



POWERXTM

Configurable Powered X-frame ambulance trolley

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POWERX Overview - Features

Powered X-frame ambulance trolley for use on vehicles with a tail-lift or ramp

Main development features:

- Enhance manoeuvrability
- Minimise components, reduce weight, reduce maintenance
- Maximise shortening capability of trolley
- Minimise injury risk and improve patient outcome
- Flexible configuration design
- Attachable accessories & options according to individual and differing needs
- Backwards compatible with current Ferno 2-part lock and current vehicle designs



POWERX Trolley Specifications

	Imperial	Metric
Load limit - raised position	55 stone	350 kg
Load limit - lowered position	63 stone	400 kg
Trolley Weight (excluding mattress + restraints)		78 kg
Dimensions	Imperial	Metric
Length		
Fully extended	75.9 in	1930 mm
Fully shortened	58.8 in	1450 mm*
Width		
Overall	22.4 in	570 mm
Surface Xtenders open	36.2 in	920 mm
Split-Scoop extender kit	37.2 in	945 mm
Height		
Maximum	34.7 in	880 mm
Minimum	18.8 in	480 mm
Wheels (Diameter)	6 in	150 mm

* - max shortening, 1450 mm with no stowage net and not in locked position, 1540 mm when in locked telescoping position



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SWL of 350 kgs (55 stone) in raised position, 400 kgs (62 stone) in lowest



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Trolley Stability - sturdy frame design with dual-ram actuator



**Smooth powered
raise/lower movement**

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Fully configurable: from **fully shortened** to
extended-width, full-length **extreme Bariatric capability**



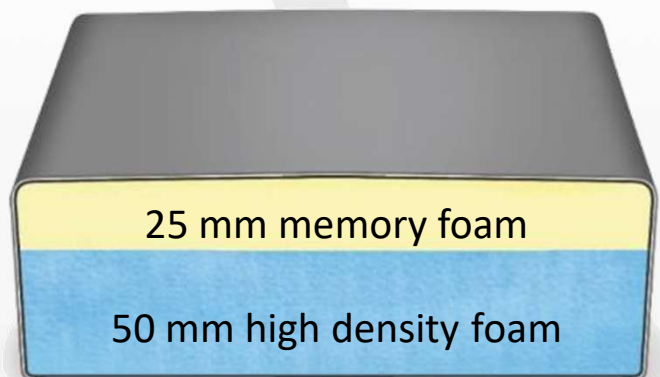
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- Moulded plastic top patient surface - **Lightweight but durable**
- Mattress attached to trolley top using AB Velcro – **Easy to remove & clean**



Anti-Bacterial Pressure-Reducing (ABPR) Mattress



- Robust 2-way stretch, 2-side coated material
- Easy to wipe-clean
- PR foam for improved tissue viability & patient comfort
- Flat surface for unhindered patient lateral transfer on/off trolley

Biosafe Patient Restraints

- Wipe-clean restraint straps, metal buckles
- Attached to trolley with clip-off / clip-on tangs



2 configurations of restraint
“Over the shoulders 4-point harness” and
“Cross-Strap Harness”

Adjustable winged ABPR Headrest option



- Improved comfort
- Adjustable to differing patient head shapes and sizes





POWERX Features

Shortening for confined areas – both head-end & foot-end telescoping



Depress red knob locking plungers at each end of trolley to shorten



Will shorten right down from to 1930 mm to 1450 mm

Power control – Concens Controller & Milwaukee 28V battery (5Ah)



