



geo
M12

Taking line array performance to a whole new level

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Thinking. Inside the box.

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GEO M12 takes its place as the flagship of NEXO's GEO M Series, sharing the same aesthetic and sonic signatures as the acclaimed GEO M10 and compact GEO M6 line arrays.

Utilising a number of patented technologies, the NEXO hallmarks of power, flexibility, coverage and superb sonic performance are immediately apparent in a system that is available in both touring and installation versions, and includes a dedicated sub bass cabinet, the MSUB18.



Aimed primarily at the mid-size rental company, the GEO M12's competitive price tag will make it a popular investment in a range of applications from corporate presentation to live performance venues and houses of worship.

Measuring just 370mm x 700mm x 446mm, and weighing in at 34kg, the M12 line array module employs a premium 12" Neodymium LF driver paired with 1.4" titanium diaphragm HF



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driver, and is offered with two vertical dispersions; the 10° GEO M1210 and the 20° GEO M1220. Horizontal directivity can also be changed in seconds from 80° to 120°.

Integral rigging hardware with no loose parts makes it easy to quickly configure ground stacks and line arrays of various scales. Amplification is via NEXO's NXAMP4x4 TDcontroller, running with up to three M12 cabinets per channel, with systems controllable over a network using a Dante, Ethersound or AES/EBU digital expansion card.

Versatility is further enhanced by a protected switch on the rear of the M12 module allowing the user to change, on the fly, from 2-way passive to 2-way active mode, without having to open the box. And with a frequency response of 50Hz-20kHz and a nominal peak SPL of 140dB, the GEO M12 is almost twice as powerful as the NEXO 12-inch line array cabinet that precedes it, the globally-renowned GEO S12.

GEO M12 Line Array Element, available in touring and installation versions with 10° or 20° vertical dispersion

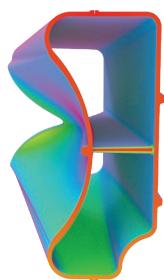


MSUB18



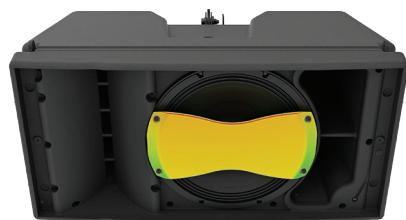
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Optimised performance through smart design



Patented Port Tube Profiling

The M12 module uses a massive, new and improved version of NEXO's patented V-shaped profile of the bass port to ensure smooth air flow, reducing turbulence to increase low frequency efficiency and linearity at high power.



Patented Phase Directivity Device™ (PDD)

A Phase Directivity Device (PDD) on the cone driver extends the upper frequency limit for line source coupling between adjacent speakers. 12" drivers coherently couple as if there were twice as many 6" cones mounted at half the physical distance.

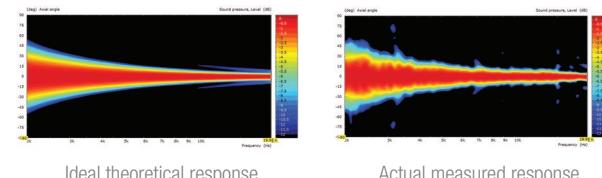




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Like other GEO M Series line arrays, the M12 delivers remarkably high output from a compact cabinet and achieves the principal benefit of single over dual driver designs – extended LF response – using patented technologies to remove what may previously have been seen as drawbacks. A Hyperbolic Reflective Wavesource (HRW™) ensures optimal wavesource coupling without destructive interference while a Phase Directivity Device (PDD) extends the upper frequency limit for line source coupling between adjacent speakers.

And drawing on technologies first seen in NEXO's STM system, M12 enclosures use a urethane co-polymer material and honeycomb structure to achieve exceptional rigidity and light weight.



Ideal theoretical response

Actual measured response

Patented Hyperbolic Reflective Wavesource

GEO M12 makes full use of NEXO's patented Hyperbolic Reflective Wavesource (HRW™) to control acoustic energy by creating a virtual wavesource 'outside the box', resulting in optimal wavesource coupling without destructive interference.



