

ZERTIFIKAT CERTIFICATE

Hiermit wird bescheinigt, dass die Firma / *This certifies that the company*

NEXO S.A.
Z.A. de la Dame Jeanne
60128 Plailly
France

berechtigt ist, das unten genannte Produkt mit dem abgebildeten Zeichen zu kennzeichnen
is authorized to provide the product mentioned below with the mark as illustrated

Fertigungsstätte
Manufacturing plant

NEXO S.A.
Z.A. de la Dame Jeanne
60128 Plailly
France

Beschreibung des Produktes
(Details s. Anlage 1)
Description of product
(Details see Annex 1)

Lautsprecher Flugsystem Typ STM
Loudspeaker flying system type STM

Geprüft nach
Tested in accordance with

EN 1993-1-1 Steel structures; design and construction

Registrier-Nr. / *Registered No.* 44 780 13157805
Prüfbericht Nr. / *Test Report No.* 18 780 487157
Aktenzeichen / *File reference* 2.4-203/2016 / 35227093

Gültigkeit / *Validity*
von / *from* 2018-11-22
bis / *until* 2022-09-26



TÜV NORD CERT GmbH
Zertifizierungsstelle Maschinen

Essen, 2018-11-22

TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen www.tuev-nord-cert.de prodcert@tuev-nord.de

Bitte beachten Sie auch die umseitigen Hinweise
Please also pay attention to the information stated overleaf



Hinweise zum TÜV NORD- Zertifikat

Dieses TÜV NORD - Zertifikat gilt nur für die umseitig bezeichnete Firma und das angegebene Produkt. Es kann nur von der Zertifizierungsstelle auf Dritte übertragen werden.

Notwendige Bedienungs- und Montageanweisungen müssen jedem Produkt beigelegt werden.

Jedes Produkt muss deutlich einen Hinweis auf den Hersteller oder Importeur und eine Typenbezeichnung tragen, damit die Identität des geprüften Baumusters mit den serienmäßig in den Verkehr gebrachten Produkten festgestellt werden kann.

Der Inhaber des TÜV NORD - Zertifikates ist verpflichtet, die Fertigung der Produkte laufend auf Übereinstimmung mit den Prüfbestimmungen zu überwachen und insbesondere die in den Prüfbestimmungen festgelegten oder von der Zertifizierungsstelle geforderten Kontrollprüfungen ordnungsgemäß durchzuführen.

Bei Änderungen am geprüften Produkt ist die Zertifizierungsstelle umgehend zu verständigen.

Bei Änderungen und bei befristeten Zertifikaten ist das Zertifikat nach Ablauf der Gültigkeit urschriftlich an die Zertifizierungsstelle zurückzugeben. Die Zertifizierungsstelle entscheidet, ob das Zertifikat ergänzt werden kann oder ob eine erneute Zertifizierung erforderlich ist.

Für das TÜV NORD - Zertifikat gelten außer den vorgenannten Bedingungen auch alle übrigen Bestimmungen des allgemeinen Vertrages. Es hat solange Gültigkeit, wie die Regeln der Technik gelten, die der Prüfung zu Grunde gelegt worden sind, sofern es nicht auf Grund der Bedingungen des allgemeinen Vertrages früher zurückgezogen wird.

Dieses TÜV NORD - Zertifikat verliert seine Gültigkeit und muss unverzüglich der Zertifizierungsstelle zurückgegeben werden, falls es ungültig wird oder für ungültig erklärt wird.

Hints to the TÜV NORD - Certificate

This TÜV NORD - certificate only applies to the firm stated overleaf and the specified product. It may only be transferred to third parties by the certification body.

Each product must be accompanied by the instructions which are necessary for its operation and installation.

Each product must bear a distinct indication of the manufacturer or importer and a type designation so that the identity of the tested sample maybe determined with the product launched on the market as a standard.

The bearer of the TÜV NORD - Certificate undertakes to regularly supervise the manufacturing of products for compliance with the test specifications and in particular properly carry out the checks which are stated in the specifications or required by the test laboratory.

In case of modifications of the tested product the certification body must be informed immediately.

In case of modifications and expiration of validity the original certificate must be returned to the certification body immediately. The certification body decides if the certificate can be supplemented or whether a new certification is required.

In addition to the conditions stated above, all other provisions of the General Agreement are applicable to the TÜV NORD - Certificate. It will be valid as long as the rules of technology on which the test was based are valid, unless revoked previously pursuant to the provisions of the General Agreement.