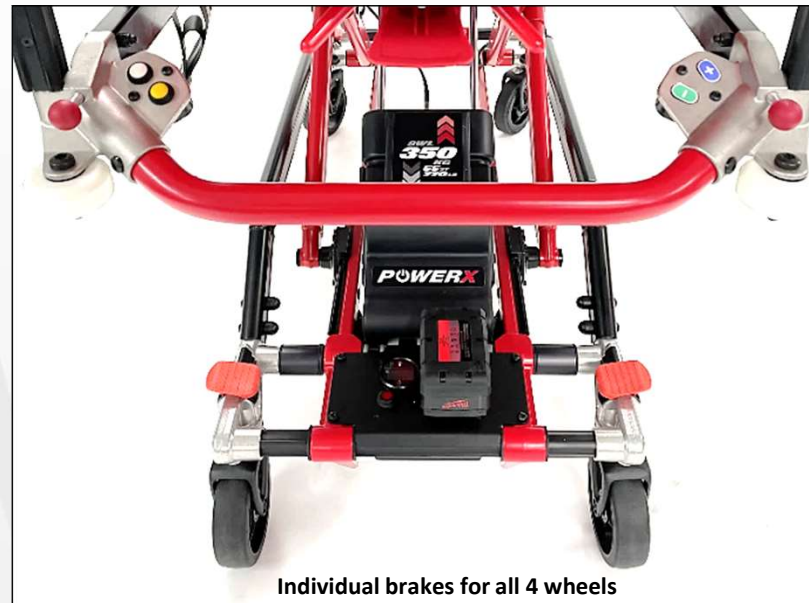
- > 110 lift cycles from 1 battery charge at 200 kg patient, > 66 lift cycles at max SWL of 350 kgs
- Auto-sleep mode after 1 min inactivity to preserve battery usage
- Full battery last over 66 hrs in sleep mode
- Short recharge time (< 1hr) and long expected battery life-time (over 5 years)
- Lift counter and battery status on LCD display

Manual override trolley lowering - for complete peace of mind



In unlikely event of no power

Brakes on all 4 wheels, one anti-static wheel



Easily accessible brake on frame on all 4 corners, independent of actual wheel positions





Directional wheel lock on each wheel at head end

Foot-Operated Directional Wheel-locks at head-end **Aids manoeuvring** in a straight line and up/down inclines

- Disengaged when lever pointing up
- Engaged when lever horizontal



Directional wheel lock disengaged



Directional wheel lock engaged



Brakes on all 4 wheels, one anti-static wheel



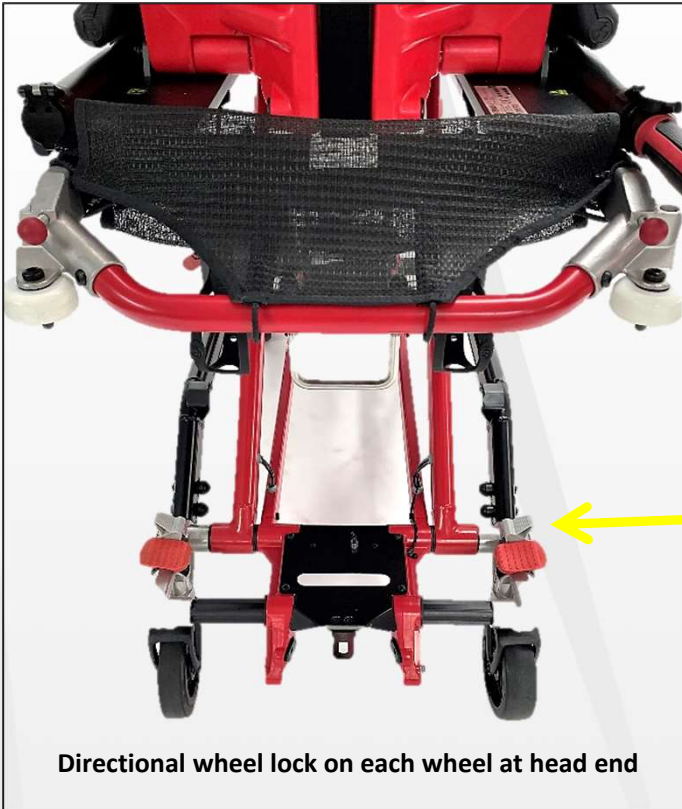
Easily accessible brake on frame on all 4 corners, independent of actual wheel positions





Foot-Operated Directional Wheel-locks at head-end **Aids manoeuvring** in a straight line and up/down inclines

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Directional wheel lock on each wheel at head end



