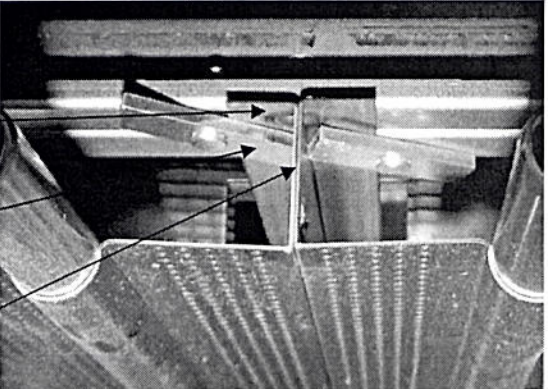


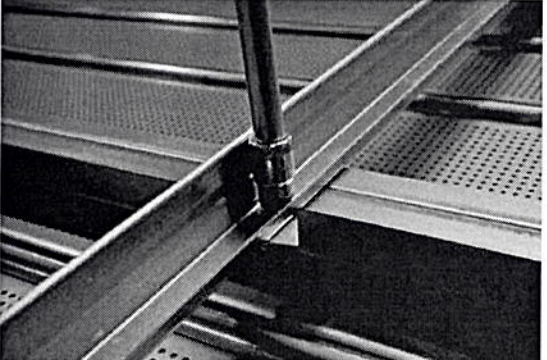
7. When the panels are ready for final compression crimping, they should be fixed in the order as shown, from outside to inside alternately. It is advisable to complete one side (left or right) first, as slight adjustment may be required. Complete the second side as before.



Mounting instructions for movable suspension bars

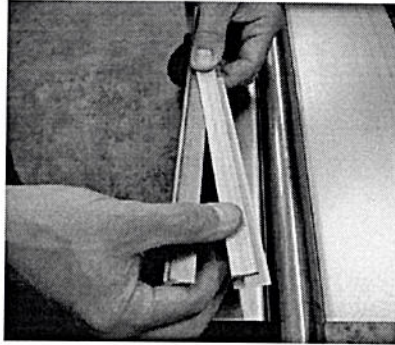
ZBN 300 - 900	ZBN 1050 - 1350
<p>1. Max. distance to header = 1000mm incl. header Max. distance to next suspension bar = 3000mm Max. distance to next junction = 2810mm</p>	
	
<p>Position the suspension bar (1) on both outer edges under the sheet fold (2) and align it 90° to the longitudinal axis of the panel.</p>	
<p>2. For ZBN 1050 – 1350 the loose suspension bar must also 'rest' on the middle web (3).</p>	
<p>3. Gradually tighten the clamping piece 1 (4), plain washer (5) and screw nut M8 (6) and fix the nose of the clamp piece 1 (7) to the outer edge of the sheet.</p>	
	
<p>4. Tighten M8 nut (6) of clamping piece 1 with a torque wrench to 15 Nm.</p>	
	
<p>5. Please repeat point 3 and 4 on the other side.</p>	

	<p>6. Position clamping piece 2 (8) for installation to the middle web. (3)</p> 
	<p>7. Gradually tighten the M8 nut (6) making sure that the clamp plate underneath is correctly rotated into position before finally tightening.</p> 
	<p>8. The sheet fold of the middle web (9) must be clamped between clamping piece 2 (8) and the movable suspension bar (1). The clamping piece 2 has to be fixed towards the middle web (10).</p> 

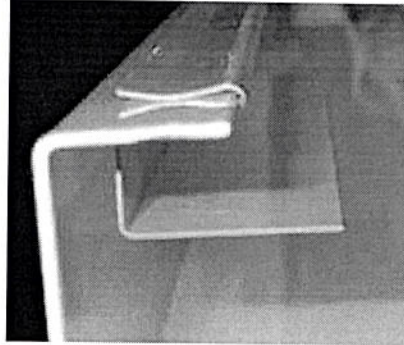
	<p>9. Using a torque wrench, tighten the M8 nut on clamping piece 2 to 15 Nm.</p> 
	<p>10. Repeat point (6) to (9) on the opposite edge of the middle web.</p>
<p>Important notice:</p> <ul style="list-style-type: none"> • Please do not load the movable suspension bars before you have finished the installation completely. • Movable suspension bars should only be used for horizontal panels. It is possible to use these for angled panels, up to a maximum of 35 degrees, in the length or in the width. • Under no circumstances should loaded suspension bars be moved or unscrewed. 	

Ballguard fitting instructions

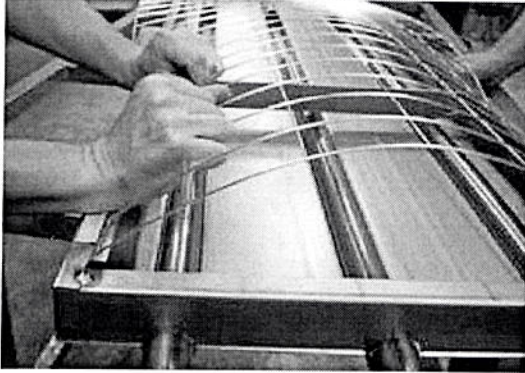
1. Install pre-cut special profile as per fig. 2



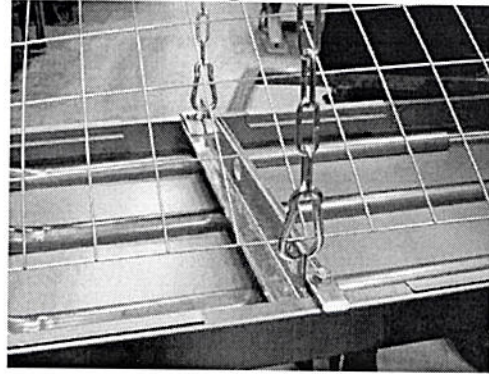
2. Fig. 2



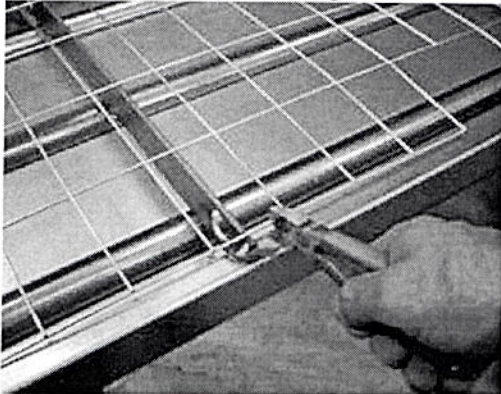
- 3a. Install ballguard at ground level or