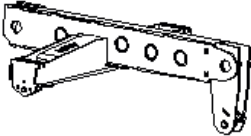
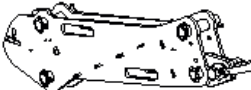
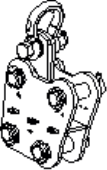
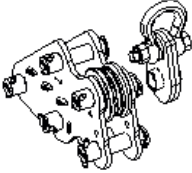
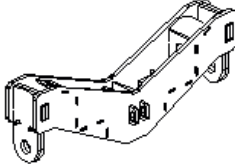
This TÜV NORD - Certificate will become invalid and shall be returned to the certification body immediately in the event that it shall expire without delay when it has expired or revoked.

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Technical Ratings:

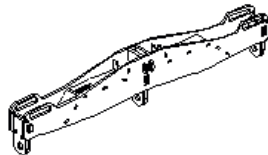
Rigging components:	Type		Weight
	STT-XBOW		16 kg
	STT-KBEAM		26 kg
	STT-MLINK		8 kg
	STT-PTILT		12 kg
	STT-XCOUP2		20 kg

ANLAGE ANNEX

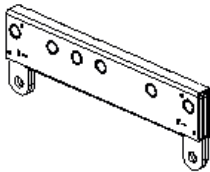
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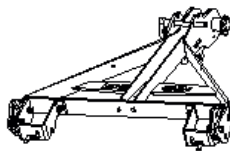
STT-XCOUP3| 34 kg



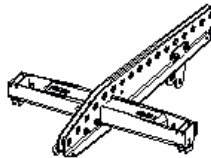
STT-MBEAM 19 kg



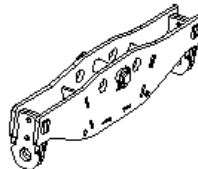
STT-BTBUMPER 10 kg



STT-LBUMPM28 17 kg



STT-BCOUP2 16 kg



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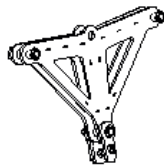
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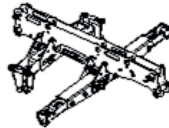
STT-BCOUP3 34 kg



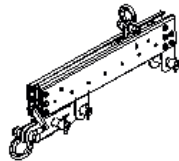
STT-DPLATE 24 kg



STT-LBUMPER 62 kg



STT-VBUMP 25 kg



VXT-BRIDLE23 9 kg



GTT-BCCH 10 kg





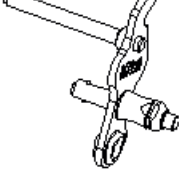


Essen, 2018-11-22

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zum Zertifikat Registrier-Nr. / to Certificate Registration No. 44 780 13157805

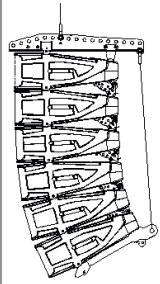
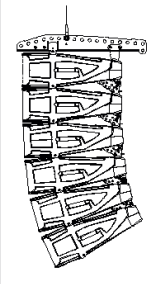
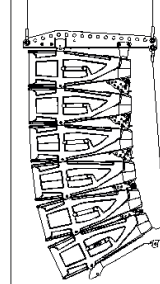
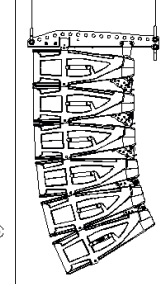
STT-BCCH3		30 kg
VXT-LEVA750		11 kg
VXT-LEVA1500		24 kg
STT-FHANDLE		3 kg
STT-M46TOM28		1 kg

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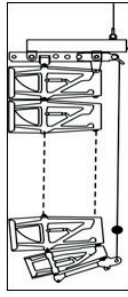
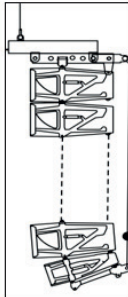
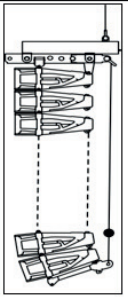
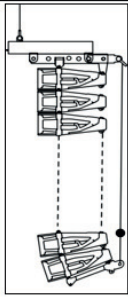
Loudspeaker weight: STM-B112: 59 kg
STM-M28: 37 kg
STM-M46: 59 kg
STM-S118: 85 kg

		Light Bumper M28			
		One Motor		Two Motor	
Rigging Points		Compression	Tension	Compression	Tension
Mode		750			
Chain Lever Hoist					
M28 only	Single				