Magnetic Waveguide Flanges

System flexibility can be increased by adding magnetic flanges to the HF waveguide exit, changing the standard 80° acoustic coverage across the horizontal plane to 120°. No tools are required to remove or replace the grille and flanges.



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AutoRig™

Integral rigging with no loose parts



On the GEO M12 touring version, NEXO's elegant AutoRig™ system automatically connects the front rigging system when speakers are assembled, with a guided back rigging system for easy angle adjustment. Perfect coverage is achievable with a choice of 11 angles between cabinets, in arrays of up to 12 boxes. The connection plate uses NL4 connectors. MSUB18 sub bass cabinets can be flown in arrays or used in ground stacks.



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The rigging system of the installation version uses safety nuts and connectivity is made through cable gland and captive 4-core cables – this version being IP54 rated.



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Applications



Large Theatres and Live Venues

The MSUB18 + GEOM12 combination is a high-power yet low visual impact solution perfect for large theatres and live venues. The high efficiency of the MSUB18 enables subs to be flown together with the main cabinets, delivering perfect sub coverage with less or no room taken on stage. The example shown here weighs less than 400 kg making it suitable for any 500 kg single rigging point. The bottom boxes of the line would typically be the higher vertical dispersion model (20°, GEOM1220) equipped with the horizontal flanges option to offer 120° horizontal coverage. This entire line uses only 3 channels of NXAMP4x4 – the remaining channel can be used for ground subs, side fills or near fill, using the custom setups capability of the processor.

Live Events

A rigging point is not always available, but using the same hardware as the previous configuration, a very loud stack composed of 2 x MSUB18 + 3 GEO M12 can be built in a few minutes. A single NXAMP4x4 can feed a stereo system like the one depicted above. The first GEO M12 stacked on the subs can have a negative angle to shoot at the first row of the audience even if the system is staked on a stage. And NS-1 Software can be used to predict the coverage and best angle between boxes, even for stack applications.



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Public Address

In stadium or other large scale systems where public address needs both power and clarity, a small line of 3 x GEO M12 and its smaller bumper, a solution of less than 120 kg, can be used even if the rigging position is a long way from the audience – typically on the edge of a stadium roof. The composite enclosure and the IP54 certification of the GEO M12 installation version will assure many years of problem-free service, while the Yamaha Provisionaire remote control solution will ensure an efficient monitoring of the whole PA system.

Concerts and Festivals

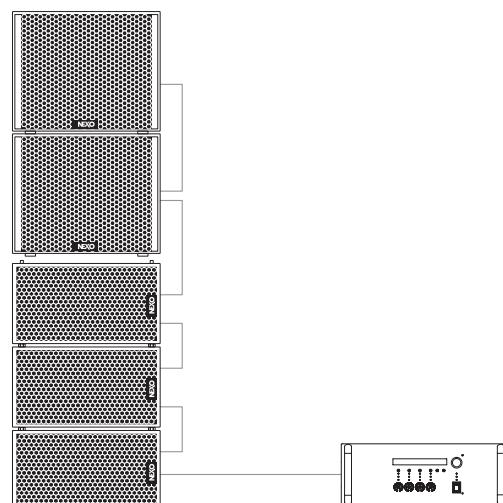
When assembled in its largest configuration, the GEO M12 and MSUB18 solution can support large scale concerts and festivals with just a 700 mm visual footprint . The Cardioid assembly of the MSUB18 line reduces massively the sub coverage on stage, while the line assembly offers large area coverage on the audience. The Autorig system speeds-up the system deployment, and a single NUAR (composed of 2 x NXAMP4X4) is enough to drive a whole system such as the one depicted above. The Dante™ connectivity is another advantage of this powering solution, offering direct connection to any modern digital mixing desk without the hassle of external conversion box.