Directional wheel lock disengaged

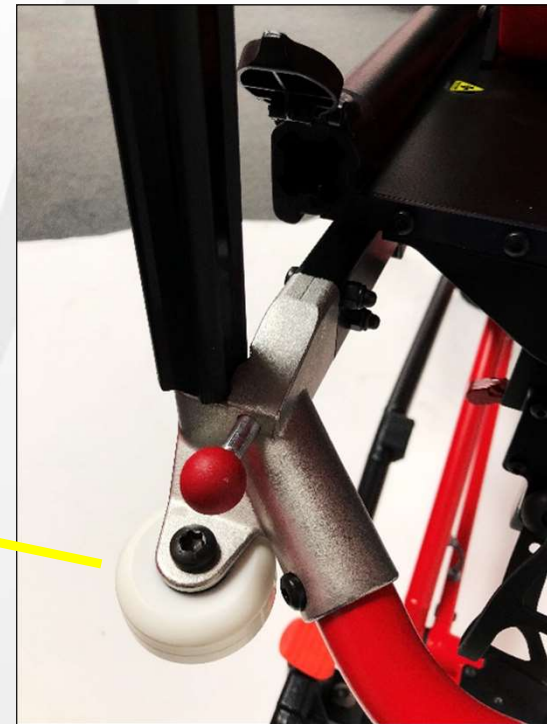


Directional wheel lock engaged

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Bump wheels on all 4 corners – **minimise potential damage** hitting walls, along corridors etc.

