MEDIUM GROUND MOBILITY SYSTEM
TECHNICAL DATA

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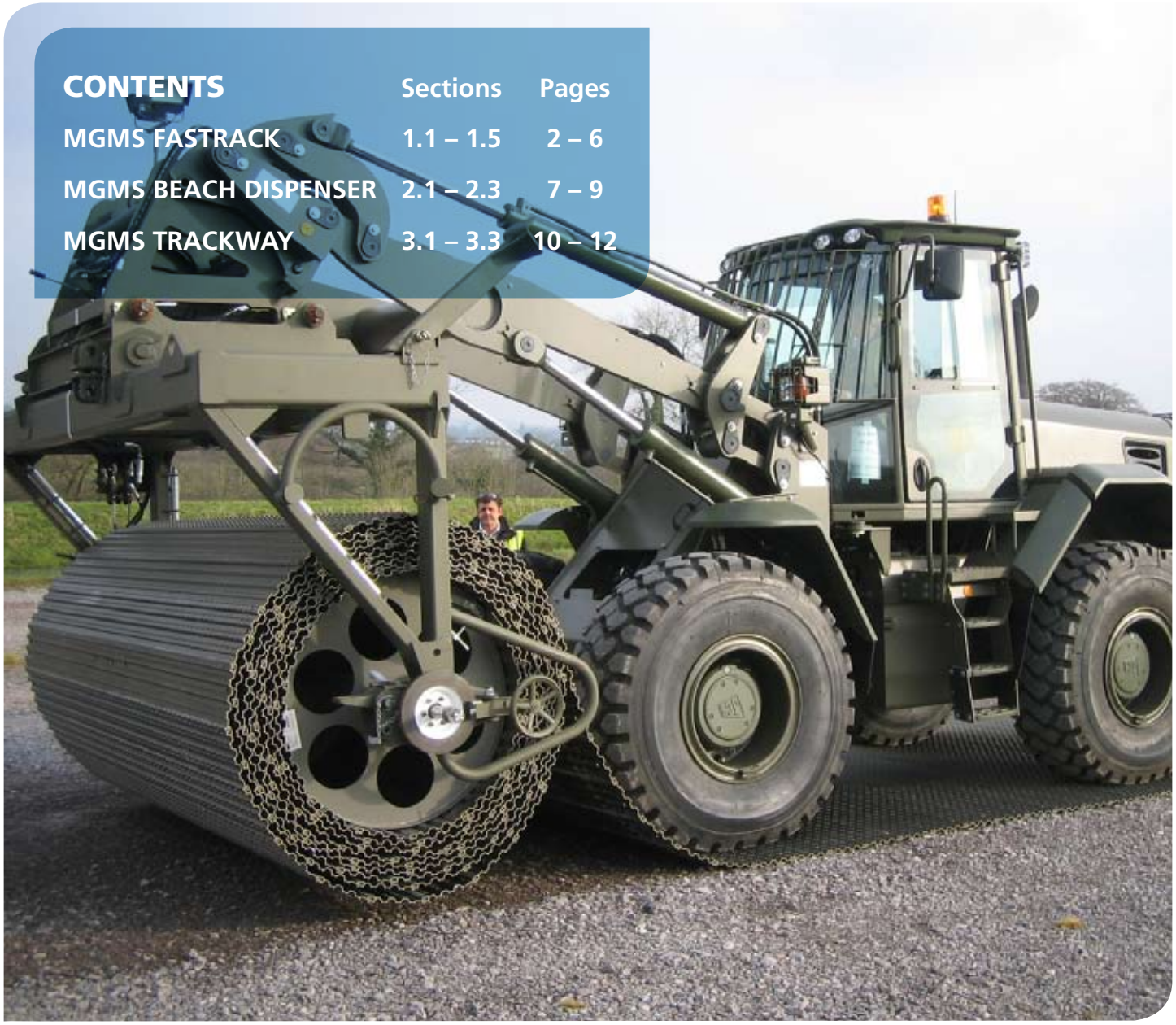