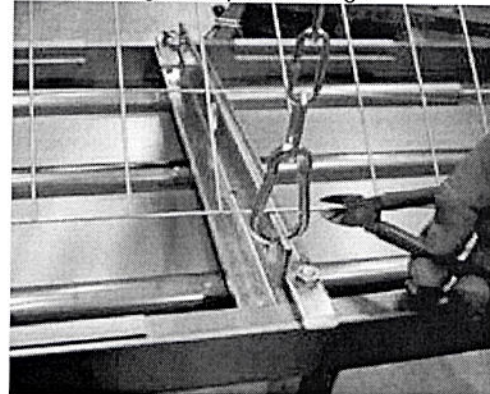
- 3b. Install ballguard at finish level



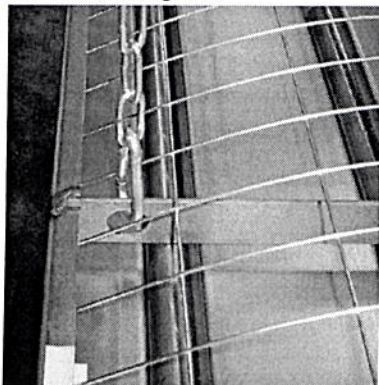
- 4a. Remove a section of the ballguard allowing the hangers to pass through



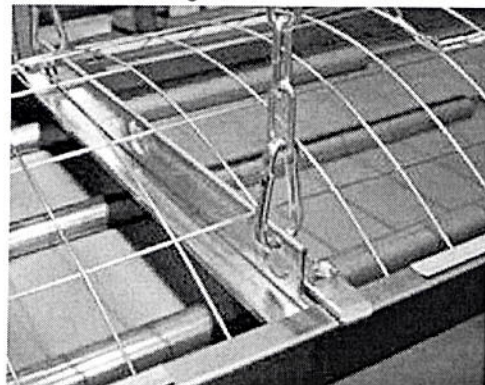
- 4b. Remove a section of the ballguard allowing the hangers to pass through



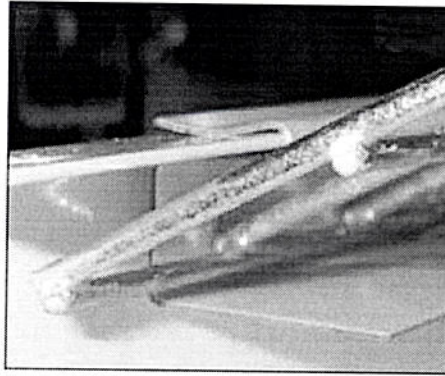
- 5a. Install ballguard



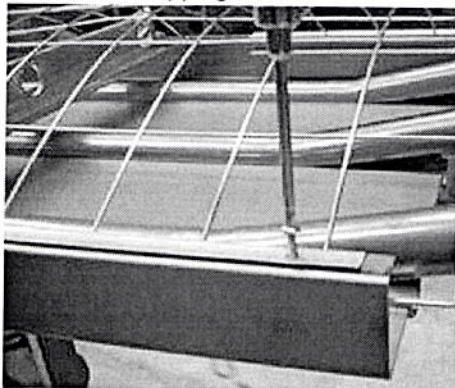
- 5b. Install ballguard



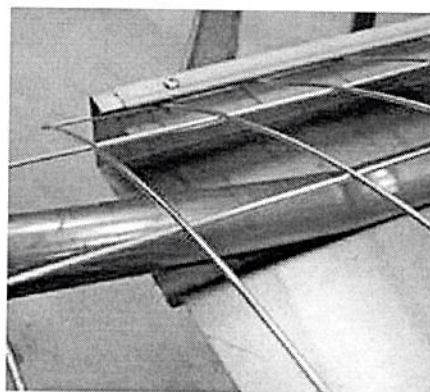
6. Ensure ballguard is seated into the profile



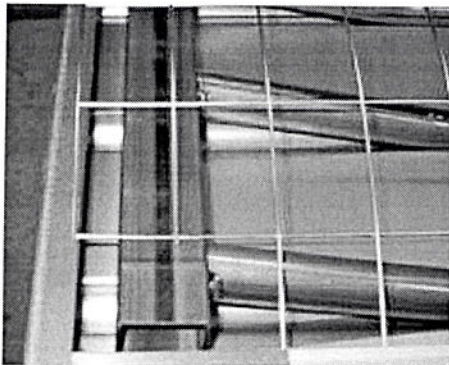
7. Important: secure ballguard to profile with self-tapping screw



