

INSTRUCTIONS FOR USE

MIG-20 CART





Please read this document fully before using the cart.
Endocarts International Ltd cannot be held responsible for damage and injuries caused by misuse or negligent maintenance.

1. INTRODUCTION

The Cart has been designed to allow safe and easy handling of video endoscopic equipment such as endoscopes, camera, CCU, monitor, light source, pump and video printer during both storage and use in an Hospital or Clinic operating/procedure room by the Hospital staff/Healthcare professionals.

The Cart can be configured in a variety of ways, to accommodate flat screen monitors up to a maximum of 20Kg in weight (when monitor placed on a monitor post).

As your MIG-20 cart may have been in its packaging for some time before you receive it, we recommend that the cart is cleaned by wiping the inside and outside surfaces with an environmental surface disinfectant/sanitising agent, as per your hospital/clinic policy.

Equipment on the cart can be switched on and off via a double pole isolating switch on the back of the cart, also a medical grade isolating transformer is usually fitted to the underside of the cart to provide protection against earth leakage currents.

Item	Quantity	Part Number
Cart with 2KvA Isolation Transformer	1	104491
Cart (no transformer)	1	104490
Optional Items *		
CO2 Bottle Holder Assembly	1	101357
I.V. Pole for 2 bags	1	106047
Height Adjustable Twin Scope Hanger	1	104452
LCD Monitor post	1	103339
Articulating arm Short Extension	1	103922
Heavy Duty Articulating Arm	1	103435
Drawer Unit Assembly	1	106032
MIG-20 Standard Shelf	1	106048

2. ASSEMBLY

	Position the cart on a flat surface and apply both front castor brakes.
	CAUTION: When assembling the cart, ensure that the main equipment is installed on the cart before fitting the articulating arm and monitor. Failure to do this may result in the cart toppling over due to the weight and leverage of the arm & monitor.
	When disassembling the cart ensure that the articulating arm & monitor are removed first. NOTE: It is recommended that two people, working together, fit the flat screen monitors on the articulating arms.

3. PRODUCT FEATURES

	(1)	Articulating Arm(s): To support an LCD monitor on the cart.
	(2)	Adjustable Shelves: The cart is fitted with three adjustable shelves as standard. Further optional shelves may be added.
	(3)	Cable Management System: Provided at the back of the shelves to help route the cables and wiring of the installed equipment.
	(4)	Multi-Socket Outlet: Located at the back of the bottom shelf to connect the electrical equipment used on the cart eg: monitor, light source, CCU etc.
	(5)	Double Pole Isolating Switch: Fitted to the side of the cart, can be used to switch all the equipment on the cart on and off.
	(6)	Camera Eye Piece Holder: To safely accommodate the camera eye piece.
	(7)	Anti-tamper Back Door: Protects connections from interference by unqualified persons.
Optional:		
	(1)	Isolating Transformer: 2000 VA Medical Grade transformer installed on the underside of the base and is retained by 4 x M6 locking nuts and washers.
	(2)	Gas Bottle Holder: Fitted on the side of the cart. Can accommodate 'E' and 'C' size CO2 bottles.
	(3)	Drawer Unit Assembly: For storage.
	(4)	IV Pole for 2 bags: Fitted on the side of the cart to accommodate up to 2 IV Bags.
	(5)	Height Adjustable Twin Scope Hanger: Fitted on the side of the cart to accommodate the endoscope.

4. USE AND HANDLING INFORMATION

	<p>Maximum power in watts of the equipment connected to the cart must not exceed 2,000W.</p>
	<p>The cart must be switched off and unplugged before cleaning it. Wipe-clean the external surfaces of the cart with a disinfectant wipe. Due to their protein-fixating effect and material incompatibility, alcohol-based agents must not be used. The chemical manufacturer's specifications regarding material compatibility must be observed. At the end of the necessary exposure time, wipe the surface with a dry low-lint cloth.</p>
	<p>Do not splash fluid onto any electrical equipment stored on the cart.</p>
	<p>Ensure all electrical items used on the cart are securely positioned. It is recommended that heavy items are placed on the cart by two people, working together. This is particularly important when connecting the monitor to the articulating arm.</p>
	<p>If electrical equipment is in use on the cart, do not operate within the zone of risk of anaesthetic equipment.</p>
	<p>The cart has two locking wheels located at the front. Before use ensure that both brakes are applied. Also ensure both brakes are released before attempting to move the cart.</p>
	<p>If a functional earth is required, one can be found on the front of the isolating transformer.</p>
	<p>At six monthly intervals, check the security of the wheels. If any are loose, consult your equipment supplier immediately.</p>

CAUTION:



When moving the cart, use the back handle only, do not use the articulating arms, the monitors nor any other parts of the cart to push or pull the cart. Not following these instructions could cause damage to the equipment and injury to the user



When moving the cart outside of the procedure room, the monitors must be positioned in TRANSPORT MODE. If the monitor is installed on an articulating arm, the end-user must ensure that the articulating arm is NOT extended, and the monitor remains centralized within the footprint of the cart as shown below.