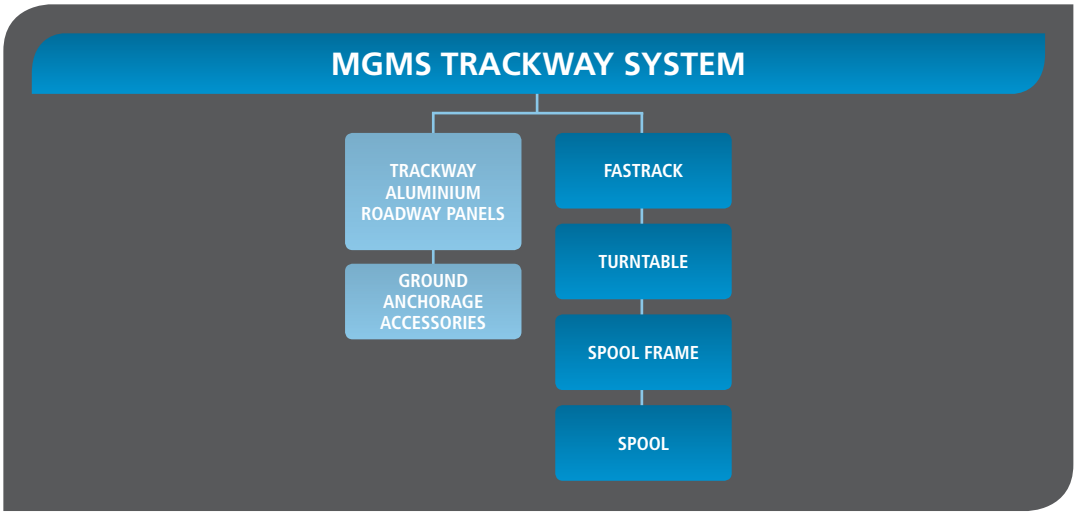
FAUN TRACKWAY

MGMS FASTRACK

SYSTEM INTEGRATION

The Medium Ground Mobility System (MGMS) is a 32m roll of aluminium roadway; frame mounted onto a 4x4 chassis, which is rapidly deployed and recovered using minimal manpower.

The Medium Ground Mobility System (MGMS) consists of the following elements:



FASTRACK DESIGN PRINCIPLE

The principle of the FASTRACK is to facilitate the deployment and recovery of the aluminium panels.

The FASTRACK is NATO codified and designed to BS EN and ISO standards.