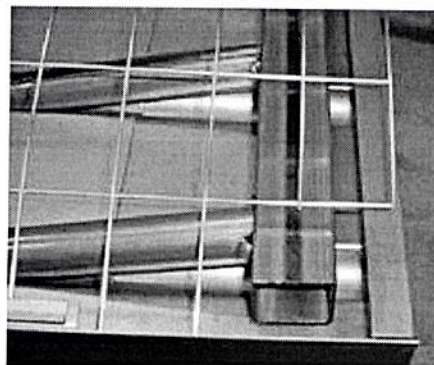
8. Secured ballguard

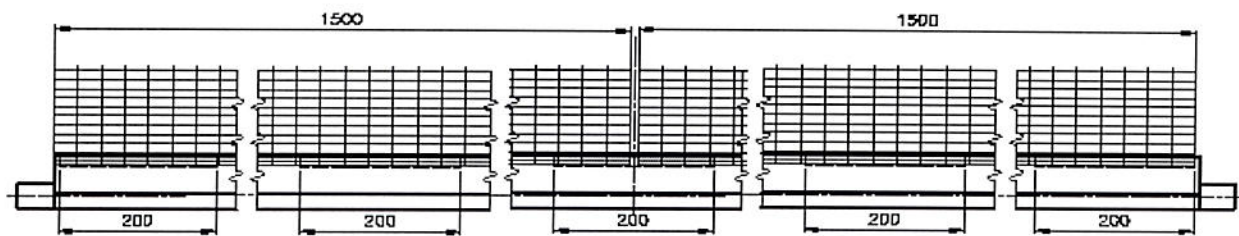
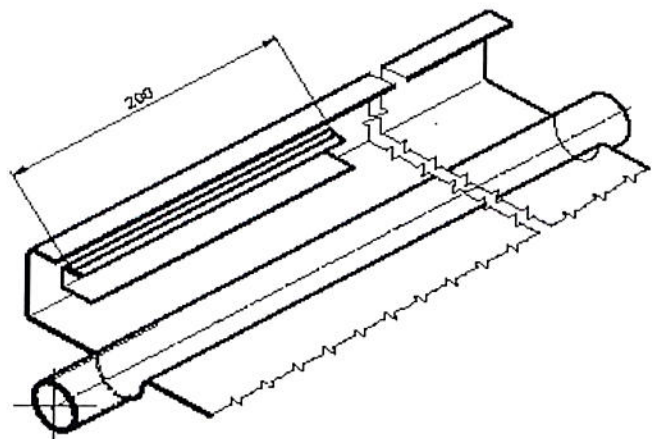
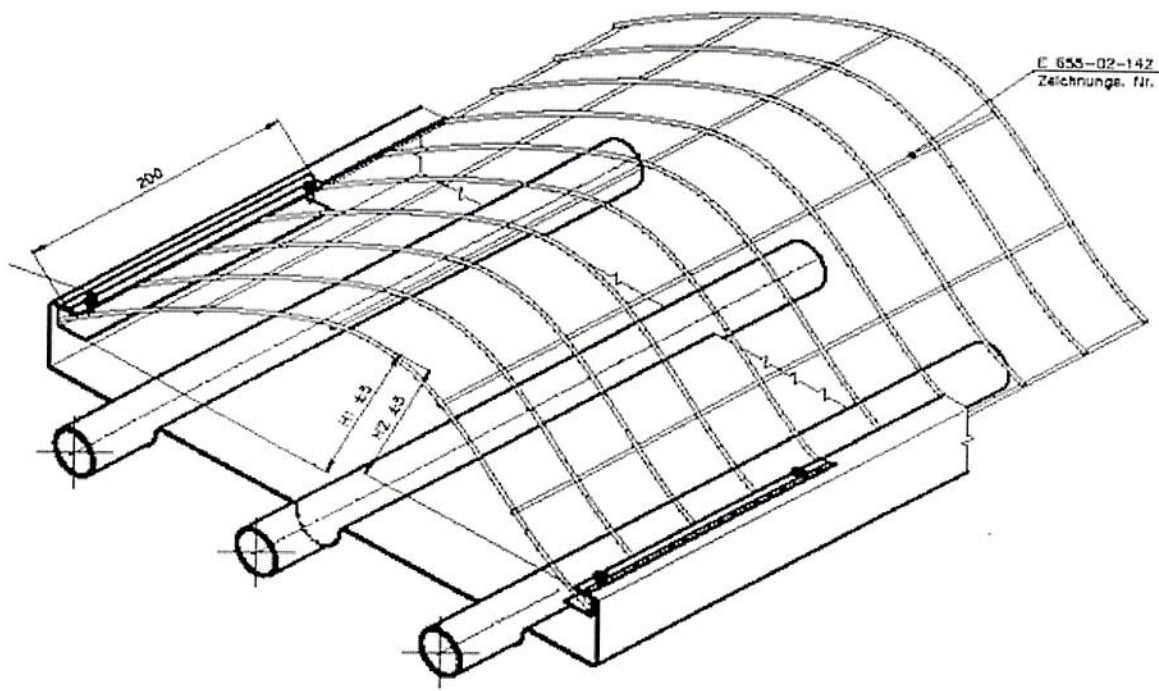


Ensure ballguard covers the rear header tube



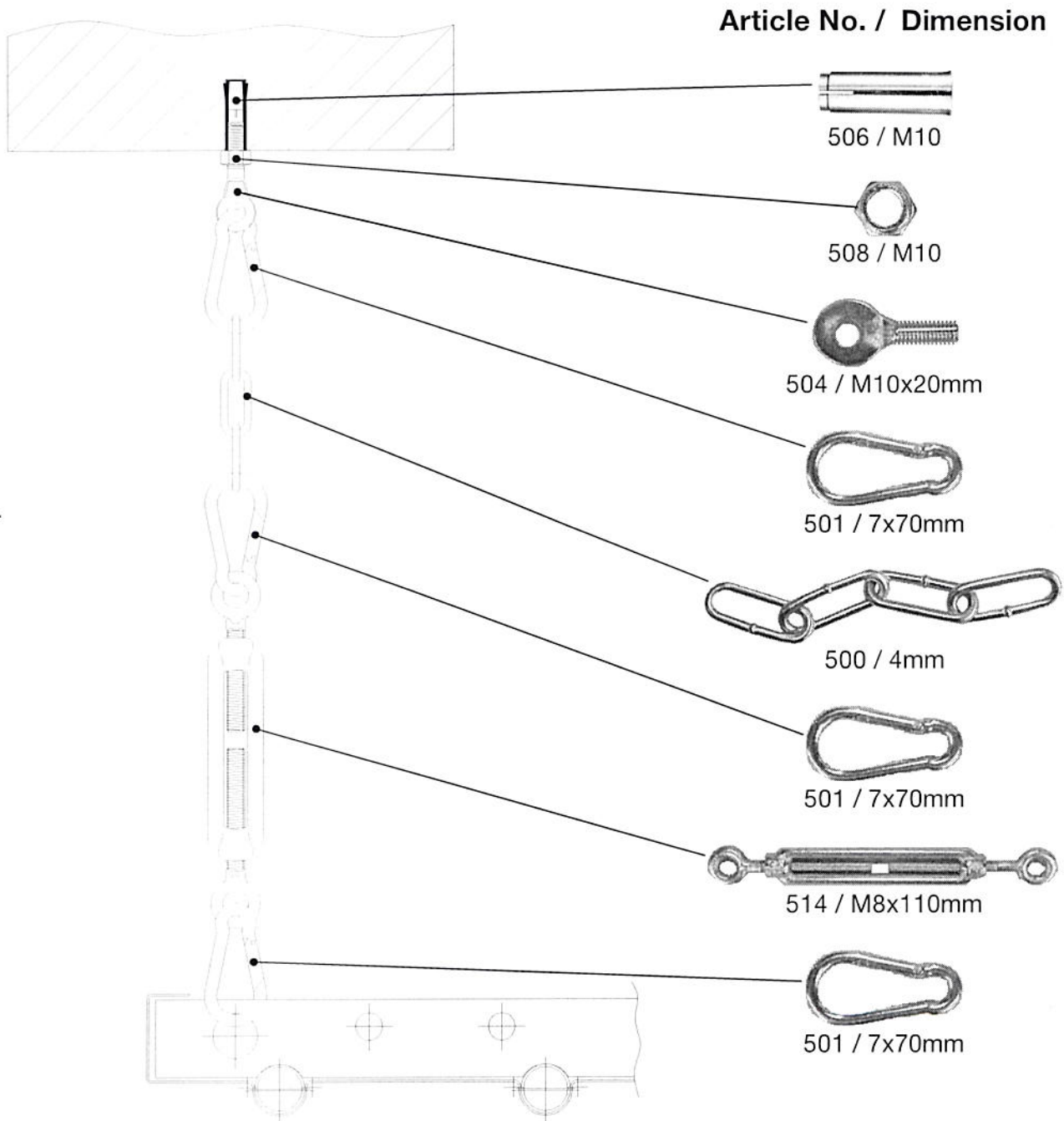
Ensure ballguard covers the rear header tube