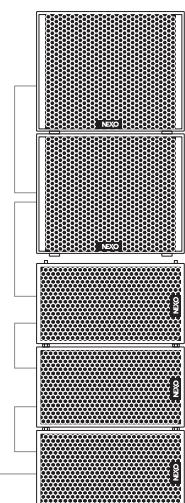
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Typical Systems

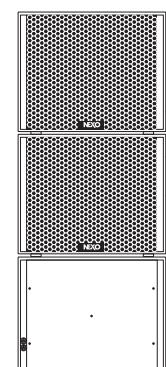
GEO M12 systems powered by a single NXAMP4X4



NXAMP4X4 powering 3 X GEO M12 and 2 X MSUB18 per side



NXAMP4X4 power



Passive or Active Modes

Typical of NEXO's consideration for the working engineer, GEO M12 modules feature a protected switch on the rear panel, enabling users to change, on the fly, from 2-way passive to 2-way active mode, without having to open the box.

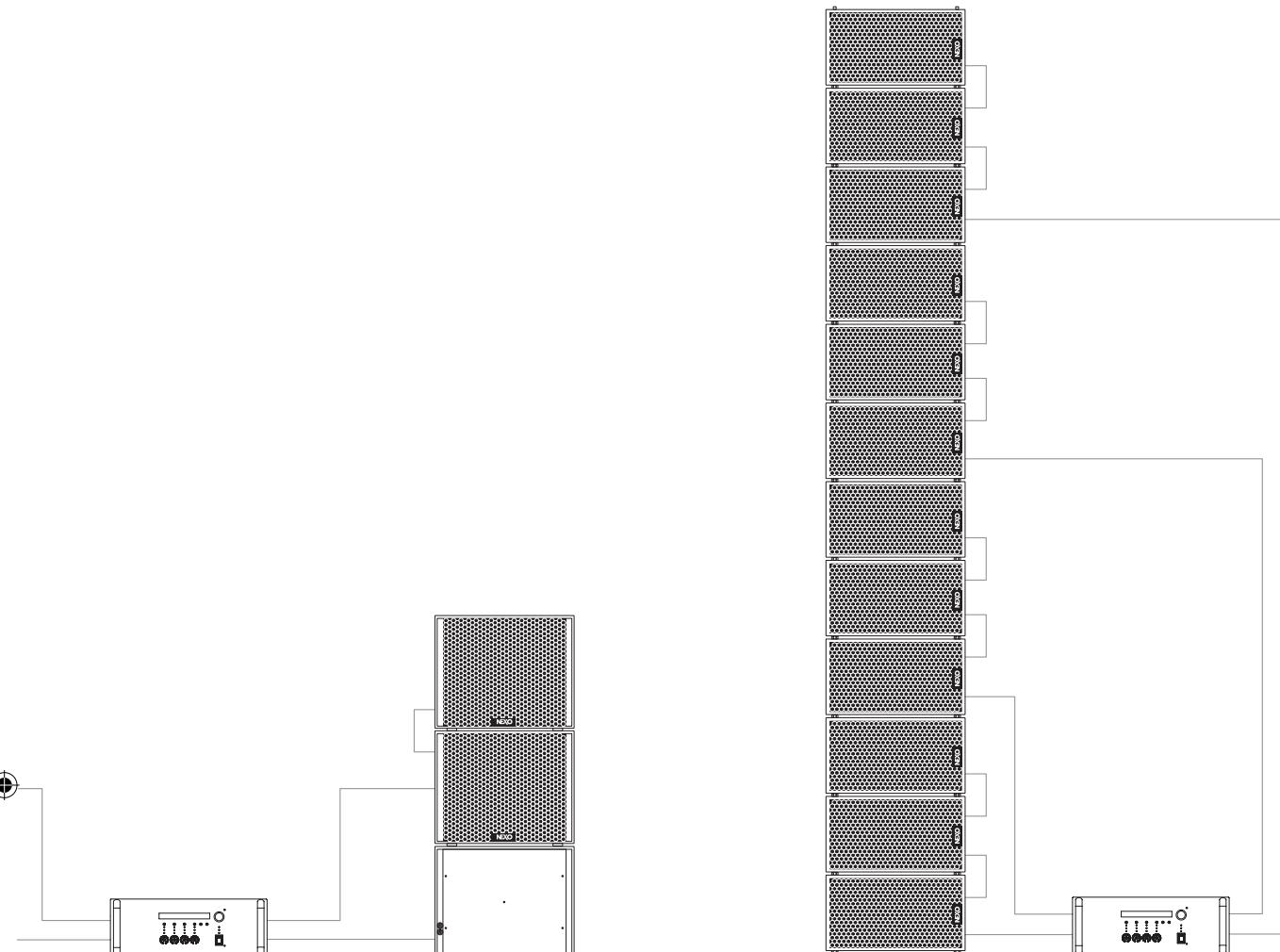


Plug & Play Power and Processing

Plug & Play amplification and processing comes courtesy of NEXO's NXAMP4x4 TDController, running with up to three GEO M12 cabinets per channel. The system can be controlled over a network using a Dante, Ethersound or AES/EBU digital expansion card.



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Powering 3 X MSUB18 (one in cardio mode) per side

NXAMP4X4 powering 12 X GEO M12



NS-1 System Configuration Software

Available to download free of charge, NS-1 is a powerful and intuitive system configuration and simulation tool enabling users to configure and optimise the performance of GEO M12 or any NEXO system by predicting its behaviour in any venue to ensure uniform SPL coverage.



NEXO NeMo Remote Control app

NEXO NeMo is a remote control app for mobile terminals of a set of NEXO NXAMP powered TDControllers. It allows the user to control one or a network of NXAMPS from a Mac, iPad, iPhone or iPod Touch through a Wi-Fi network. Managing and positioning amplifiers, monitoring their parameters (levels, etc.), and setting new values (volume, delay, setup, etc.) are all possible via an attractive and intuitive user interface.



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Touring Bumper

The Touring Bumper (VNT-BUMPM12) enables mixed GEO M12 and MSUB18 flown arrays or groundstacks and can handle a line of up to 12 main boxes or 8 subs. Including an extension bar for extreme angles, the Touring Bumper supports two industry-standard inclinometer formats.