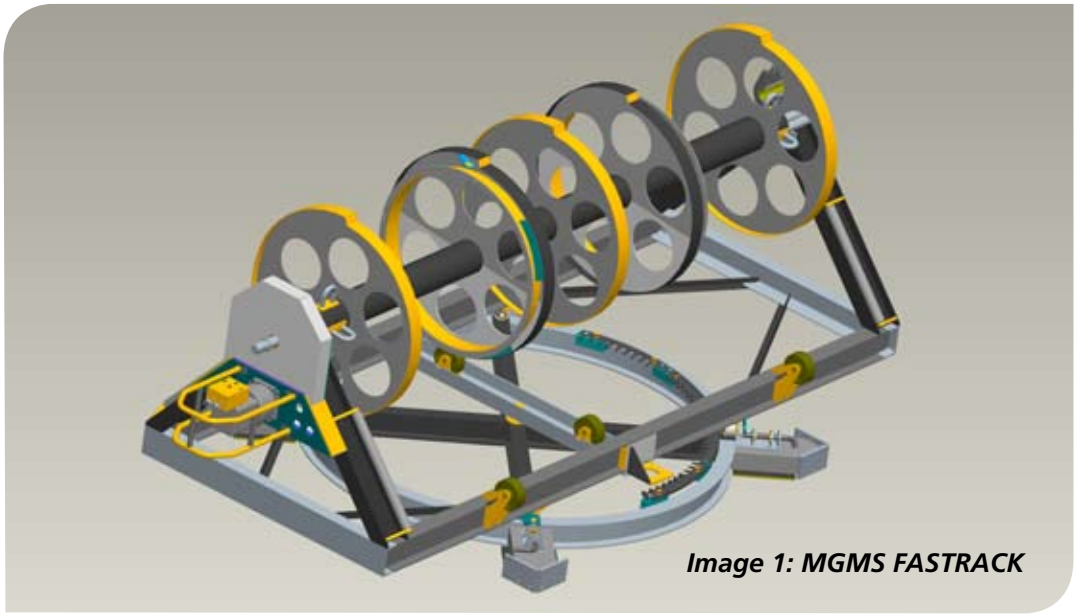


Image 1: MGMS FASTRACK

FASTRACK is an easily demountable platform, compatible with flat bed vehicles. It is secured using twist locks or side clamps.

FASTRACK can also be mounted direct to chassis using any mobile or overhead crane system with a combined 5,000kg lifting capacity.

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The FASTRACK consists of:

- SPOOL FRAME
- Bearing clamp
- Hydraulic power pack
- Halogen 100 watt work light (qty = 2)
- Weight = 537kg
- Spool drive motor
- Slew motor assembly
- Electrical connection turntable
- Rear rollers

The SPOOL FRAME is a steel structure onto which the TRACKWAY and SPOOL are located. The SPOOL STAND is fitted with two bearing caps, complete with t-bolts, to secure the SPOOL.

Movement of the SPOOL FRAME is by hydraulic motor, by rack and pinion through 95° for transportation and laying/ recovery of the TRACKWAY from the vehicle. The SPOOL FRAME has an independent hydraulic power pack attached at one end drawing electrical supply from the vehicle.

- TURNTABLE
- Transit locks
- Turntable side mounting clamps
- Turntable slew gears
- J bolts
- Weight = 324kg

The TURNTABLE has four flat bed fixing clamps or can be supplied with twist lock plates. The TURNTABLE is fitted with four transit locks for securing the SPOOL FRAME in the transit, deployment of recovery mode.

- SPOOL
- Laying and recovery cables
- Drive gear – 31 tooth
- Weight = 320kg

The SPOOL is provided with four lifting eyes at each end and is constructed with four flanges; it has spigot supports, which rest into the bearing housings of the spool stand. At one end of the spool a toothed gear is fitted which engages with the gear on the hydraulic motor, fitted to the SPOOL STAND.

Two deployment cables are coiled around the inner flanges of the spool for safe and easy deployment of the TRACKWAY. Rotation of the spool is by hydraulic motor with gear engaging on gear. The TRACKWAY is prevented from unwinding by transit and holdfast straps, used for the anchorage of the TRACKWAY.

FASTRACK OPERATIONAL PRINCIPLE

The TURNTABLE rotates through 90° from the transit position to the laying position. Rotation of the spool stand is by hydraulic motor with pinion engaging on a gear rack.

Hand operated locking bolts secure the TURNTABLE in either the transit or laying position.

The SPOOLFRAME is mounted onto the TURNTABLE base to form the complete FASTRACK.

At the rear of the main frame, roller accessories can be attached, ensuring that the aluminium roadway panels pass smoothly under the rear wheels of the truck.

Optional ISO 668 twist lock receivers can be incorporated into four positions of the main frame so that the FASTRACK can be secured to and transported on a vehicle (or rail carriage) with ISO fastenings.

FASTRACK CHASSIS REQUIREMENTS

Size:	4x4 (dependant on local law for axle capacities and chassis configuration and weight)
Minimum Payload:	5,000kg
Hydraulic Requirements:	MGMS has a built in hydraulic power pack. Any pre-defined hydraulic couplings can be used, location at rear of chassis preferred. Direct to battery electrical connection, 24V 170 amp supply and earth required.

