



cart movers

MCE 400

MCE 400 E



operating instructions



This product complies with the Directive 2006/42/EC on machinery

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MANMCEENA4V0421

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introduction

Dear Customer,

Thank you for purchasing Renova's **movicart** – battery cart movers.

We also thank you for the preference you have reserved for this innovative product. We are certain it will satisfy you with its technologically advanced solutions, its in-line and elegant design and its professional quality.

In this manual you will find our instructions for a proper use of this product and the necessary technical information, as well as our advices, to ensure excellent performance over time.

All information contained in this manual have been collected respecting the rules in force, the current state of knowledge of design and construction, our knowledge and our many years of experience.

The instruction manual was translated with all due care and attention. However, we do not accept liability for any translation errors. The Italian version of this instruction manual is definitive.

The warranty does not apply in cases which occur as a result of the Customer's violation of advice concerning operation, incorrect use, improper application, negligence (including but not limited to improper maintenance and storage), accidents, improper installation, modifications (included but not limited to the use of non-original parts or accessories not authorized by Renova), improper adjustment or repair. All parts subject to normal wear are excluded from the guarantee.

warning

CAREFULLY READ THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL AND KEEP THEM FOR FURTHER REFERENCE FOR ENTIRE PRODUCT LIFE. THEY SUPPLY IMPORTANT INSTRUCTIONS REGARDING OPERATIONS AND SAFETY FOR INSTALLING, USING AND MAINTAINING THE PRODUCT.

PLEASE TAKE THE TIME TO READ AND UNDERSTAND THE INSTRUCTIONS COMPLETELY BEFORE THE INSTALLATION AND USE OF THIS PRODUCT.

IN THE EVENT OF A POSSIBLE BREAKDOWN OF THE PRODUCT, THE OPERATOR SHOULD UNDERSTAND THE MANUFACTURER'S INSTRUCTIONS AND BE AWARE OF THE DANGERS, BEFORE ANY CHECK INTERVENTION OR RECOURSE OF RENOVA'S TECHNICAL ASSISTANCE.

general warnings

- **movicart** is exclusively designed to move cart movers on wheels (2 fixed and 2 pivoting).
- **movicart** must not be used to brake heavy loads which run toward the appliance.
- The workplace must be kept proper of whatever object should be between the machine and the object to move.
- The operator must always be aware that nothing or no one is in the way of the object to be displaced and that no one could be endangered by the moving object.
- Certain fundamental rules must be respected when using any kind of electrical appliance. More specifically:
 - do not leave the appliance exposed to the weather (rain, sun, etc.)
 - do not use the appliance next to flammable material
 - do not let children or incapable persons use the appliance without supervision
- A hearing protection must always be used.

assistance

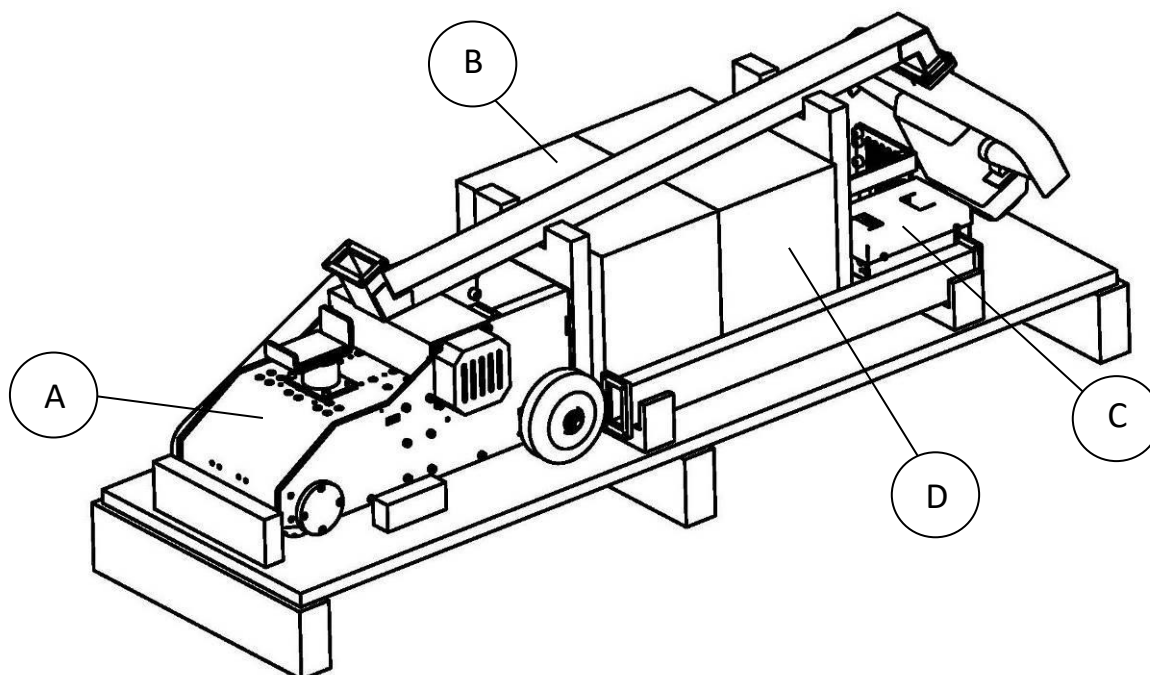
Renova is worldwide present with Agents and Distributors.