Light Weight Bumper

Perfect for smaller systems, the Light Weight bumper (GMT-LBUMPM12) is compatible with the GEO M12 main box only (not MSUB18) and can handle flown arrays of up to 12 boxes. It can also be used to create small ground stacks of up to 3 boxes and an extension bar is also available. The Light Bumper depth is the same as the GEO M12 cabinet depth.



Flightcases

Two GEO M12 wheeled flightcases are available to accommodate 2 x (GMT-2CASEM12) and 3 x (GMT-3CASEM12) GEO M12 main boxes.





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Accessories



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A 2-way passive or active line array element with 12" LF and 3" voice coil / 1.4" throat HF drivers. Measuring 700mm wide x 370mm high x 446mm deep and weighing 34kg, the GEO M12 is available in Touring and Installation formats in two versions: GEO M1210 with 10° vertical dispersion and GEOM1220 with 20° vertical dispersion. Both cabinets can be set for 80° or 120° horizontal dispersion using magnetic flanges in the waveguide, with no tools required. Cabinets are constructed from a honeycomb-structure urethane co-polymer material and feature integral rigging with no loose parts and handles on the rear and sides. GEO M12 is available in black, white or custom RAL colours.



Touring version

Install version

Specifications

GEO M1210 (without CDDTM)	GEO M1210 (with CDDTM)	GEO M1220 (without CDDTM)	GEO M1220 (with CDDTM)
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GEO M12 with NEXO processing

Frequency Response @-6 dB	50 Hz to 20 kHz		
Sensitivity 1W@1m	105 dB SPL Nominal		
Peak SPL@1m	140 dB		
Vertical Dispersion	10°	20°	
Horizontal Dispersion	80°	120°	80°
Passive Mode Crossover Frequency	1.1 kHz		
Nominal Impedance	Active mode: (8 LF + 16 HF) / Passive mode: 8		
Recommended Power	Active mode: (1250 Watts LF + 625 W HF) / Passive mode: 1250 Watts		