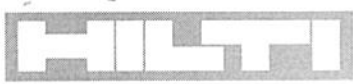




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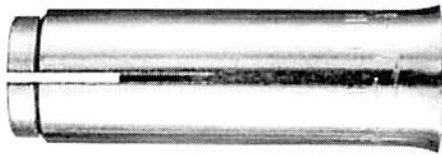
Montageanleitung / Installation Instruction / Instruction de montage
 Instrucciones de Colocación / Instrucciones de montaje / De Instructie van de installatie
 Instrukcja Montażu / Инструкция по монтажу / Инструкція за монтаж
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 Uputstva za Montazu / Uppsetninga leiðbeiningar





Kompaktdübel HKD-S

Push-In Anchor HKD-S
Cheville femelle compacte HKD-S



Z-21.1-1505

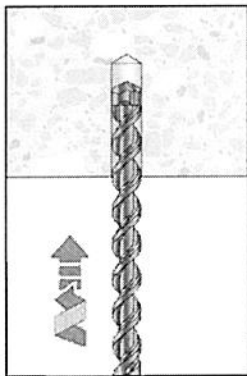
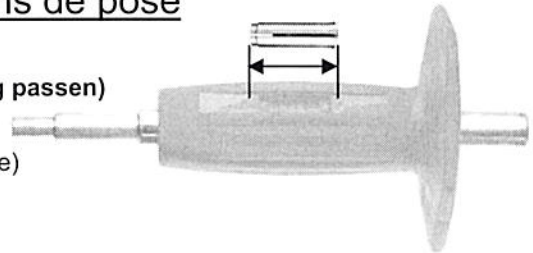
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Setzanleitung / Setting instruction / Instructions de pose

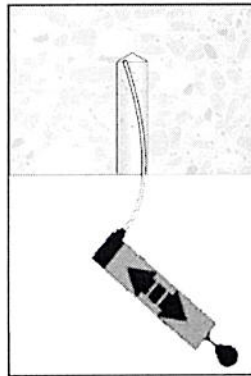
Prüfen, ob richtiges Setzwerkzeug (Dübel muß exakt in Aussparung passen)

Check setting tool (Anchor must fit exactly into recess)

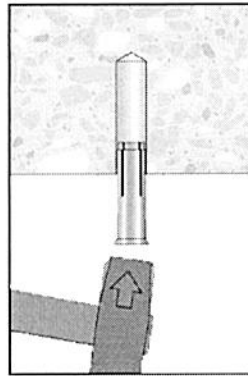
Vérifier l'outil de pose (la cheville doit s'adapter exactement dans la niche)



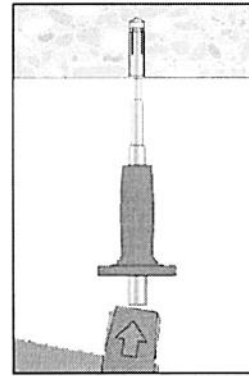
Bohrloch erstellen
Drill borehole
Percer le trou



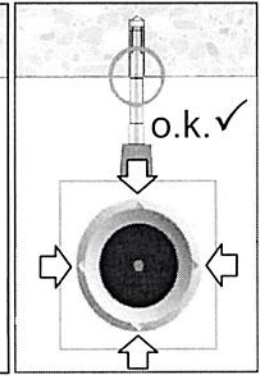
Bohrloch reinigen
Clean borehole
Nettoyer le trou



Dübel einschlagen
Push in anchor
Frapper la cheville



Dübel verspreizen bis Prägung am Dübelrand
Expand anchor until marking on flared end
Expanser jusqu'au marquage de la cheville



		HKD-S M8x40	HKD-S M10x40
Bohr-Ø / Drill-Bit-Ø / Perçage-Ø	d_0 [mm]	10	12
Bohrtiefe / Hole depth / Profondeur de perçage	h_1 [mm]	42	43
Verankerungstiefe / Embedment depth / Profondeur d'ancrage	h_v [mm]	40	40
Einschraubtiefe (min-max) / Screwing depth / Profondeur de vis	l_s [mm]	10-13	12-16
Anzugsdrehmoment (Schraube) / tightening torque (screw) / Couple de serrage (vis)	T_{inst} [Nm]	3	6



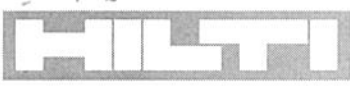
Weitere Informationen erhalten Sie bei www.hilti.de oder ☎ 0800-888 55 22



You will get further information at www.hilti.co.uk or ☎ 0800 886 100



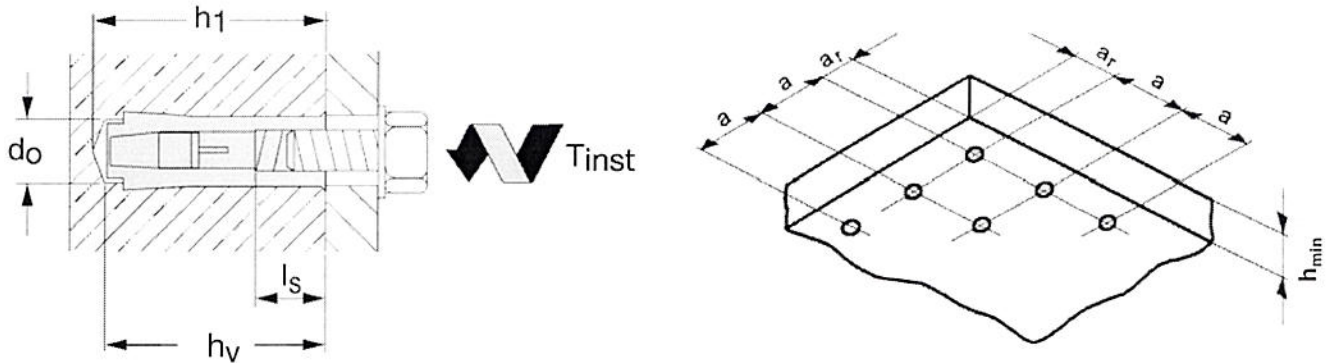
Plus d'informations sur www.hilti.fr ou ☎ 0800 397 397