Image 2:
MGMS Control System

FASTRACK CONTROL SYSTEM

Standard controls to move the SPOOL STAND from the transit position to the laying position and to operate the SPOOL to lay or recover the TRACKWAY panels are electrical buttons on a pendant control cable.

In the event of a hydraulic failure a hand pump can be operated to release the hydraulic brake in the SPOOL MOTOR to enable deployment of the TRACKWAY panels.

FASTRACK WEIGHT AND DIMENSIONS

	With spool and roadway panels
Width	2150mm
Length	4600mm
Height	1850mm
Weight	5000kg
Colour	NATO Green IRR CARC Coating available Custom colour available

FASTRACK ELECTRICAL DATA

Voltage	24 volts
Maximum Current:	170 amp powerpack

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FASTRACK ANCILLARY AND ACCESSORY STOWAGE

The following ancillary equipment is provided with each FASTRACK and provides all items necessary for safe and straightforward deployment.

Name	QTY
Pendant control	1
Umbilical cable	1
Handline, fibre rope	2
Sledge hammer	1
End adaptor	2
Padlocks	3
Winding cables	2
Transit/holdfast straps	2

Stowage lockers are built into the FASTRACK to store the equipment securely.

CYCLE TIMES

Stage	Process	Time: daylight conditions	Time: night conditions
Pre-launch preparation	1. Slewing turn table 2. Removing transit straps 3. Connecting laying straps 4. Locate TRACKWAY panels into pre-laying position	5 minutes	6 minutes
Launch	Laying 32m roadway	5 minutes	5 minutes
Total time		**<10 minutes (in level conditions)**	**<11 minutes (in level conditions)**
Total personnel		**Two**	**Two**

Videos of the laying process are available here: www.fauntrackway.co.uk

SERVICE AND SPARES

- Worldwide training available
- Basic service requirements due to low maintenance system
- Palletised spares kits available

DOCUMENTATION

MGMS is supplied with the following documentation in English as standard. Translation into local language, and/or alternative formats can be provided upon request.

- User/operator handbook
- Illustrated parts catalogue
- Service manual
- Maintenance allocation chart
- Risk/hazard assessment

OPTIONAL EXTRAS

- Fully customisable to individual requirement
- Water pump for cleaning
- Ground anchoring equipment
- Camouflage netting for storage
- Infra red control

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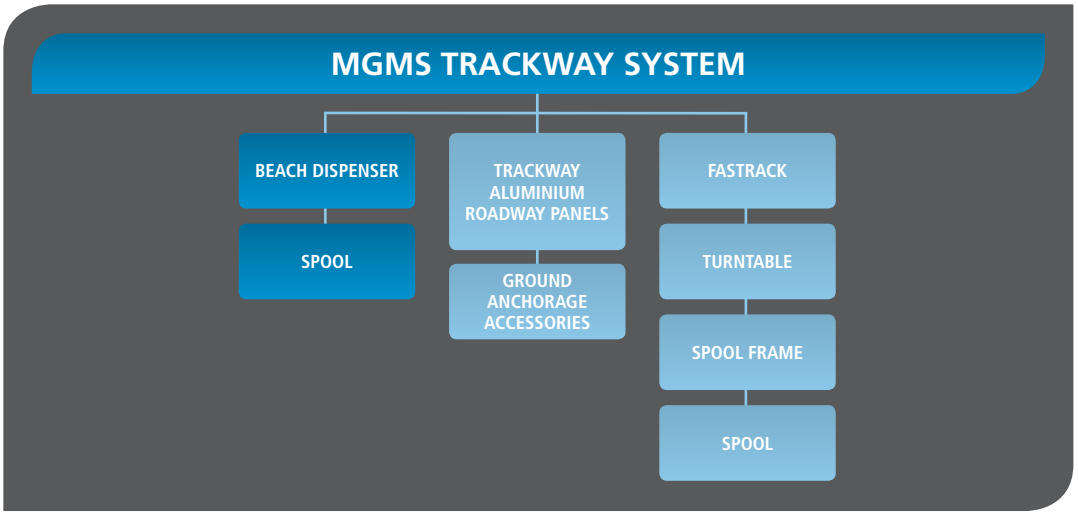
MGMS BEACH DISPENSER

SYSTEM INTEGRATION

The Medium Ground Mobility System can also be deployed and recovered using a medium wheeled tractor. This method of deployment is suitable for beach landings.