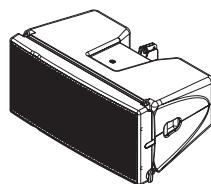
Product Features

LF Component	1 x 12" 8 Ohms long excursion Neodymium driver with PDDTM
HF Component	1 x 3" voice coil 1.4" throat driver on a BEA/FEA optimized HR WavesourceTM
Height x Width x Depth	370mm x 700mm x 446 mm (14.6" x 27.6" x 17.6")
Weight: Net	34 kg (75 lbs)
Connectors (Touring version)	2 x NL4, 4 poles connectors
Touring Connectors pinout	Passive mode: (1+/1- Through, 2+/2- GEO M12) / Active Mode: (1+/1- LF, 2+/2- HF)
Connectors (Install version)	2 x Cable gland with 4 cores cables
Active / Passive mode selection	Ruggedized, recessed, waterproof 2 position switch
Construction	Lightweight Polyurethane Composite
Fittings	2 x Side handles horizontal + back grip
Front Finish (Touring version)	Steel front grill + back mesh
Front Finish (Install version)	Acoustic fabric fitted front grill

System Operation

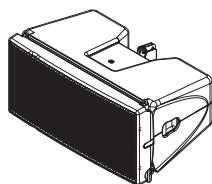
Operating temperature range	0°C - 40 °C (32° F - 104° F)
Storage temperature range	-20 °C - 60 °C (-4 °F - 140 °F)
Recommended powering solution	NXAMP4x4 Powered TDController: up to 3 x GEO M12 per channel
Optional powering solution	NXAMP4x2mk2 Powered TDController: 1 x GEO M12 per channel NXAMP4x1mk2 Powered TDController (Bridged): up to 2 x GEOM12 per channel

GEO M12 System Components



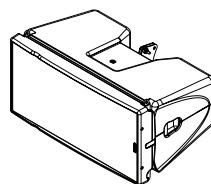
GEOM1210

Line array element, 2 way switchable passive/active, 1x12 inches, touring, black, 10° vertical, 80° horizontal, 50Hz - 20 kHz, 140 dB, 34 kg (GEOM1210-PW for white version)



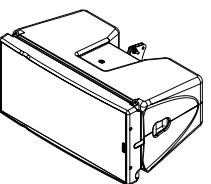
GEOM1220

Line array element, 2 way switchable passive/active, 1x12 inches, touring, black, 20° vertical, 80° horizontal, 50Hz - 20 kHz, 140 dB, 34 kg (GEOM1220-PW for white version)



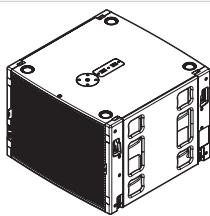
GEOM1210-I

Line array element, 2 way switchable passive/active, 1x12 inches, install, black, 10° vertical, 80° horizontal, 50 Hz - 20 kHz, 140 dB, 34 kg (GEOM1210-IPW for white version)



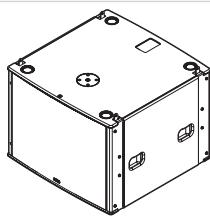
GEOM1220-I

Line array element, 2 way switchable passive/active, 1x12 inches, install, black, 20° vertical, 80° horizontal, 50 Hz - 20 kHz, 140 dB, 34 kg (GEOM1220-IPW for white version)



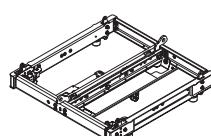
MSUB18

Arrayable Sub hybrid load, 1x18 inches, touring, black, 29-120 Hz, 139 dB, 55 kg (MSUB18-PW for white version)



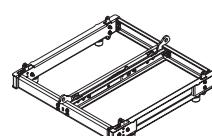
MSUB18-I

Arrayable Sub hybrid load, 1x18 inches, install, black, 29 - 120 Hz, 139 dB, 55 kg (MSUB18-IPW for white version)



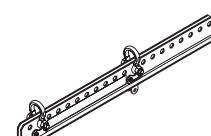
VNT-BUMPM12

Flying / Stacking bumper for GEOM12 and MSUB18, touring, 2 rigging points, 22 kg (VNT-BUMPM12-PW for white version)