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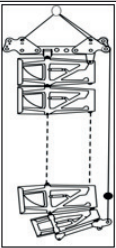
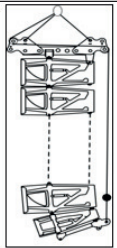
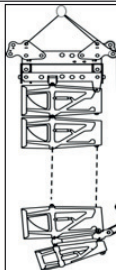
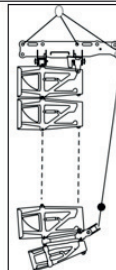
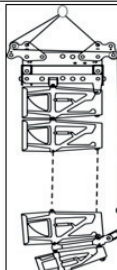
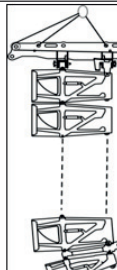
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		Variobumper - Single Motor		
STM General	Single	Rigging Points Bumper Top M28 Mode Chain Lever Hoist	One Motor + Variobumper	
			Vario Rear Compression 750/1500	Vario Front Compression 750/1500
				
M28 only	Single	Rigging Points Bumper Top Chain Lever Hoist	One Motor + Variobumper	
			Vario Rear 750/1500	Vario Front 750/1500
				

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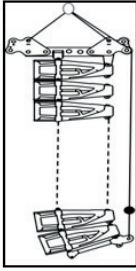
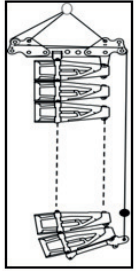
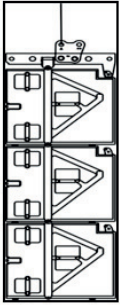
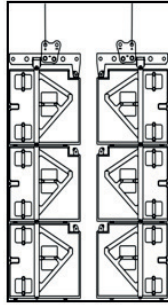
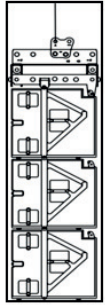
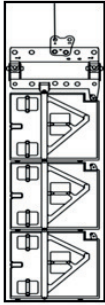
zum Zertifikat Registrier-Nr. / to Certificate Registration No. 44 780 13157805

STM General	Single	Chain Lever Hoist - Single Motor			
		Rigging Points	One Motor		
	Bumper Top	No Kbeam	No Kbeam		
	M28 Mode	Compression	Compression		
Chain Lever Hoist	750/1500	750/1500			
Bridle Fix Leg	Front	Rear			
					
Bass left or right	Rigging Points				
	One Motor				
Bumper Top	No Kbeam	LWB	No Kbeam	LWB	
M28 Mode	Tension	Tension	Tension	Tension	
Chain Lever Hoist	750/1500	750/1500	750/1500	750/1500	
Bridle Fix Leg	Front	Front	Rear	Rear	
					

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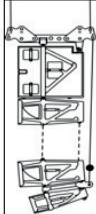
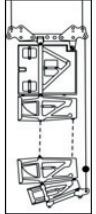
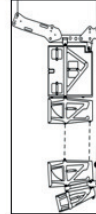
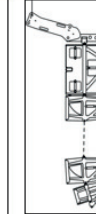
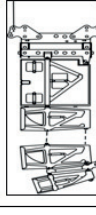
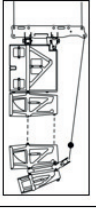
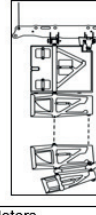
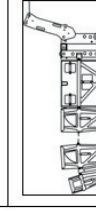
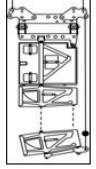
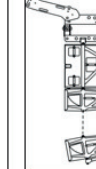
zum Zertifikat Registrier-Nr. / to Certificate Registration No. 44 780 13157805

Chain Lever Hoist - Single Motor						
		Rigging Points Bridle Fix Leg Chain Lever Hoist	One Motor			
			Front 750/1500		Rear 750/1500	
M28 only	Single					
S118 only	Bumper forced at 0°	Rigging Points	One Motor			
			(O/S)	(B2B)	(O/D or S2S)	(OT)
						

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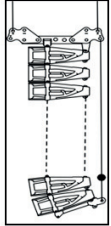
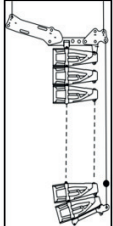
zum Zertifikat Registrier-Nr. / to Certificate Registration No. 44 780 13157805

		Chain Lever Hoist - Two Motors				
		Rigging Points	Two Motors			
STM General	Single	Bumper Top M28 Mode Chain Lever Hoist	No Kbeam Tension 750/1500	No Kbeam Compression 750/1500	Kbeam Front Tension 750/1500	Kbeam Front Compression 750/1500
						
STM General	Bass left or right	Bumper Top M28 Mode Chain Lever Hoist	No Kbeam Tension 750/1500	LWB Rear Tension 750/1500	LWB Front Tension 750/1500	Kbeam Front Tension 750/1500
						
STM General	Bass left and right	Bumper Top Chain Lever Hoist	No Kbeam 750/1500			Kbeam Front 750/1500
						

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		Chain Lever Hoist - Two Motors			
		Rigging Points	Two Motors		
		Bumper Top Chain Lever Hoist	No Kbeam 750/1500		Kbeam Front 750/1500
M 28 Only	Single				