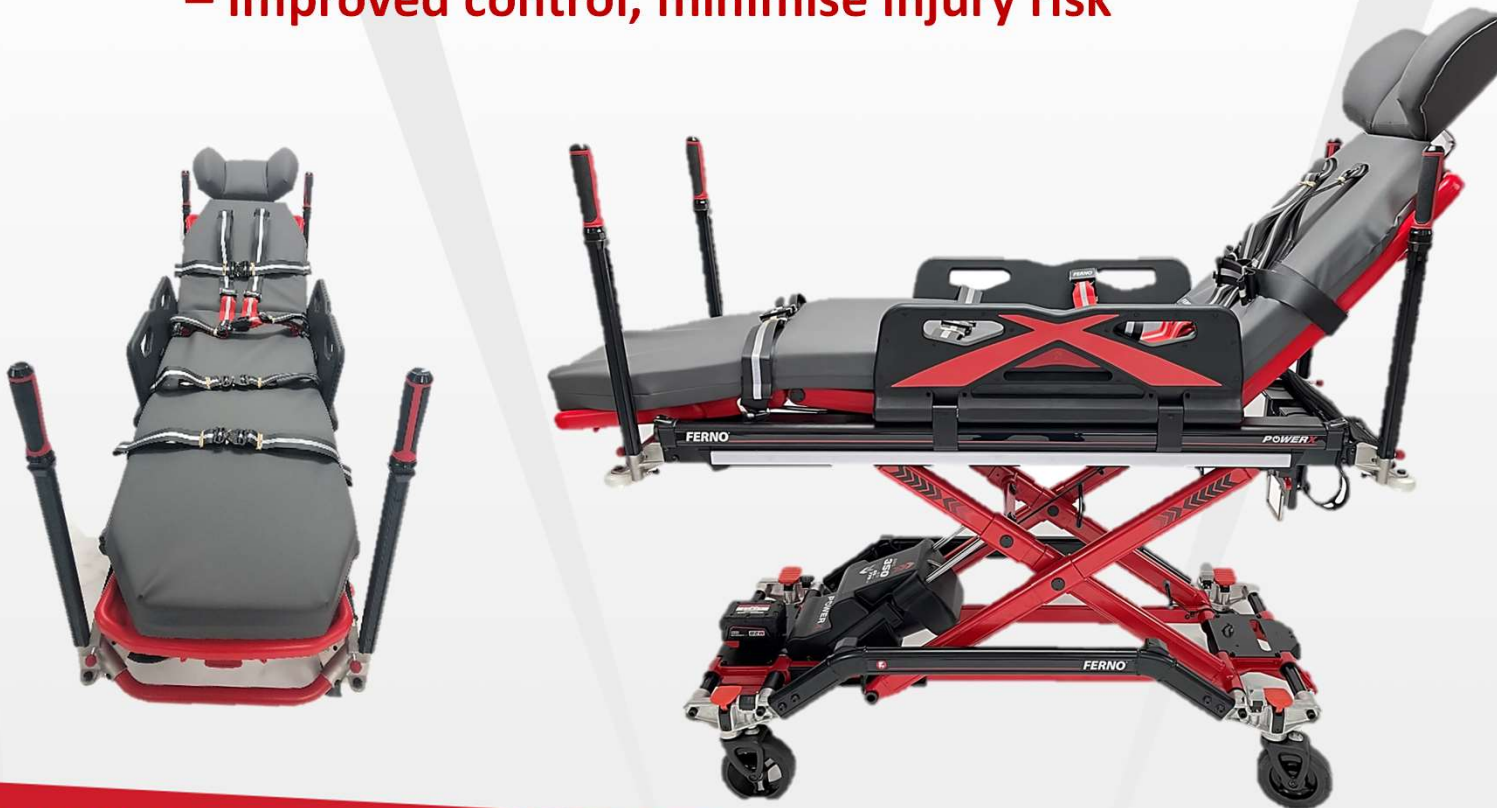


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Push-poles & optional side-manoevre handles
– Improved control, minimise injury risk



Side manoeuvre handles (option)

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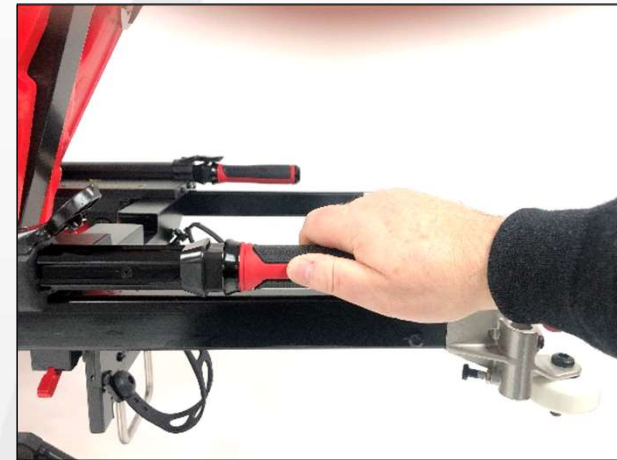
Push-poles locked, detachable & storable in frame – **minimises potential for loss & misuse**



Insert push-pole until it clips into catch



Release by pulling against the fixing catch and lift out pole



Discreetly stored and locked inside POWERX frame, minimise loss of poles

Winch link for assisted loading into vehicle when using a winch up a ramp



Should be used whenever possible, whether bariatric patient or not, to minimise manual handling risks



Easy-to-operate backrest positioning



Gas-strut assisted to aid manual handling



Horizontal (at all trolley heights)



Recumbent at various angles



Near-vertical for vomiting patients

Easy-to-operate leg positioning



Trendelenburg



Shock position



Knee contour

Multi-positioning for clinical benefit and improved patient comfort
Gas-strut assisted to aid manual handling

Reduced-risk lateral transfer from chair-to-trolley
due to **low trolley height** in lowest position



Equipment-carrying options:

- Defib monitor hook on back-rest (latching to stop monitor from falling off but not designed to keep on trolley whilst travelling in vehicle)
- O2 cylinder holder (crash-tested & CEN compliant - can keep cylinder on trolley in vehicle)



Monitor hook option



O2 cylinder holder option

Equipment-carrying options:

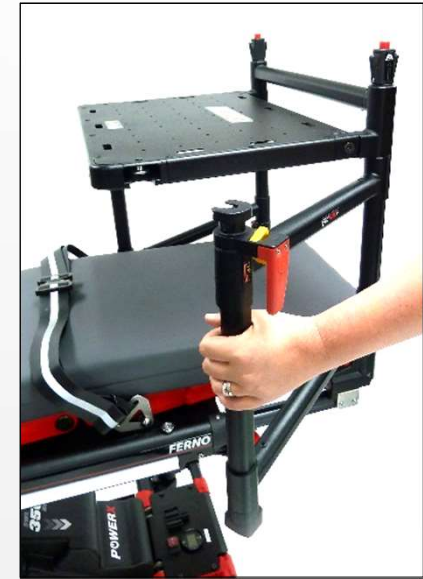
- PacRac+ equipment holder
- Head-end document/possessions holder



