

TOWER - TOWER22 - TOWER A2 INSTALLATION MANUAL



C20/25



S235JR



GL24H



CLT



EN 795:2012 A+C
CEN/TS 16415:2013 A+C
UNI 11578:2015 A+C



AS/NZS 5532:2013
AS/NZS 1891.2:2001



read also:



TOWER
Installation
Manual

+



TOWER
Safety
Regulations

=



EN
795:2012
A + C

CEN/TS
16415:2013
A + C

UNI
11578:2015
A + C

AS/NZS
5532:2013

AS/NZS
1891.2:2001

AS/NZS
1891.4:2009



TOWER
Installation
Manual

+



TOWER
Safety
Regulations

TOOLS



SELF-LOCKING NUT ⁽²⁾

⁽¹⁾ ROTHOBLAAS VINYL LESTER CHEMICAL ANCHOR WITHOUT STYRENE

⁽²⁾ SELF-LOCKING NUT (FOLLOW ITS MAINTENANCE MANUAL)

SAFETY INSTRUCTIONS

- IT** L'installazione e/o utilizzo del prodotto Rotho Blaas è permessa solo a personale esperto previa lettura e comprensione del **1** **MANUALE D'INSTALLAZIONE** e delle **2** **NORME DI SICUREZZA** nella lingua del relativo Paese di utilizzo.
- DE** Die Installation und/oder die Verwendung des Produkts von Rotho Blaas ist ausschließlich Fachpersonal vorbehalten, nachdem es das **1** **INSTALLATIONSHANDBUCH** und die **2** **SICHERHEITSVORSCHRIFTEN** in der Sprache des Verwendungslandes gelesen und verstanden hat.
- EN** Only qualified personnel may install and/or use this Rotho Blaas product, after reading and understanding the **1** **INSTALLATION MANUAL** and the **2** **SAFETY REGULATIONS**, in the language of the country of use.
- ES** La instalación y/o el uso del producto Rotho Blaas solo están permitidos al personal experto después de haber leído y comprendido el **1** **MANUAL DE INSTALACIÓN** y las **2** **NORMAS DE SEGURIDAD** en el idioma del país en el que se utiliza.
- FR** Seul le personnel expérimenté peut installer et/ou utiliser ce produit Rotho Blaas, après avoir lu et compris le **1** **MANUEL D'INSTALLATION** et les **2** **NORMES DE SÉCURITÉ** dans la langue du pays où le produit est utilisé.
- PT** A instalação e/ou utilização do produto Rotho Blaas só é permitida a pessoal especializado após a leitura e compreensão do **1** **MANUAL DE INSTALAÇÃO** e das **2** **NORMAS DE SEGURANÇA** na língua do respetivo país onde será utilizado.
- RU** К установке и (или) использованию продукции Rotho Blaas допускается только высококвалифицированный персонал после обязательного прочтения и усвоения **1** **РУКОВОДСТВО ПО УСТАНОВКЕ** и **2** **ПРАВИЛ ТЕХНИКИ БЕЗОПАСНОСТИ** на языке соответствующей страны использования.
- CS** Instalace a/nebo použití výrobku Rotho Blaas je povoleno pouze odborným osobám po přečtení a pochopení **1** **NÁVODU K INSTALACI** a **2** **BEZPEČNOSTNÍCH PŘEDPISŮ** v jazyce příslušné země použití.
- DA** Kun kvalificeret personale må installere og/eller bruge dette Rotho Blaas-produkt efter at have læst og forstået den **1** **INSTALLATIONSMANUALEN** og **2** **SIKKERHEDSFORSKRIFTERNE** på brugerens sprog.
- EL** Η εγκατάσταση ή/και η χρήση του προϊόντος Rotho Blaas επιτρέπεται μόνο σε έμπειρο προσωπικό που έχει διαβάσει και κατανοήσει τις **1** **ΕΓΧΕΙΡΙΔΙΟ ΕΓΚΑΤΑΣΤΑΣΗΣ** και τους **2** **ΚΑΝΟΝΙΣΜΟΥΣ ΑΣΦΑΛΕΙΑΣ** στη γλώσσα της σχετικής χώρας χρήσης.
- ET** Antud Rotho Blaasi toodet tohib paigaldada ja / või kasutada ainult kvalifitseeritud personal, kes on lugenud kasutamise riigi keeles **1** **PAIGALDUSJUHENDIS** ja **2** **OHUTUSEESKIRJU** ning nendest aru saanud.
- FI** Tämän Rotho Blaas -tuotteen asennus ja/tai käyttö on sallittu vain asiantuntevan henkilöstön toimesta sen jälkeen, kun he ovat lukeneet ja ymmärtäneet **1** **ASENNUSOHJEIDEN** ja **2** **TURVALLISUUSMÄÄRÄYKSET** käytömaan kielellä.
- HR** Postavljanje i/ili uporaba proizvoda Rotho Blaas dopuštena je samo stručnom osoblju koje je prethodno pročitalo i razumjelo **1** **UPUTA ZA MONTAŽU** kao i **2** **PROPISE O SIGURNOSTI** na jeziku zemlje uporabe.
- HU** A Rotho Blaas termékét kizárólag hozzáértő személyzet szerelheti be és/vagy használhatja, az adott országnak megfelelő nyelvű **1** **TELEPÍTÉSI KÉZIKÖNYV** és **2** **BIZTONSÁGI SZABÁLYOK** elolvasása és megértése után.