The beach landings configuration of Medium Ground Mobility System consists of the following elements:



BEACH DISPENSER DESIGN PRINCIPLE

The principle of the BEACH DISPENSER is to carry, deploy and recover 32m of MLC 30 TRACKWAY.

The BEACH DISPENSER was specifically designed to assist Royal Marines in beachhead operations. The BEACH DISPENSER is NATO codified and designed to BS EN and ISO standards.

Image 3: BEACH DISPENSER

BEACH DISPENSER OPERATIONAL PRINCIPLE

The BEACH DISPENSER attaches to a frame steel shovel loader with suitable lifting capacity, the BEACH DISPENSER mates to the quick release pick up points, (where the shovel bucket would normally be attached to the main lifting arms). Mounting brackets are designed to interface with the loader quick coupler.

The BEACH DISPENSER also takes its hydraulic power from the loader using quick release hydraulic connections. The shovel loader complete with BEACH DISPENSER deploys the TRACKWAY by driving forwards, laying underneath its own wheels. The carriage frame is also equipped with hydraulic operation rotation, to reduce overall width, which allows loading onto and unloading from the landing craft.

The BEACH DISPENSER features a free-wheel for deployment of the TRACKWAY and a hydraulic motor/gearbox, which engages at the end of the SPOOL to rewind for recovery. A manually operated overrun brake controls the free-wheel during laying and is applied to prevent rotation whist travelling.

The carriage frame is fitted with hydraulic operation side-shift which gives 175mm movement either side to assist TRACKWAY alignment during recovery. A side shift facility to enable the operator to centralise the TRACKWAY, should the driver deviate from the centre line.

Image 4: BEACH DISPENSER – carriage rotated for width reduction

BEACH DISPENSER TRACTOR REQUIREMENTS

Size:	Loader 13 tonne GVW minimum
Minimum Payload:	3900Kgs
Hydraulic Requirements:	Tailored to suit wheeled loader

BEACH DISPENSER CONTROL SYSTEM

The BEACH DISPENSER is controlled by the operator who walks alongside the BEACH DISPENSER during the laying procedure.

The operator is also responsible for providing suitable hand signals to the driver to ensure that the laying and recovery procedure is performed in smooth and continuous manner.

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BEACH DISPENSER WEIGHT AND DIMENSIONS

	With spool and roadway panels
Width	3900mm
Length	2420mm
Height	1730mm
Weight	3900kg
Colour	NATO Green IRR CARC Coating available Custom colour available

CYCLE TIMES

Stage	Process	Time: daylight conditions	Time: night conditions
Pre-launch	1. Remove transit straps 2. Feeding aluminium panels into pre-laying position	2 minutes	3 minutes
Launch	Laying 32m roadway	1 minute 30 seconds	3 minutes
Total time		**3 minutes 30 seconds**	**6 minutes**
Total personnel		**3**	**3**

Stage	Process	Time: daylight conditions	Time: night conditions
Pre-recovery	1. Attaching hydraulic recovery drive. 2. Feeding aluminium panels into pre-recovery position.	4 minutes	5 minutes
Recovery	Recovering 32m roadway	4 minute 30 seconds	6 minutes
Total time		**8 minutes 30 seconds**	**11 minutes**
Total personnel		**3**	**3**

SERVICE AND SPARES

- Worldwide training available
- Basic service requirements due to low maintenance system
- Palletised spares kits available

DOCUMENTATION

MGMS beach dispenser is supplied with the following documentation in English as standard. Translation into local language, and/or alternative formats can be provided upon request.