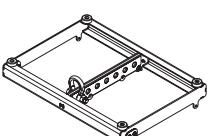
VNI-BUMPM12

Flying / Stacking bumper for GEOM12 and MSUB18, install, 2 rigging points, 20 kg (VNI-BUMPM12-PW for white version)



VNI-EXBARM12

Extension bar for VNT-BUMPM12 or VNI-BUMPM12, 1 or 2 rigging points, 11.5 kg (VNI-EXBARM12-PW for white version)



GMT-LBUMPM12

Flying / Stacking bumper for GEOM12, 1 rigging point, 10.5 kg (GMT-LBUMPM12-PW for white version)



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MSUB18

Measuring 701mm wide x 525mm high x 704mm deep and weighing 55 kg, the MSUB18 is the same width as the GEO M12 main cabinet, and 141% higher. Available in Touring and Installation formats, cabinets are constructed from Baltic birch ply with large composite bumpers on the corners, and feature integral rigging. Employing a single 18" diameter voice coil Neodymium driver in a high-efficiency hybrid band pass cabinet design with a quadratic shaped profiled port, the MSUB18 can be deployed in Omni or Cardioid modes and is available in black, white or custom RAL colours.



Touring version

Install version

Specifications

MSUB18

MSUB18 with NEXO TDController Setup

Frequency Response @-6 dB	32 Hz to 120 Hz
Sensitivity 1W@1m	107 dB SPL Nominal
Peak SPL@1m	139 dB
Available Crossover Frequencies	29-65, 29-75, 29-85, 29-95, 29-120 Hz
Nominal Impedance	4 Ohms
Recommended Power	2000 Watts

Product Features

Component	1 x 18" 4 Ohms very long excursion Neodymium driver
Height x Width x Depth	525mm x 701mm x 704mm (20.6" x 27.6" x 27.7")
Weight: Net	55 kg / 122 lbs
Connectors (Touring version)	4 x NL4, 4 poles connectors (1+/1- MSUB18 / 2+/2- Through)
Connectors (Install version)	2 x Cable gland with 2 cores cables
Construction	Baltic Birch Plywood & textured black or white coating
Fittings	8 x Side handles
Front Finish (Touring version)	Steel front grill + back mesh
Front Finish (Install version)	Acoustic fabric fitted front grill
Operating temperature range	0°C - 40 °C
Storage temperature range	-20 °C - 60 °C

System Operation

Recommended powering solution	NXAMP4x4 Powered TDcontroller: up to 2 x MSUB18 per channel
Optional powering solution	NXAMP4x1mk2 Powered TDcontroller (Bridged): 1 x MSUB18 per channel NXAMP4x2mk2 Powered TDcontroller: 1 x MSUB18 per channel

	GMT-EXBARM12L Extension bar for GMT-BUMPM12, 1 or 2 rigging points, 9.7 kg (GMT-EXBARM12L-PW for white version)		GMT-FLGM12 Pair of magnetic flanges for GEOM12, all models, for 120° horizontal directivity (GMT-FLGM12-PW for white version)		VNT-GSTKM10M12S Short stacking extension for VNT-BUMPM10, VNI-BUMPM10, VNT-BUMPM12, VNI-BUMPM12, 7 kg		VNT-GSTKM10M12L Long stacking extension for VNT-BUMPM10, VNI-BUMPM10, VNT-BUMPM12, VNI-BUMPM12, 9.7 kg		VNT-MNSTKM12 Stacking accessory for GEOM12 on top of MSUB18, 3 kg		VNT-LSTKM1018 Stacking accessory for MSUB15 or GEOM10 on top of MSUB18, 1.5 kg
	MST-WBMSUB18 Wheel board for MSUB18, 7.2 kg		MST-COVMSUB18 Cover for MSUB18, 2.2 kg		MST-DOLLYMSUB18 Dolly for 2 x MSUB18, 10 kg		MST-COV2MSUB18 Cover for 2 x MSUB18, 3.5 kg		GMT-2CASEM12 Flight Case for 2 x GEOM12, 35 kg		GMT-3CASEM12 Flight Case for 3 x GEOM12, 56 kg



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