	Do not lean or place your body weight on the equipment shelves.
	Do not exceed the cart loading as detailed in section 6 of these instructions.
	Close the keyboard tray before moving the cart.
	Ensure that equipment placed on the cart is attached properly to prevent it from falling during transportation.
	When moving the cart, it mustn't travel faster than the walking pace.
	Avoid pushing the cart over obstacles such as cables and thresholds. If it can't be avoided, a slow pace must be adopted and there must be two people pushing it.
	Whilst every care has been taken to maximise the stability of this product, care must be exercised when moving it, particularly over uneven surfaces or the lips of lifts to avoid tipping especially when loaded with equipment.
	To improve stability when moving anything other than short distances, it is recommended that the monitors are removed and transported separately.
	Prior to unplugging the cart from the mains, ensure the cart and all equipment are turned off.
	The use of freely accessible multiple socket strips is not permitted. The use of additional multiple socket outlets or extension cables with the system is not permitted.
	The purpose of the cart is to provide a practical, mobile workstation for electro-medical equipment. For the complete medical electrical system to conform with BS EN 60601-1, the total earth leakage current should not exceed the maximum value allowed in the standard, which is 0.5mA. If the total earth leakage current does

	<p>exceed this limit, the equipment should be powered by a safety isolating transformer, as long as the total load on the transformer is within its rating.</p> <p>If no isolating transformer is fitted, the multi-socket outlet on this cart should not be used for the connection of equipment that does not comply with the leakage current requirements of BS EN 60601-1, although if an isolating transformer is fitted, such equipment may be powered via the transformer as long as the total load on the transformer is within its rating.</p>
	<p>When an isolating transformer is fitted:</p> <p>A. The transformer circuitry includes an inrush current limiter that will prevent excessive initial inrush current. However, switching the unit on and off with only short intervals between will reduce the effectiveness of the limiter and may lead to supply fuses blowing.</p> <p>B. If the inrush current results in normal supply circuit breakers operating, please contact the hospitals engineering department as it may be necessary to install circuit breakers that are specifically designed to protect circuits with high in rush currents such as transformers.</p>

5. REGULAR MAINTENANCE

	<p>This cart has been designed and constructed to give many years of safe and trouble-free service.</p>
	<p>The following check should be carried out prior to each use.</p> <ul style="list-style-type: none"> • Articulating Arms and Monitors: Check the security of the arm, movement of the joints and the security of the monitor fixing screws. <p>Prior to each use, check that the thumbscrew located on the mounting cup is tightened up. When repositioning the monitor, loosen the thumbscrew sufficiently to enable the arm to be repositioned and fully tighten on completion. It is recommended to place your hands on the monitor only.</p>
	<p>At 6 monthly intervals to confirm the security and operation of the following:</p> <ul style="list-style-type: none"> • Shelves: Check for alignment and security of the screw fixings. • Castors: Check that the castors rotate freely, the 2 brakes operate on and off, that the 4 locking bolts that secure the castors through the chassis are in place and that the castors are secure in their mountings. • Inspect the mains cable prior to using the cart. If the cable is damaged, do not use the cart.
	<p>In the event of the checks reveal a problem with your cart, please advise the supplier immediately.</p>

6. POWER SUPPLY

External power supply (line voltage) to the equipment cart

The cart is supplied with power via a special power supply in a hospital, laboratory or medical practice room.

6.1. Connecting

	<p>CAUTION: Risk of damage to property. Observe the line voltage. Only connect the equipment cart to the voltage and frequency shown on the manufacturer’s identification plate. Do not extend the mains cable. If extended, the permitted value of the potential leakage is exceeded. Only use the power cable supplied.</p> <ul style="list-style-type: none"> ○ Apply the brakes on the cart. ○ Unwind the fixed and pre-installed cart mains cable from the cable carrier. ○ Insert the power cable’s plug into a sufficiently safe and grounded socket in the room. ○ Switch-on the cart mains switch and the power switches of the electrical devices on the cart.
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6.2. Disconnecting

	<ul style="list-style-type: none"> ○ Switch-off the power switches of the electrical devices on the cart. To prevent any loss of data, the devices which are used to backup data should not be switched off until last or until data backup has been concluded. ○ Switch off the mains switch on the equipment cart. ○ Pull the plug of the cart power cable out of the grounded socket. ○ Wind the power cable around the carrier at the rear of the cart.
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7. SPECIFICATIONS

Cart Height	1400mm
Width	550mm
Depth	710mm
Shelf sizes	W 435mm x D 510 mm
Weight	103.5Kg with transformer installed, 80Kg without
Wheels	125mm, load capacity 80 Kg each
Braking	Two front wheels fitted with brakes.
Maximum Loadings:	
Shelves	40Kg
Base	40Kg
Monitor Post (103339)	20Kg
Articulating arm Short Extension (103922)	14Kg
Heavy Duty Articulating Arm (103435)	17Kg
Maximum Total Loading	180Kg
Maximum power load	2000W

8. DEVICES ON THE EU MARKET – SERIOUS INCIDENTS

User and/or patient that identify a serious incident has occurred in relation to the device should report the incident to Endocarts QA-RA@endocartsinternational.com and the relevant competent authority of the Member State in which the user and/or patient is established.

9. RECYCLING THIS PRODUCT



This product is manufactured from a combination of materials, the main ones being: Steel, Acrylonitrile Butadiene Styrene (ABS) and Copper (Transformer windings and cable loom)

Each of these materials have considerably increased in cost recently and are therefore, sought after for their recycling value. At the end of this products useful working life, the user will probably find that there is a ready means of disposal available to them locally and this is the preferable disposal route, as shorter disposal routes minimises the impact on the environment.

In the event that local recycling is not available, the manufacturer (Endocarts International Ltd), will accept the product back for recycling, providing the product is delivered back to our premises (Address is on the back page of this manual) at the end users cost.
If this product is sold outside the UK, please consult your supplier regarding the route for recycling.



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