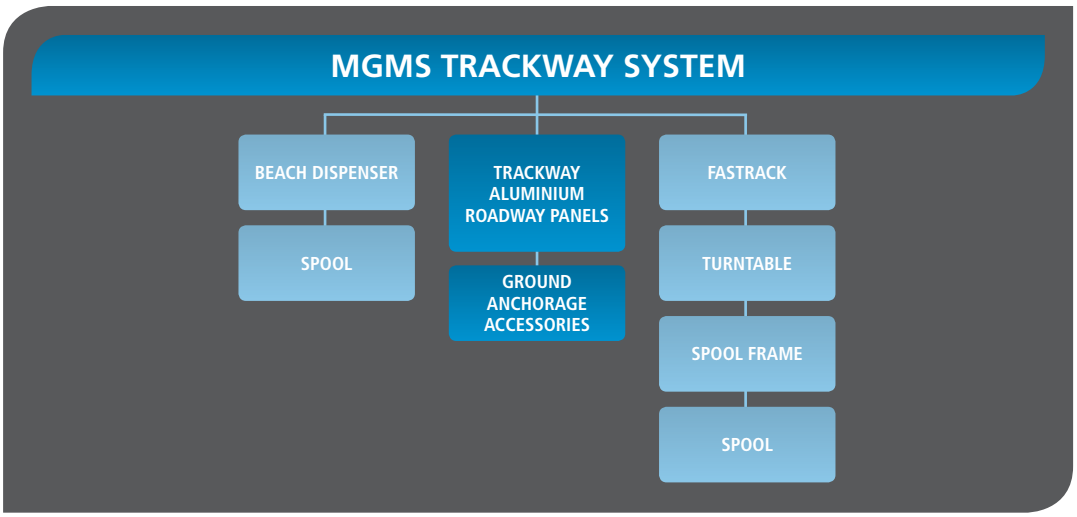
- User/operator handbook
- Illustrated parts catalogue
- Service manual
- Maintenance allocation chart
- Risk/hazard assessment

MGMS TRACKWAY

SYSTEM INTEGRATION

The Medium Ground Mobility System (MGMS) is a 32m roll of aluminium roadway; frame mounted onto a 4x4 chassis, which is rapidly deployed and recovered using minimal manpower.

The Medium Ground Mobility System (MGMS) consists of the following elements:



TRACKWAY MLC 30 DESIGN PRINCIPLE

TRACKWAY is the brand name for the aluminium roadway panels.

The panels used in the Medium Ground Mobility System are rated to Military Load Classification 30.

A standard Medium Ground Mobility System can transport, deploy and recover 32m of TRACKWAY. TRACKWAY is NATO codified and designed to BS EN and ISO standards.

Image 5: TRACKWAY MLC30 loaded onto spools

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TRACKWAY MLC 30 OPERATIONAL PRINCIPLE

TRACKWAY panels are connected using a 'tongue and groove' method, forming an articulated joint. This enables the TRACKWAY to be laid on undulating ground.

TRACKWAY permits wheeled vehicles with pneumatic tyres to traverse soft ground without bogging down or causing severe damage to the ground surface or vehicle.

A complete roadway contains a section break every 8.92m, comprising of 3 section breaks in total. A section break consists of one panel, that divides into four sections, fitted to ease the split (and re-assembly) of the roadway into shorter lengths as desired. TRACKWAY is designed to be split by hand.

TRACKWAY utilises the FASTRACK to provide rapid, automated laying and recovery. TRACKWAY can also be laid and recovered using other techniques including simply unrolling the TRACKWAY on the ground.

TRACKWAY MLC 30 WEIGHT AND DIMENSIONS

Image 6: Full and half length TRACKWAY panels

	Single panel	Complete roadway
Width	3.35m	3.35m
Length	0.228m	32m
Height	22.8mm	22.8mm
Weight	15.6kg	2184kg
Number of panels		137 full panels 3 section break panels
Colour	Powder coated or anodised to eliminate glare from reflective surface	Powder coated or anodised to eliminate glare from reflective surface
Composition	Aluminium alloy	Aluminium alloy

TRACKWAY PACKAGING CONSIDERATIONS

TRACKWAY panels can be transported by container. The panels are disconnected and grouped in packages of ten panels.