INFORMATION

Type

Rothoblaas

TOWER - TOWER22 - TOWERA2

Related standard(s)

EN 795:2012 A+C

CEN/TS 16415:2013 A+C

UNI 11578:2015 A+C

Maximum number of users

4 users

Name or logo of manufacturer/
distributor

ROTHOBLAAS

Serial number and year of
manufacture

XXXXYY

(XXXX = lot number – YY = year)



TOWER
Installation
Manual



TOWER
Safety
Regulations

SAFETY INSTRUCTIONS

IS Aðeins þjálfað starfsfólk má setja upp og/eða nota þessa Rotho Blaas-vöru eftir að hafa lesið og skilið **1** UPPSETNINGARHANDBÓKAR og **2** REGLUGERÐIR UM ÖRYGGI á tungumáli þess lands sem varan er notuð í.

LT Produktą „Rotho Blaas“ montuoti ir (arba) naudoti leidžiama tik patyrusiems personalui, prieš tai perskaičius ir supratus **1** MONTAVIMO VADOVE ir **2** SAUGOS TAISYKLES atitinkamos šalies, kurioje eksploatuojama, kalba.

LV Rotho Blaas produkta uzstādīšana un/vai lietošana ir atļauta tikai pieredzējušam darbiniekam pēc **1** UZSTĀDĪŠANAS ROKASGRĀMATĀ un **2** DROŠĪBAS NĒMĒKĀM izlasīšanas un izpratnes attiecīgās valsts valodā, kurā produkts tiks lietots.

NL De installatie en/of het gebruik van het product Rotho Blaas is voorbehouden aan uitsluitend vakbekwaam personeel dat de **1** INSTALLATIEHANDLEIDING en de **2** VEILIGHEIDSVOORSCHRIFTEN in de taal van het land van gebruik gelezen en begrepen heeft.

NO Dette Rotho Blaas-produktet skal bare installeres og/eller brukes av kvalifisert personell som har lest og forstått **1** INSTALLASJONSHÅNDBOKEN og **2** SIKKERHETSFORSKRIFTENE, på det språket som brukes i landet produktet anvendes.

PL Instalacji i/lub użytkowania produktu Rotho Blaas może dokonać wyłącznie doświadczony personel, który przeczytał i zrozumiał **1** INSTRUKCJĘ INSTALACJI oraz normy **2** BEZPIECZEŃSTWA w języku kraju użytkowania.

RO Instalarea și/sau utilizarea produsului Rotho Blaas este permisă numai personalului expert, după ce a citit și înțeles **1** MANUALUL DE INSTALARE și **2** NORMELE DE SIGURANȚĂ în limba țării de utilizare a produsului.

SK Inštalácia a/alebo používanie produktu Rotho Blaas je povolené len skúsenému personálu po predchádzajúcom prečítaní a pochopení **1** NÁVODE NA INŠTALÁCIU a **2** BEZPEČNOSTNÝCH NORIEM v jazyku príslušnej krajiny používania.

SL Ta proizvod Rotho Blaas lahko namesti in/ali uporablja samo izkušeno osebe, ki je prebralo in razume vse **1** NAVODILH ZA VGRADNJO in **2** VARNOSTNE PREDPISE v jeziku države njegove uporabe.