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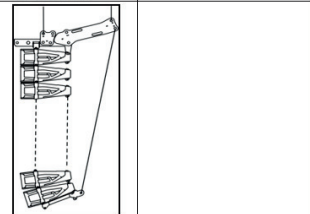
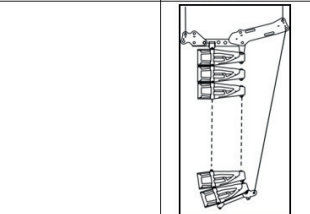
zum Zertifikat Registrier-Nr. / to Certificate Registration No. 44 780 13157805

		Compression Chain			
		Rigging Points Bumper Top M28 Mode Compression Chain	Two Motors		
STM General	Single	Kbeam+Mlink Tension 1500/3000	Kbeam+Mlink Compression 1500/3000	Kbeam+Ptilt Tension 1500/3000	Kbeam+Ptilt Compression 1500/3000
	Bass left or right	Kbeam+Mlink Tension 1500/3000		Kbeam+Ptilt Tension 1500/3000	
	Bass left and right	Kbeam+Mlink Tension 1500/3000		Kbeam+Ptilt Tension 1500/3000	

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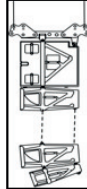
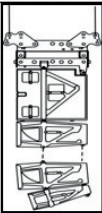
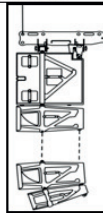
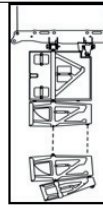
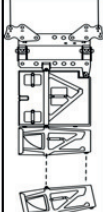
zum Zertifikat Registrier-Nr. / to Certificate Registration No. 44 780 13157805

M28 only	Single	Compression Chain			
		Rigging Points Bumper Top Compression Chain	Two Motors		
			Kbeam+Mlink 1500/3000		Kbeam+Ptit 1500/3000
					

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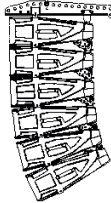
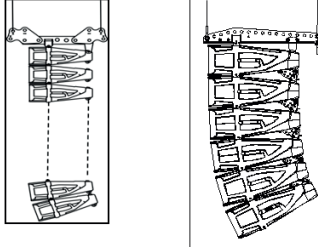
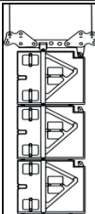
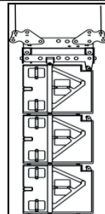
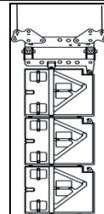
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STM General	Single	Fixed Installation			
		Rigging Points Bumper Top M28 Mode	Two Motors - Fix install		
		No Kbeam Tension			
					
	Bass left or right	Two Motors - Fix install			
		Rigging Points Bumper Top M28 Mode	No Kbeam Tension	LWB Rear Tension	LWB front Tension
					
Bass left and right	Two Motors - Fix install				
	Rigging Points				
					

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Fixed Installation						
		Rigging Points	Fix install			
			Single Motor	Two Motors		
M28 Only	Single					
S118 Only	Bumper forced at 0°	Rigging Points	Two Motors			
			(O/S)	(O/D or S2S)	(O/T)	
						

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ANNEX

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Restrictions concerning maximum number of cabinets

For all desired configurations an individual proof of structural integrity like described in this report is necessary. Especially angle settings with important angles between the cabinets can reduce the maximum allowable number of cabinets which can be flown together.

For practical use the proof of structural integrity like described in this report has been introduced in the programme GeoSoft.

The dimension of an additional securing is not part of this structural report.

Subbasses in combination with STM-loadspeakers are always located at the top of the cluster.

The maximum angle between two M46 resp. B112 loudspeakers is limited to 10°.

The angle between two subbasses (S118) is always 0°.

The angle between a subbass (S118) and a M46 resp. B112 underneath is always 2,5°.

The angle between two M28 loudspeakers is limited to 15°.

The total load of a cluster with one column is limited to 1700 kg.

The total load of a cluster with two columns is limited to 3400 kg.

The total load of a cluster with three columns is limited to 5100 kg.

Downfill of M28 is limited to three cabinets.

The total load of a double cluster with light-bumper is limited to 1700 kg.

The total load of a cluster with vario-bumper is limited to 530 kg and a maximum angle of inclination of 25°.

The total load of a cluster with Light Bumper STT-LBUMPM28 and 9 M28 cabinets is limited to 400 kg.

Light Bumper => STT-LBUMPER

Vario Bumper => STT-VBUMP

Light Bumper => STT-LBUMPM28



TÜV NORD CERT GmbH
Zertifizierungsstelle Maschinen

Essen, 2018-11-22