Kompaktdübel HKD-S

Push-In Anchor HKD-S
Cheville femelle compacte HKD-S

Technische Daten / Technical Data / Données techniques



		HKD-S M8x40	HKD-S M10x40
Zulässige Last pro Dübel in gerissenem Beton ¹⁾ Admissible load per anchor in cracked concrete ¹⁾ Traction admissible par cheville dans le béton fissuré ¹⁾	zul F [kN]	0,8	0,8
Max. Last für Feuerwiderstandsdauer 90 Minuten Max. load for fire resistance rating 90 minutes Charge Max pour une resistance au le feu de 90 min.	F90 [kN]	0,6	0,8
Achsabstand / Spacing / Distance entre axes	$a \geq$ [cm]	40	40
Randabstand / Edge distance / Distance au bord	$a_r \geq$ [cm]	10	20
Mindestbauteildicke / Min. base material thickness / Epaisseur minimale du support	h_{min} [cm]	10	10

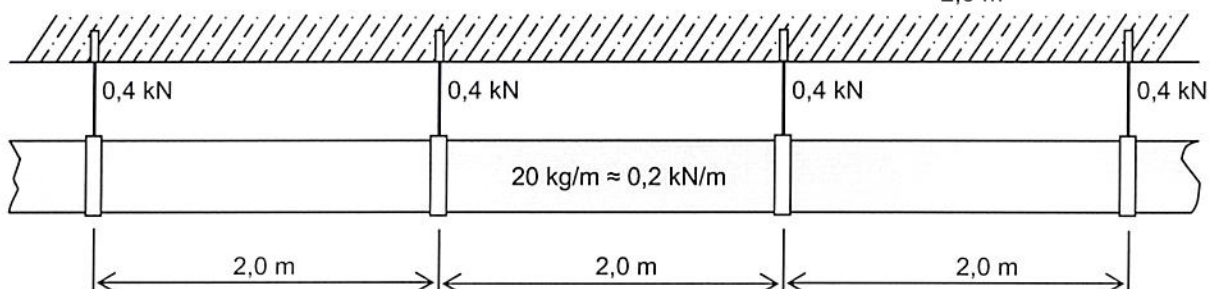
1) Für die Verankerung von abgehängten Decken und statisch vergleichbaren, redundanten Konstruktionen:
Linienlast max. 0,5 kN/m (50 kg/m) ²⁾

For anchoring of suspended ceilings and statically comparable redundant constructions:
Line load max. 0,5 kN/m (110 lb/m) ²⁾

Pour la fixation de plafonds suspendus ou constructions statiques comparables:
Charge sur la ligne max. 0,5 kN/m (50 kg/m) ²⁾

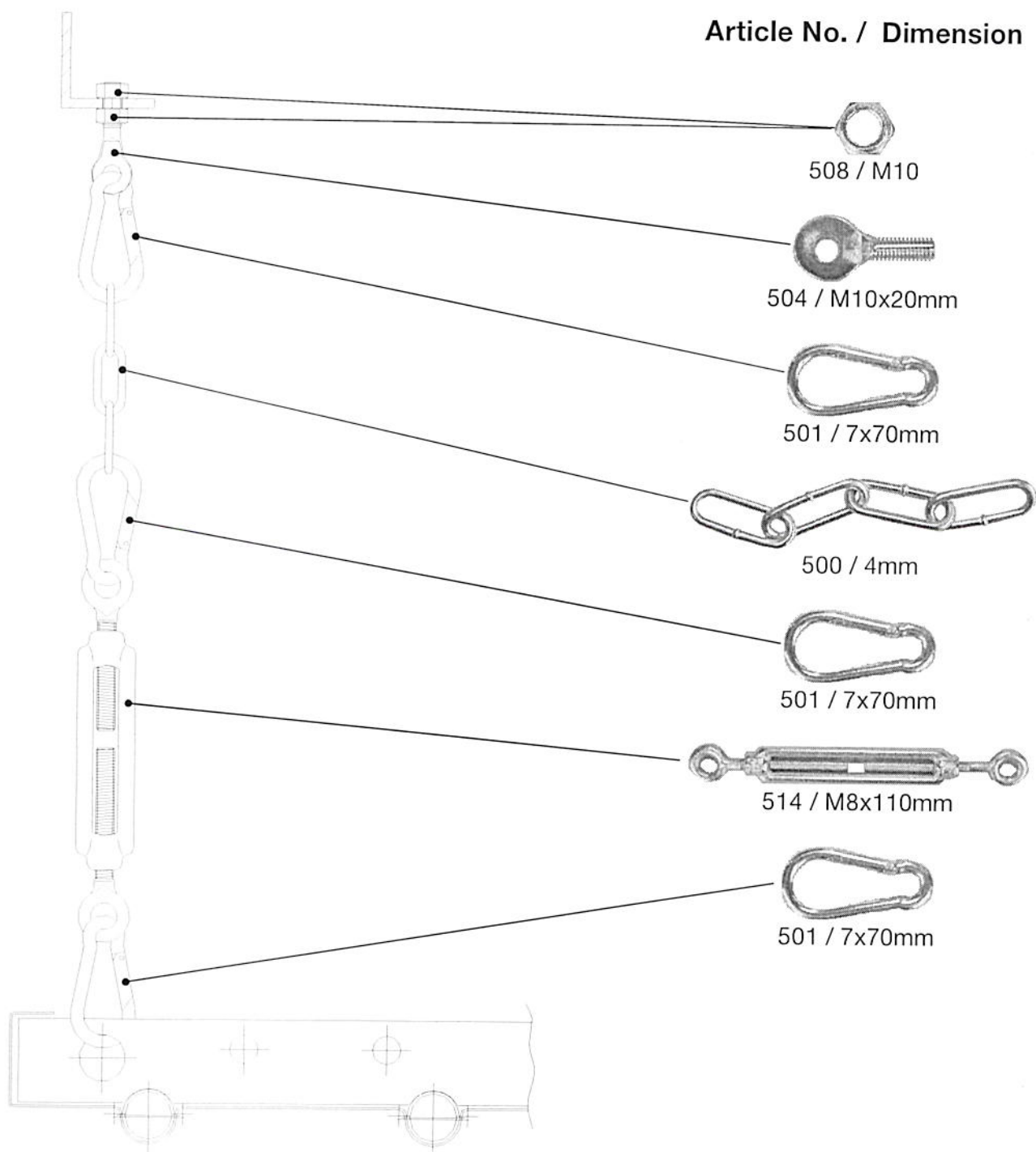
2) Gutachten Prof. Eligehausen vom 20.12.1995 / Technical Assesment Prof. Eligehausen 20.12.1995 / Évaluation de Prof. Eligehausen du 20.12.1995

Beispiel: Linienlast / Example: Line Load / Exemple: Charge sur la ligne = $\frac{0,4 \text{ kN}}{2,0 \text{ m}} = 0,2 \text{ kN/m} < 0,5 \text{ kN/m}$ ✓