SV Endast erfaren personal får installera och/eller använda den här Rotho Blaas-produkten efter att **1** INSTALLATIONSANVISNINGARNA och **2** SÄKERHETSFORESKRIFTER har lästs igenom på språket i installationslandet.

TR Sadece yetkilili personel **1** KURULUM KILAVUZUNDA ve **2** GÜVENLİK MEVZUATINI (2) ürünün kullanıldığı ülke dilinde okuyup anladıktan sonra Rotho Blaas ürününü kurabilir ve/veya kullanabilir.

JA Rotho Blaas製品の施工および使用は、資格を有する専門家のみに許可されています。施工および使用の前に、必ず使用する国の言語で**1**設置マニュアルと**2**安全規則をお読み下さい。

ZH 只有具备合格资质的人员在阅读并理解以使用国的语言编写的**1**安装手册和**2**安全规程后才能安装和/或使用该Rotho Blaas产品。

AR يمكن فقط للفنيين المؤهلين باستخدام أو تركيب منتج Rotho Blaas بعد قراءة وفهم دليل التثبيت **1** نظراً **2** السلامة لبلد المستخدم فيها المنتج

PRODUCT INFORMATION



TOWER -
TOWER22

S235JR
HOT DIP

TOWERA2

INDX
AISI304
INOX



EN 795:2012 A+C
CEN/TS 16415:2013 A+C
UNI 11578:2015 A+C



AS/NZS 5532:2013
AS/NZS 1891.2:2001

EN
795:2012
A + C

CEN/TS
16415:2013
A + C

UNI
11578:2015
A + C

AS/NZS
5532:2013

AS/NZS
1891.2001

AS/NZS
1891.4:2009

EN 795:2012 A+C, CEN/TS 16415:2013, UNI 11578:2015 A+C

rothoblaas TOWER

XXXX/NN/X

EN 795:2012 A+C, CEN/TS 16415:2013, UNI 11578:2015 A+C

rothoblaas TOWER22

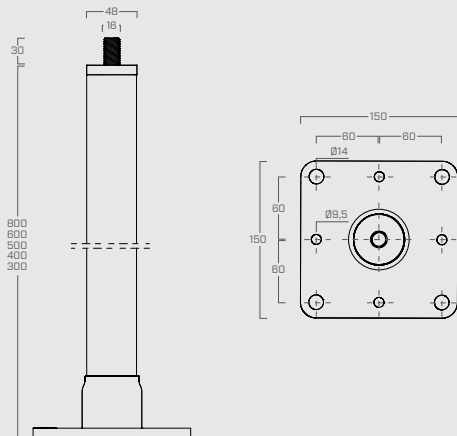
XXXX/NN/X

EN 795:2012 A+C, CEN/TS 16415:2013, UNI 11578:2015 A+C

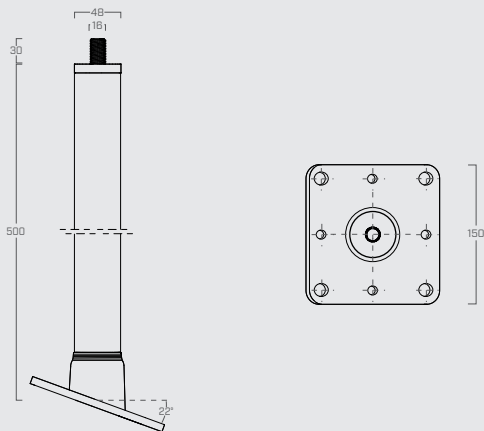
rothoblaas TOWERA2

XXXX/NN/X

■ TOWER - TOWER A2 DIMENSIONS

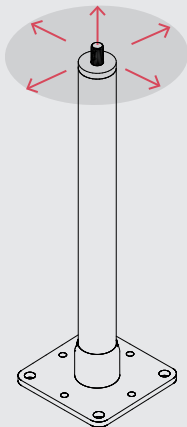


■ TOWER22 DIMENSIONS



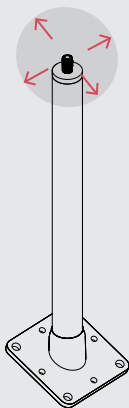
■ LOAD TEST MODEL TOWER - TOWER A2

- IT** ⚠ Verificare idoneità statica del sottofondo di montaggio!
- DE** ⚠ Die statische Eignung des Montageuntergrundes sicherstellen!
- EN** ⚠ Check the static suitability of the installation substrate!
- ES** ⚠ ¡Compruebe la idoneidad estática del sustrato de montaje!
- FR** ⚠ Vérifier l'adéquation statique du substrat d'assemblage!