Stow net storage option



PacRac+ equipment holder option



Side-rail interface for the easy attachment of accessories



PowerX uses same siderail interface as iNX & Mondial, interchangeability of equipment and accessories

Flexibility of use – configurable according to needs

- Push poles
 - Pac-Rac+
 - IV Pole
 - SX Cotsides
 - Side manoeuvre handles
-all attachable via interface rail





Interchangeability of equipment between models of Trolley (PowerX / iNX / Mondial)



Side-lighting Option



Programmable to different modes - constant white LED, flashing white, flashing red, red/white flashing

Lateral-folding Cotsides Option



- Lift up to lock in place
- Squeeze handle underneath cotside to lower



SX Surface Xtender ratcheting cotside option



Load-bearing, tested to 100 kg each cotside, ratcheting to 6 different positions from vertical to near-horizontal, and folded down for lateral transfer

SX ratcheting cotside option – **Semi-Bariatric capabilities**



Sidepads for enhanced tissue viability



Load-bearing when horizontal, tested to 100 kgs

SX cotsides can be fixed at different locations on the side-rail interface

Larger patient surface for **Extreme** Bariatric capability – **Double SX cotsides**



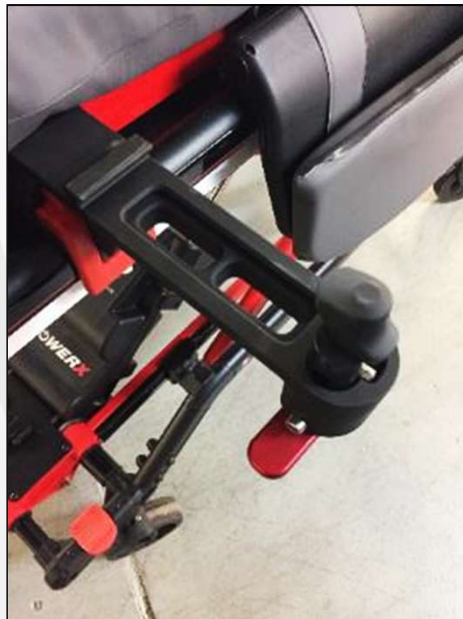
Two SX cotsides each side of PowerX
(locking of push poles in frame not possible with 2 SX cotsides attached)



Split-Scoop Extended Patient Surface Kit Option – Full length/width bariatric capability



Split-Scoop fixing
bracket kit



Attach brackets to
sides of POWERX on
interface rail

Split Scoop fixed to either
side of Trolley



Inflatable sidepads for
enhanced tissue viability





Trolley Locks



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Vehicle Trolley Locks

- Standard 2-part lock for fixing all Ferno UK trolleys to vehicle floor
 - Hard mounted to floor plates
 - NMI track mounted
 - Unwin track mounted
- All configurations 6-direction dynamically crash-tested, CEN compliant
- Side-operated version available for all 3 models of standard 2-part lock, pedal at side of lock



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Ferno SlideLock

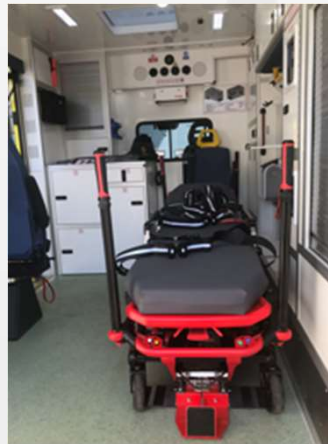
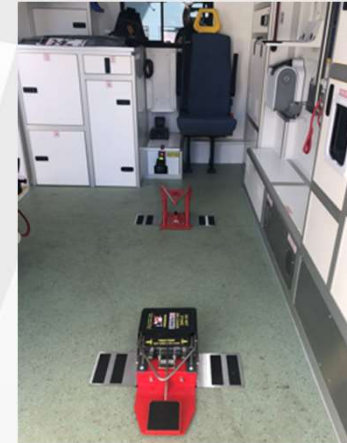
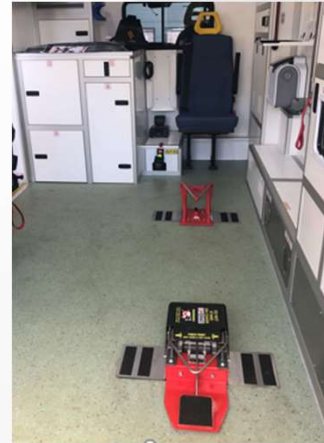
Easy-to-adjust 2-position ambulance trolley lock system