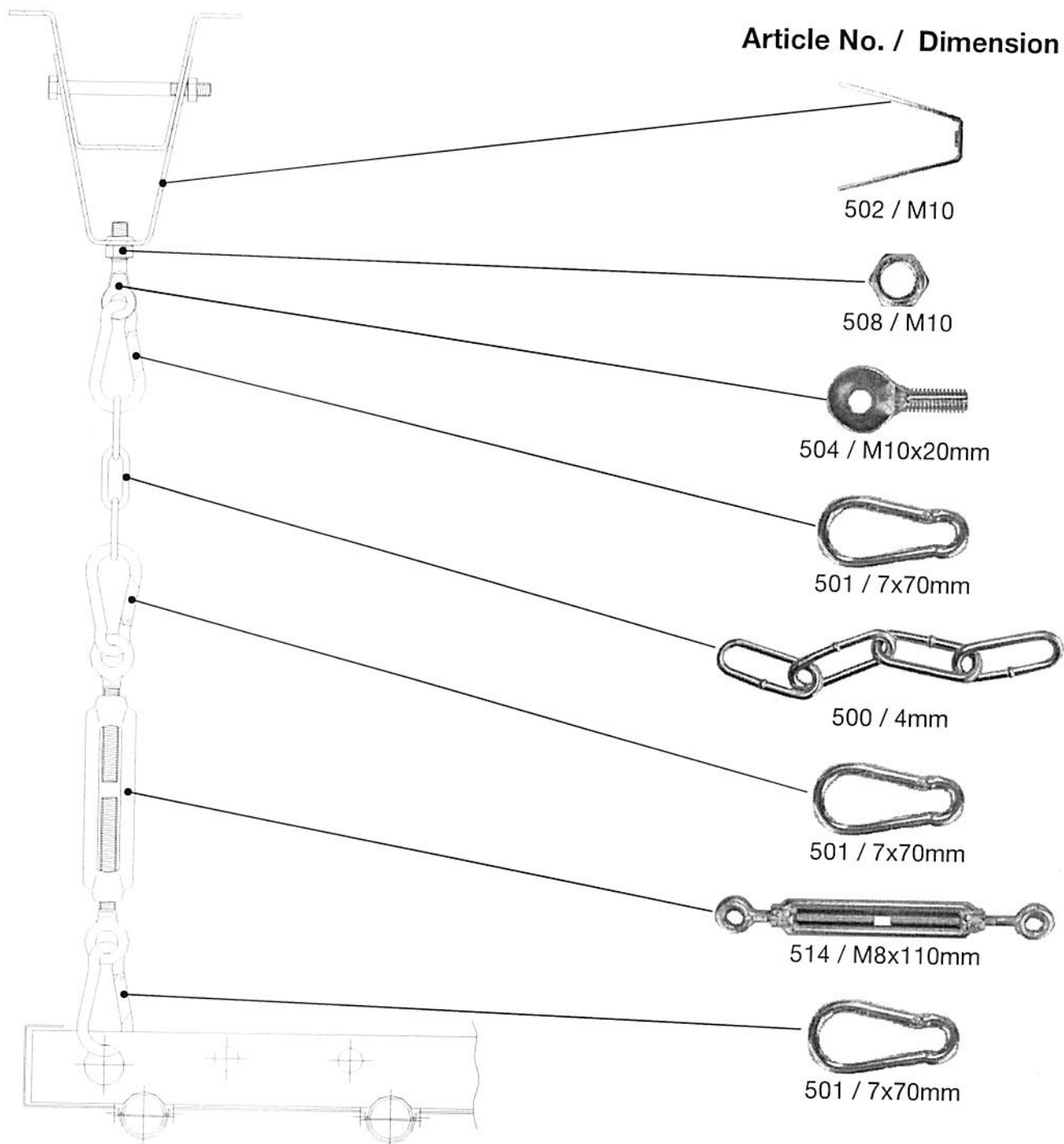
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Montageanleitung / Installation Instruction / Instruction de montage
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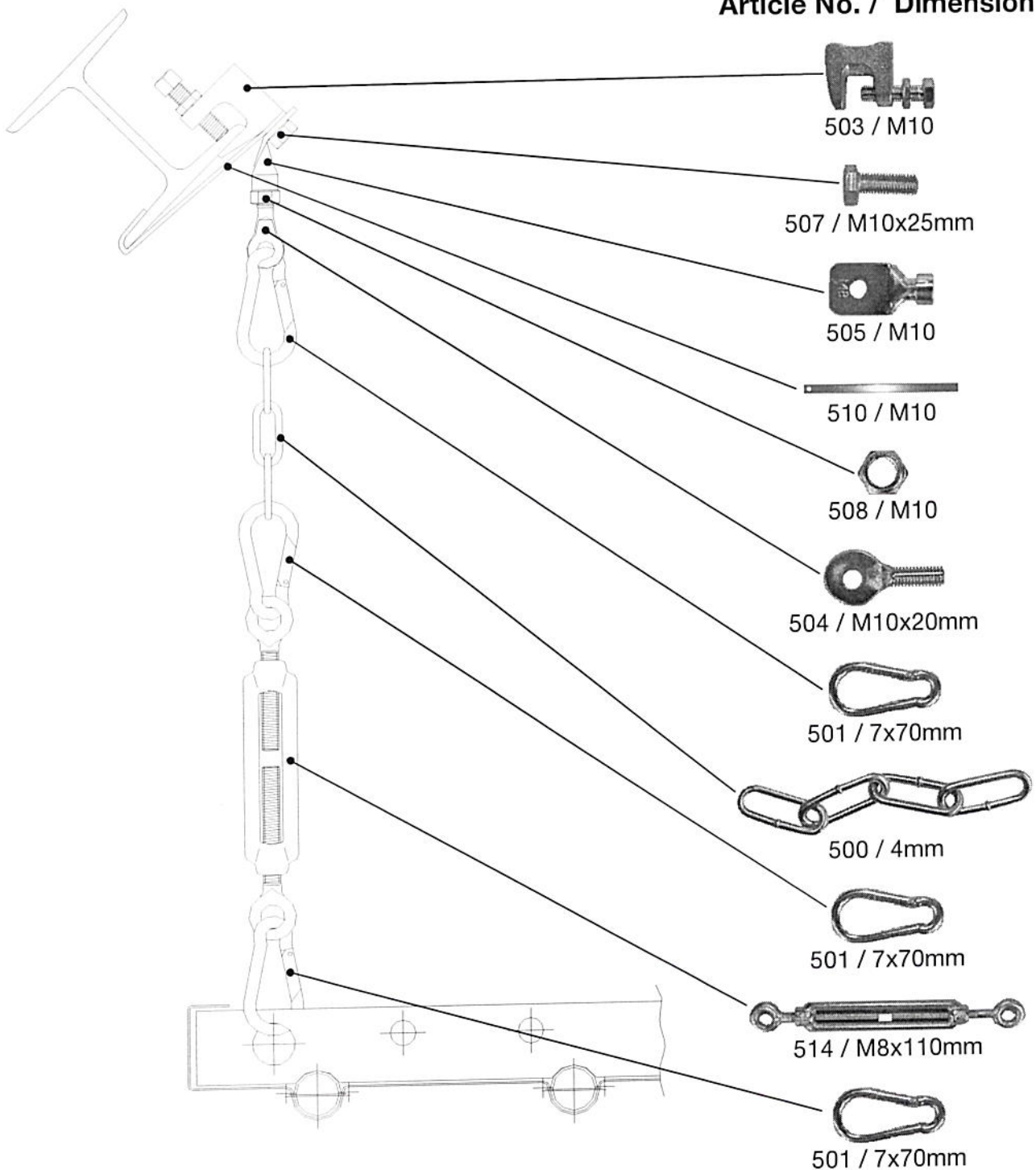
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Article No. / Dimension