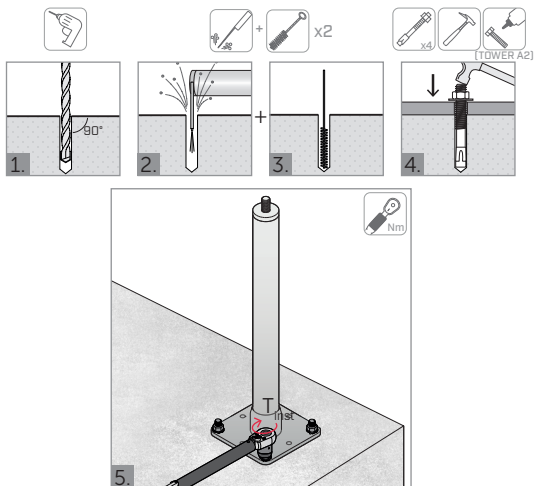


■ LOAD TEST MODEL TOWER22

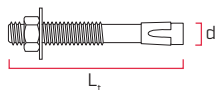
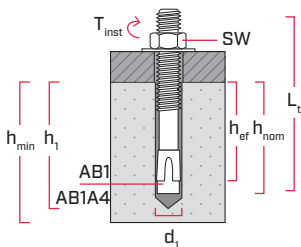
- IT** ⚠ Verificare idoneità statica del sottofondo di montaggio!
- DE** ⚠ Die statische Eignung des Montageuntergrundes sicherstellen!
- EN** ⚠ Check the static suitability of the installation substrate!
- ES** ⚠ ¡Compruebe la idoneidad estática del sustrato de montaje!
- FR** ⚠ Vérifier l'adéquation statique du substrat d'assemblage!



TOWER - TOWER A2 - TOWER22 CONCRETE SUBSTRUCTURE

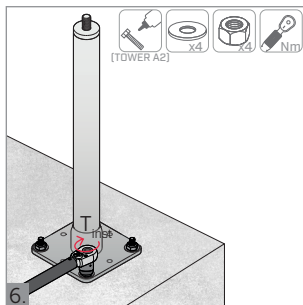
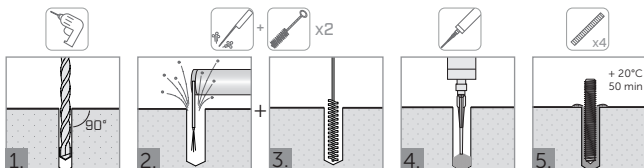


AB1/AB1A4

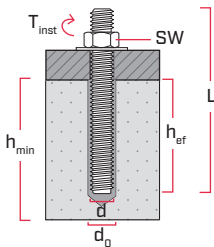


d	$= d_1 = M12$	$h_{ef} \geq 70$	mm
L_t	≥ 118	$SW = 19$	mm
h_1	≥ 90	$T_{inst} = 70$	Nm
h_{nom}	≥ 81	$h_{min} \geq 140$	mm

TOWER - TOWER A2 - TOWER22 CONCRETE SUBSTRUCTURE



M12 - 5.8 min/A2



$$70 \leq h_{ef} \leq 240 \text{ mm}$$

$$h_{min} \geq h_{ef} + 30 \text{ mm}$$

$$L \geq h_{ef} + 20 \text{ mm}$$

$$h_{min} \geq 140 \text{ mm}$$

$$d_o = 14 \text{ mm}$$

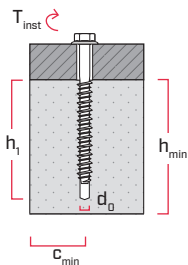
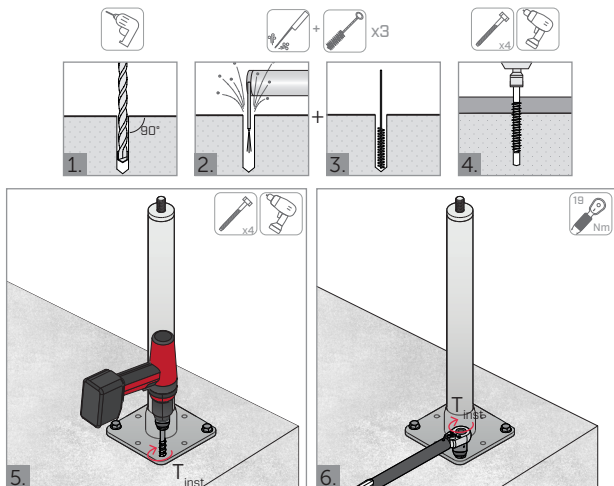
$$d = 12 \text{ mm}$$