Ferno SlideLock - Features

- Provides the flexibility of where trolley can be positioned in a vehicle
- Allows a vehicle to be quickly and easily re-configured to accommodate a bariatric trolley, such as Harrier LT-LBS or Megasus with the cotsides extended
- Alter lock position 'on-the-fly' to accommodate POWERX with bariatric Split-Scoop surface extender kit attached or with SX cotsides fully deployed horizontal





Ferno SlideLock - Overview

Allows the lock position to be easily repositioned from side to centre (C to B) in a vehicle, in accordance with EN 1789

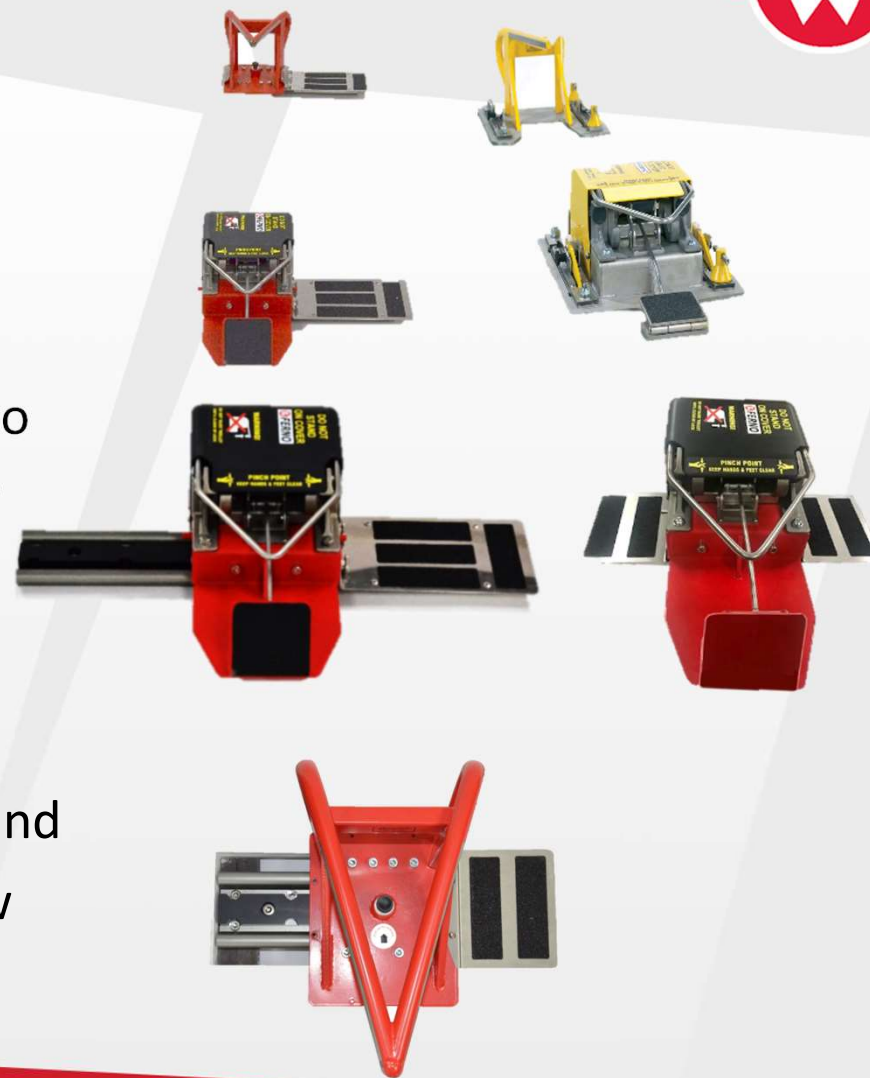
- Moves sideways along a linear bearing mounted in the vehicle floor
- Easy to move lock between positions by Paramedics/Operators
- Simply move the lock from one position to the other, locks in place
- No need for any tools
- No need to remove lock from floor to move
- No need for vehicle floor tracking
- Enhanced IPC compared to track-mounted locks
- Fully CEN compliant, dynamically crash-tested to BS EN 1789
- Backwards compatible with all UK locks/trolleys