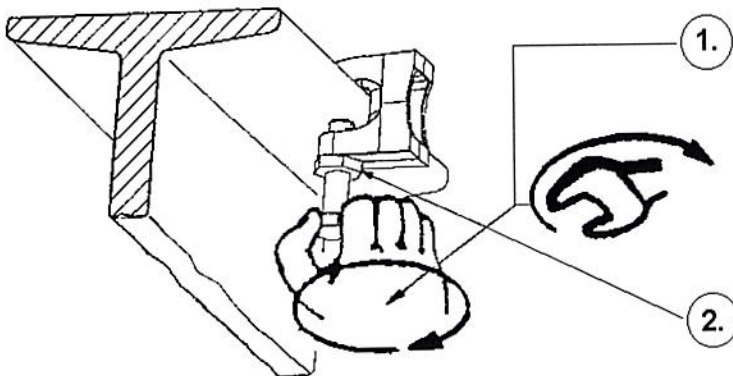
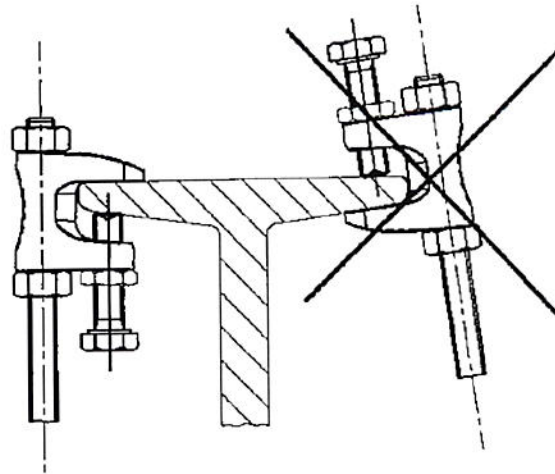
Montageanleitung / Installation Instruction



Trägerklammer Beam Clamp

Korrekte Installation
an Trägern mit
schrägen Schenkeln

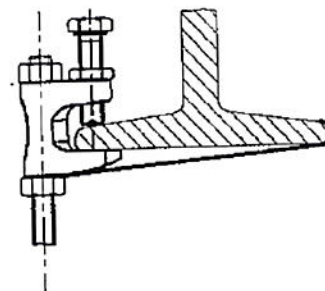
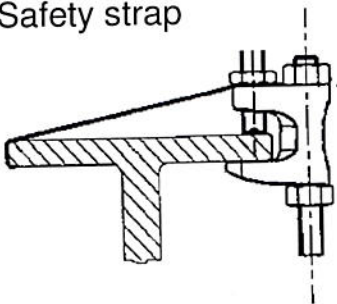
Correct installation
to sections with
tapered flanges



Andrehen von Hand +
1/2 Schlüsselumdrehung
tighten by hand +
1/2 turn with spanner

Andrehen von Hand +
1/8 Schlüsselumdrehung
tighten by hand +
1/8 turn with spanner

Sicherungslasche Safety strap



Trägerklammern können grundsätzlich mit einer Sicherungslasche gesichert werden. Die Vorschriften der zuständigen Behörden sind zu beachten. Bei Sprinkleranlagen nach VdS-Vorschriften müssen Trägerklammern für Rohre größer DN 65 gegen seitliches Abgleiten vom Träger gesichert werden. Bei Sprinkleranlagen nach FM-Vorschriften dürfen Trägerklammern für Gewindestangen M 16 und 5/8", nach UL-Vorschriften 203 Trägerklammern für Gewindestangen M 6, 1/4" und 5/8" nur in Zugrichtung gegen den Steg montiert werden.

Beam Clamps can generally be secured by safety straps. The instructions of the certifying bodies have to be followed. According to VdS-regulations Beam Clamps must be secured when using Beam Clamps for pipes larger DN 65 to avoid slipping off Beam. According to FM-regulations Beam Clamps for threaded rods M 16 and 5/8", according to UL 203 Beam Clamps for threaded rods M 6, 1/4" and 5/8", can only be installed load direction set screw on load side (Top mount configuration only).

VS Guss AG

Der Guss-Spezialist
Serien-Kleinteile
Temper- und Grauguss
Komplett-Bearbeitung

VS Guss AG
42719 Solingen
Parallelstr. 17
Tel. (0212)384-0
Fax. (0212)311035

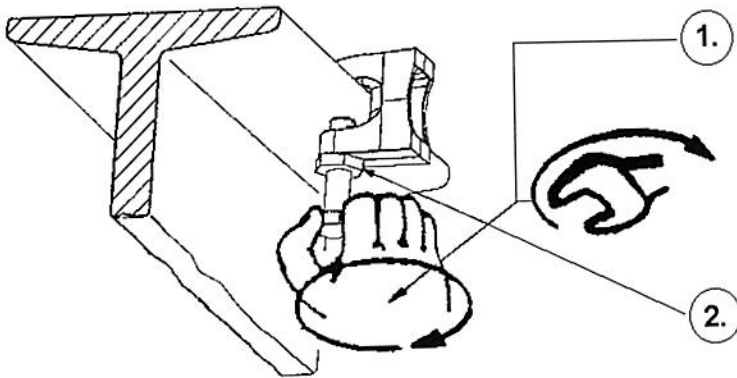
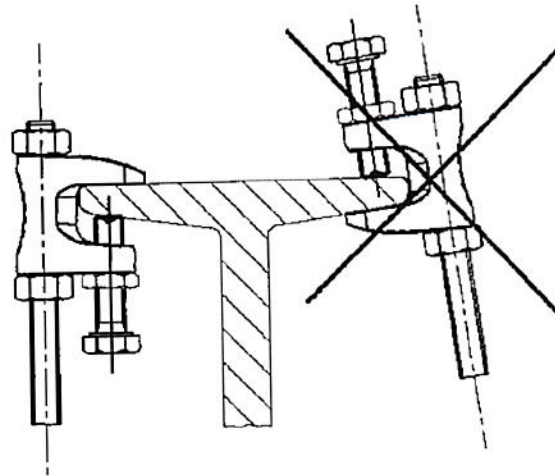
Instruction de montage / Instrucciones de Colocación