$$SW = 19 \text{ mm}$$

$$T_{inst} = 40 \text{ Nm}$$

$$L \geq 140 \text{ mm}$$

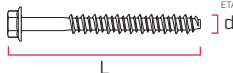
TOWER - TOWER A2 - TOWER22 CONCRETE SUBSTRUCTURE



M12 - 5.8 min/A2



SKR CE
ETA-18/0279
ETA-19/0100



d	=	12 mm	d ₀	=	10 mm
L	=	90 mm	h ₁	=	100 mm
T _{inst}	=	80 Nm	h _{min}	≥	130 mm
			c _{min}	≥	96 mm

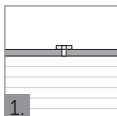
**TOWER - TOWER A2 -
TOWER22
GL24H SUBSTRUCTURE**



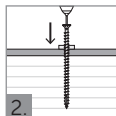
GL24H



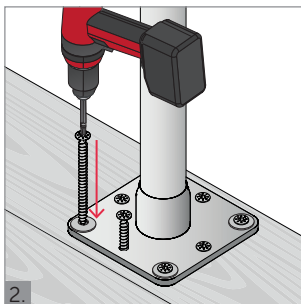
INCLUDED IN BEF201VGS



1.

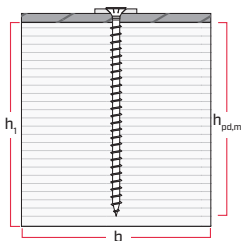


2.



2.

VGS 9 x L mm



h_1	$\geq$	160 mm	$h_{pd,min}$	$\geq$	150 mm
d	$=$	9 mm	h_1	$\geq$	$h_{pd,min}$
L	$\geq$	160 mm	b	$\geq$	160 mm

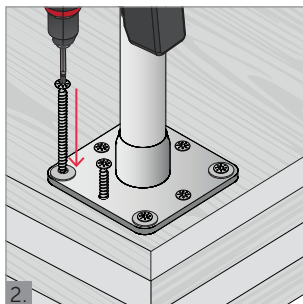
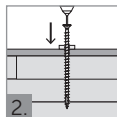
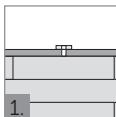
TOWER - TOWER A2 - TOWER22 CLT SUBSTRUCTURE



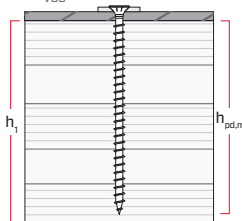
CLT



INCLUDED IN BEF202VGS



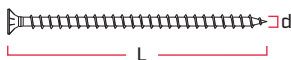
VGS



VGS 9 x L mm



VGS
VGS EVO
ETA-11/0030



h_1	$\geq$	200 mm	$h_{pd,min}$	$\geq$	190 mm
d	$=$	9 mm	h_1	$\geq$	$h_{pd,min}$
L	$\geq$	200 mm			

**TOWER - TOWER A2 -
TOWER22
STEEL SUBSTRUCTURE**



S235



ULS



M12

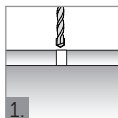


M12



19

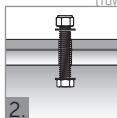
(TOWER A2)



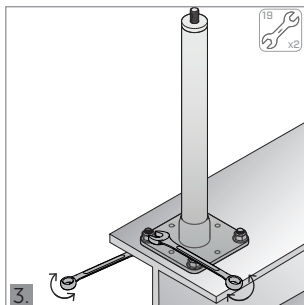
1.



(TOWER A2)



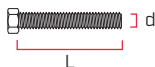
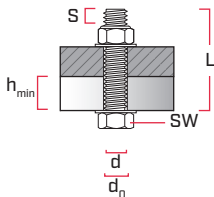
2.



3.