Ferno SlideLock - Features

- 5 kg lighter than an NMI 2-part track lock
- Eliminates need for NMI/Unwin floor tracking and associated additional weight
- Available with different linear bearing widths to give different distance between the two trolley positions: 255mm, 150mm or other bespoke distance according to vehicle layout/customer requirements
- Easy to clean – remove top slide cover plates and clean or pressure wash the sealed recess below

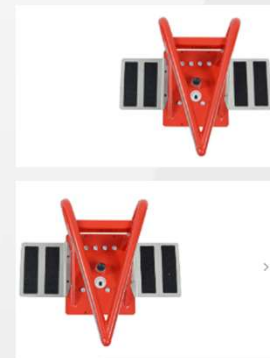




Ferno SlideLock - Operation

To move the trolley lock between positions, simply:

1. Lift the plunger located on the head-end section of the lock (Spike)
2. Slide the Spike over to the left (or right), letting go of the plunger once it has started to move
3. Continue to move all the way over to the other side and it will lock in position with a positive 'click' sound
4. Do the same with the foot-end section, lifting the levers on both sides of the lock and then slide across to the other locking position, letting go of the levers once it has started moving





Ferno SlideLock - Compatibility

- Compatible with all Ferno trolleys
- Compatible with the Stryker Power Pro TL trolley





LiteLock

Lightweight 2-Part Lock

Reduce weight of equipment in vehicle, reduce fuel costs

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Ferno Lightweight 2-part lock

Revised design 2-part lock, designed to reduce weight

- 3.5 kgs lighter than Standard yellow 2-part lock
- Fully backwards compatible with Standard 2-part lock
- Will fit all trollies, legacy or current POWERX
- Colour scheme Red/black in line with Ferno IPTS/POWERX branding
- Lightweight lock design to be also implemented on SlideLock





Comparison of various lock weights

Two Part Locking Device Comparison										
Two Part Lock			NMI 255mm Track Lock		Unwin 255 Track Lock		Slidelock			
Kgs	Ferno Std	Ferno Lightweight	Stryker	Ferno	Stryker*	Ferno	Stryker	SlideLock 255	SlideLock 150	
Spike	5.30	3.80	7.40	10.30	12.40	8.50	N/A	8.50	8.00	
Lock	8.00	5.70	7.80	14.10	13.90	12.40	N/A	11.00	10.40	
Total	13.00	9.50	15.20	24.40	26.60	20.90	N/A	19.50	18.40	
Diff	-	-3.50	+2.20		+2.20			-4.90	-6.00	
	In addition 7 knurled screws and 7 fixing block plates required at 1.3kg		?							

SlideLock Lite 11 kg lighter than Stryker's NMI tracklock



Uni-Clip Doc

- Interface that attaches (and tested with) all Ferno UK trollies & iNX
- Will also attach to Stryker PowerPro trolley for full inter-operability
- Mimics the locking system in floor of aircraft/helicopter such that equipment can be safely fixed and transported by both air and road
- Transfer incubator, Aerosled and other platforms from aircraft to Ambulance trolley for safe onward journey
- Dynamically crash-tested, CEN compliant
- Comes with 2 sets of attachments, clamps for iNX and POWERX, ratcheting fixing straps for all other trollies
- Optional bridge to attach at one end to bridge gap between helicopter and trolley





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