Crampon Mordaza

Installation correcte
sur une poutre
à côté oblique

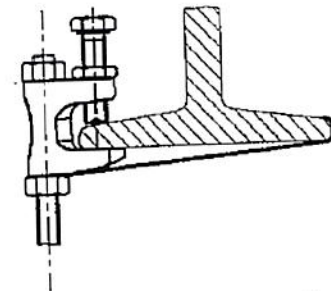
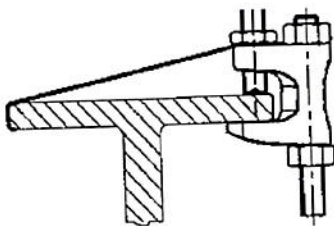
Montaje correcto
de la mordaza



Serrer avec la main +
1/2 tour avec la clef
Fijar a mano +
1/2 vuelta con la llave fija

Serrer avec la main +
1/8 tour avec la clef
Fijar a mano +
1/8 vuelta con la llave fija

Fer plat de sécurité Correas de seguridad



Il est possible d'assurer les crampons avec un fer plat de sécurité. Suivez les instructions des autorités compétentes. Dans les cas d'installations de sprinkler en conformité avec la réglementation VdS, il faut pour des tuyaux excédent DN 65, assurer les crampons avec un fer plat de sécurité, pour éviter un glissement latéral. Dans les cas d'installation de sprinkler en conformité avec les normes FM, le montage de crampons pour tiges filetées M 16 et 5/16", dans les cas d'installation de sprinkler en conformité avec UL 203, le montage de crampon pour tiges filetées M 6, 1/4" et 5/8" n'est autorisé qu'en traction sur la traverse.

Las Mordazas para vigas normalmente pueden ser aseguradas con correas de seguridad. Se deben seguir las instrucciones de los certificados correspondientes. Según las instrucciones del Certificado VdS y para evitar el deslizamiento de las mordazas, se deben colocar las correas de seguridad para tubos de diámetro superior a 65. De conformidad con la normativa FM para las mordazas de varilla roscada M 16 y 5/8" y la normativa UL 203 para las mordazas de varilla M6 y 1/4" y 5/8" sólo se pueden instalar con la dirección de carga del tornillo hacia el lado de carga de la viga

VS Guss AG

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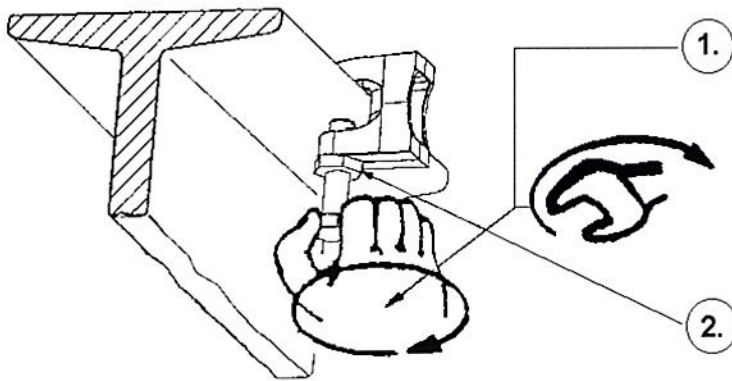
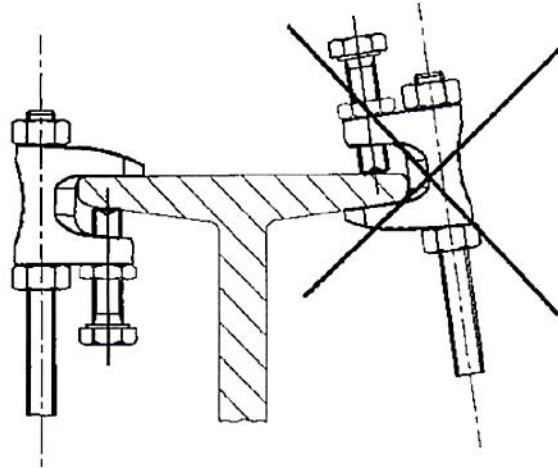
Montageanleitung / Installation Instruction



Trägerklammer Beam Clamp

Korrekte Installation
an Trägern mit
schrägen Schenkeln

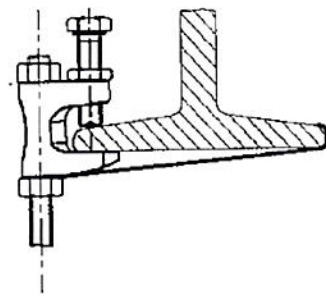
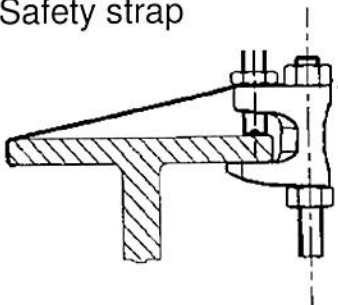
Correct installation
to sections with
tapered flanges



Andrehen von Hand +
1/2 Schlüsselumdrehung
tighten by hand +
1/2 turn with spanner

Andrehen von Hand +
1/8 Schlüsselumdrehung
tighten by hand +
1/8 turn with spanner

Sicherungslasche Safety strap



Trägerklammern können grundsätzlich mit einer Sicherungslasche gesichert werden. Die Vorschriften der zuständigen Behörden sind zu beachten. Bei Sprinkleranlagen nach VdS-Vorschriften müssen Trägerklammern für Rohre größer DN 65 gegen seitliches Abgleiten vom Träger gesichert werden. Bei Sprinkleranlagen nach FM-Vorschriften dürfen Trägerklammern für Gewindestangen M 16 und 5/8", nach UL-Vorschriften 203 Trägerklammern für Gewindestangen M 6, 1/4" und 5/8" nur in Zugrichtung gegen den Steg montiert werden.

Beam Clamps can generally be secured by safety straps. The instructions of the certifying bodies have to be followed. According to VdS-regulations Beam Clamps must be secured when using Beam Clamps for pipes larger DN 65 to avoid slipping off Beam. According to FM-regulations Beam Clamps for threaded rods M 16 and 5/8", according to UL 203 Beam Clamps for threaded rods M 6, 1/4" and 5/8", can only be installed load direction set screw on load side (Top mount configuration only).

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