M12 - 8.8 min/A2-A4



d	$=$	12 mm	SW	$=$	19 mm
d_0	$=$	12,5 mm	s	$\geq$	2 mm
L	$\geq$	35 mm			
L	$\geq$	$h_{min} + 25 \text{ mm}$			
h_{min}	$\geq$	6 mm			

TOWER - TOWER A2 + TOWERPEAK WOOD SUBSTRUCTURE



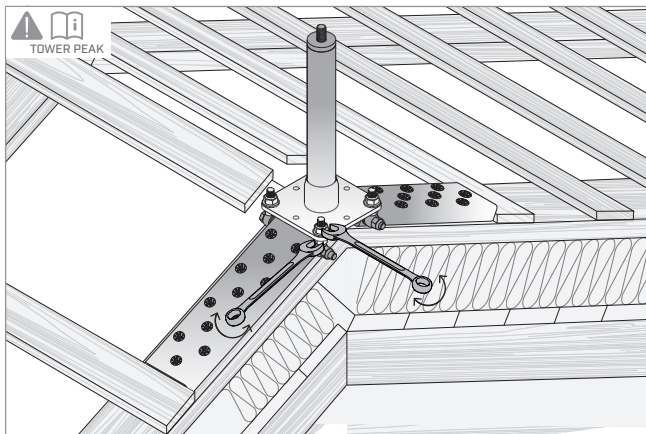
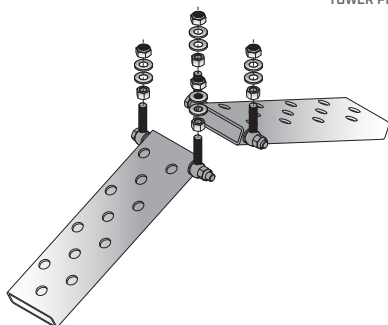
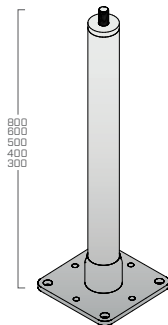
GL24H



HBS



TOWER PEAK



TOWER22 + TOWERSLOPE WOOD SUBSTRUCTURE



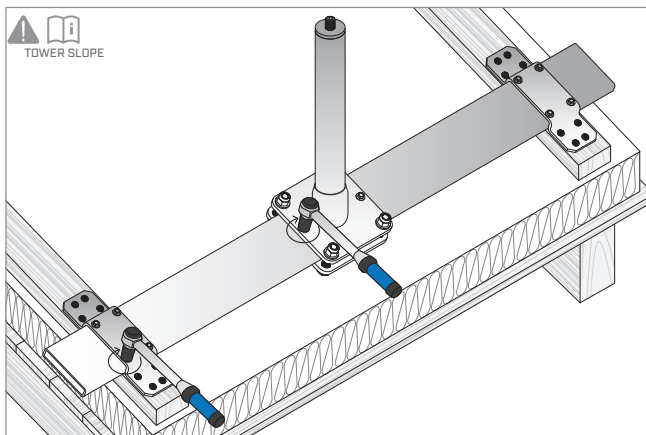
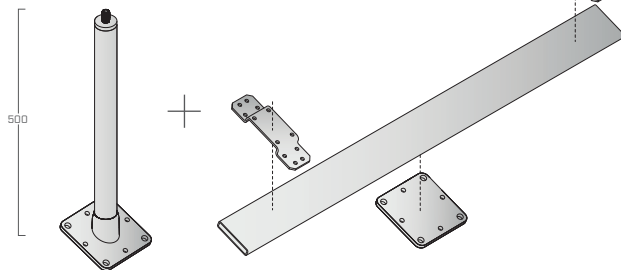
GL24H



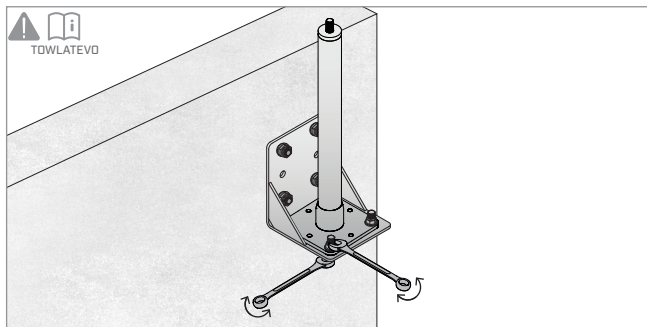
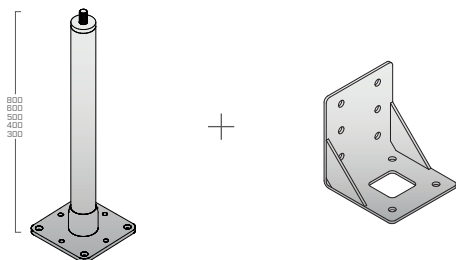
HBS