Each 32m roadway creates the following:

	Complete roadway
# Panels	140 panels, comprising: 137 full panels 3 divided panels
# Packages	14 packages, comprising: 13 packages x 10 panels 1 packages x 7 panels and 3 divided panels
	1730mm
Package Width	3.35m
Package Length	0.228m
Package Height	14 x 2.28m Total = 31.23m
Package Volume	14 x 1.74m³ Total = 23.83m³
Package Weight	14 x 156 kg Total =2184kg

GROUND ANCHORAGE ACCESSORIES

Name	QTY
End adaptor	1
Transit/holdfast straps	2
Chain Weld Holdfast	4
Ground anchor stakes	12
Shackle Steel SWL 1.5 ton D	8
Shackle Steel SWL 2 ton D	4
Clamps junction GSM	2
Handline, fibre rope	2

Anchorages comprise of a holdfast chain with steel stakes to be hammered through the chain links into soft ground; and tensioned using transit/holdfast straps. The chain is shackled to one end of a holdfast strap which in turn is connected to edge holes of the TRACKWAY by shackles.

The holdfast straps are tensioned to pull the anchorage into position. Anchorages are recommended when there is a side or longitudinal tilt.

Junction clamps are used to connect one length of TRACKWAY to another, in order to create multiple roadways.

Accessories are stored in a canvas bag inside the lockers built into the FASTRACK.

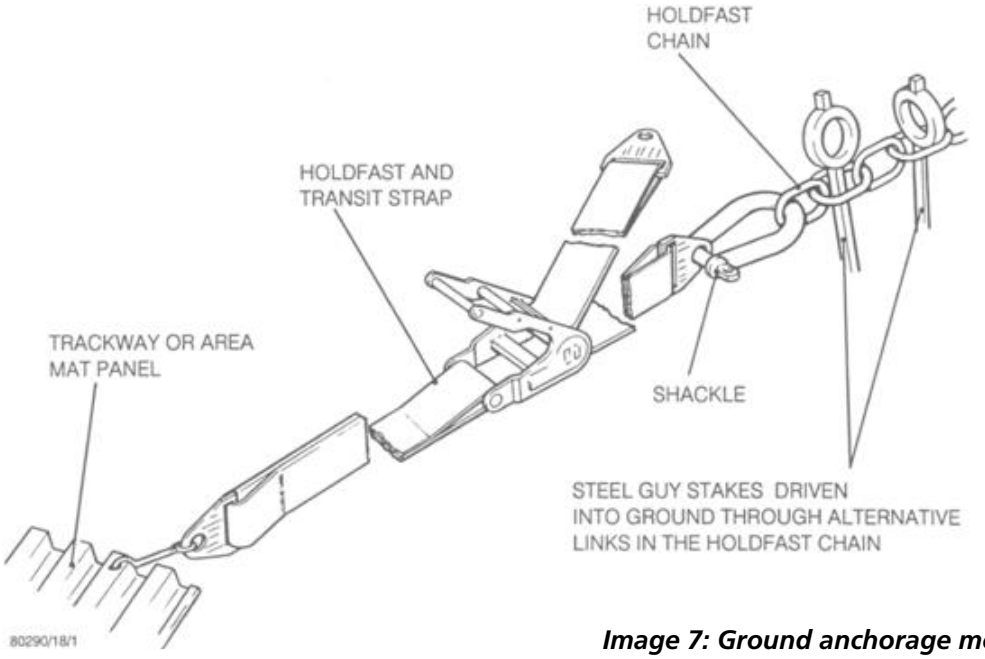

Image 7: Ground anchorage method

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