TOWER SLOPE



**TOWER - TOWER A2 +
TOWLATEVO**
STEEL/CONCRETE/WOOD
SUBSTRUCTURE

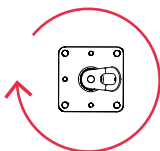


ANCHOR POINT

EN
795:2012
A

CEN/TS
16415:2013
A

UNI
11578:2015
A



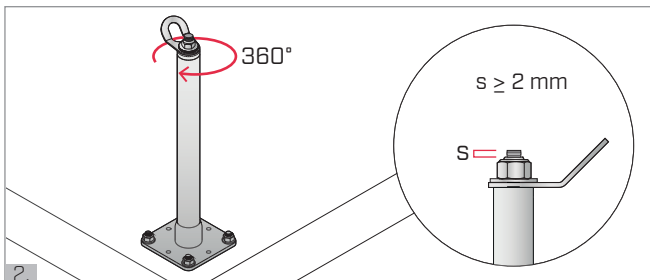
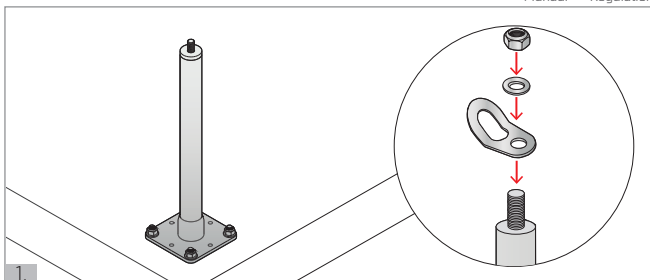
TOWER - TOWER22 - TOWERA2 + AOS01



AOS01
Installation
Manual



AOS01
Safety
Regulations



ANCHOR LINE



TOWER - TOWERA2 + PATROL + SPEAR



TOWER22 + PATROL + SPEAR

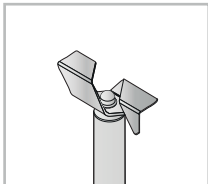


TOWER - TOWERA2 + PATROL + SPEAREVO

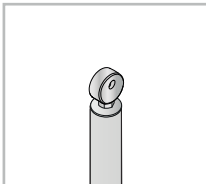


SUPPORTS

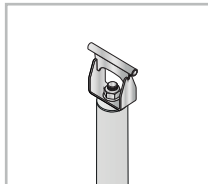
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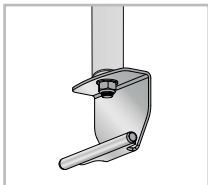
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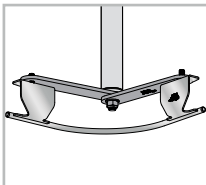
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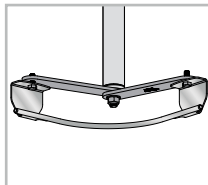
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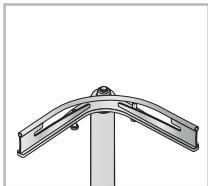
OHANGEXT + ANG SUP



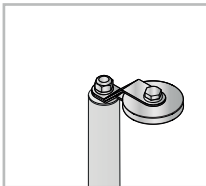
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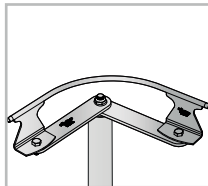
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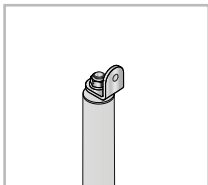
PATROLANG



PASANGBEND + ANG SUP

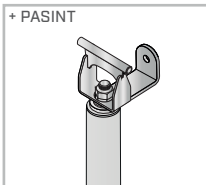


PATROLTERM

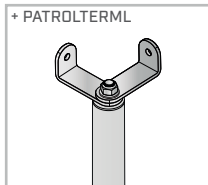


PATROLTERML

+ PASINT



+ PATROLTERML





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04-23

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