Contact Renova support

support@renova-srl.com

general instructions

INITIAL CONTENT OF THE BOX



A	movicart	x1
B	batteries	x2 (optional)
C	battery charger	x1
D	shipment kit	x1

CONTENT DESCRIPTION

MOVICART – in the model as ordered, MCE400 or MCE400E.

BATTERIES - **movicart** (all models) is provided with a second battery (optional). The two batteries Plug & Play are housed in the box near the **movicart** system and are ready to be used (battery < 30%).

BATTERY CHARGER - **movicart** is provided with the original battery charger.

SHIPMENT KIT – composed of battery connector.

PACKAGING

Please do not throw away the wood packaging of your **movicart** system as it might be useful for storage purposes, when moving or, in case of damages, when the device must be sent back to Renova srl.

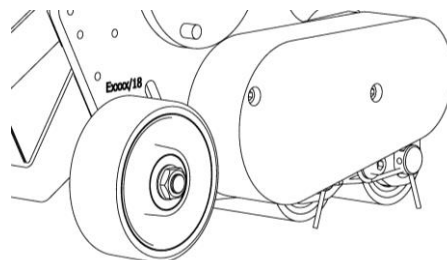
SERIAL NUMBER

Each **movicart** is provided with its serial number.

The serial number is stamped on the side plate of the movicart, above the rear wheel.

Example in the picture on the right.

Please find the serial number also on the warranty sheet provided with the **movicart**.



IMPORTANT:

Always communicate the serial number when requiring assistance or spare parts for your **movicart**.

Instructions for use

- Unpack the appliance and store the packaging material
- After unpacking, make sure that the appliance is intact with no visible signs of damage caused by transport. If in doubt, do not use the appliance and contact Renova srl
- Place the **movicart** on a safe and flat surface that can support its weight
- Assemble the handle by connecting the electric cables with those of the **movicart** previously.
- Insert the battery into the special chassis. Previous recharge of the battery is not necessary
- Push the switch into the ON position
- At this point **movicart** can be used.
- Push the switch into OFF position when the **movicart** is not running in order to preserve the battery charge

PLEASE NOTE:

Battery-powered **movicart** is equipped with reverse gear to allow you to drag the cart.

BATTERY STATUS

The status LEDs (see the picture at page 8):

GREEN LED	charged battery
YELLOW LED	50% battery charge (when active)
RED LED	discharged battery

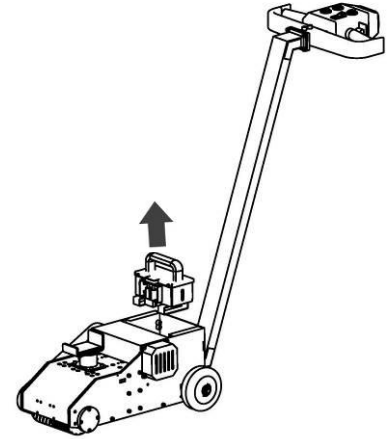


ATTENTION!

Use the **movicart** only when GREEN and YELLOW LEDs. Do not use the **movicart** with RED battery status LED to avoid any irreparably damage to the electronic unit and the battery. With RED battery status LED recharging the battery is mandatory.

BATTERY RECHARGE

- Push the switch into the OFF position.
- Remove the battery from the chassis (as in the picture)
- Insert the battery into the charger.
A green LED now lights up.
Insert the battery into the charger. A red LED on the battery charger now turns on.
- The estimated time of charging is about 4 hours (maximum time needed for a full recharge of the battery). The battery is full recharged when the LED will turn green.
- Please leave the battery under charge for about 30 minutes to stabilize the tension of the cells.
- After recharging the battery remove the battery from the charger, then unplug the charger from the mains supply. The red LED of the charger will remain lit for a bit of time even if cable unplugged.



ATTENTION!

For the full recharge of the battery, please use the battery charger supplied with **movicart**. To not damage the battery please do not use different battery chargers.

BATTERY HANDLING PRECAUTIONS

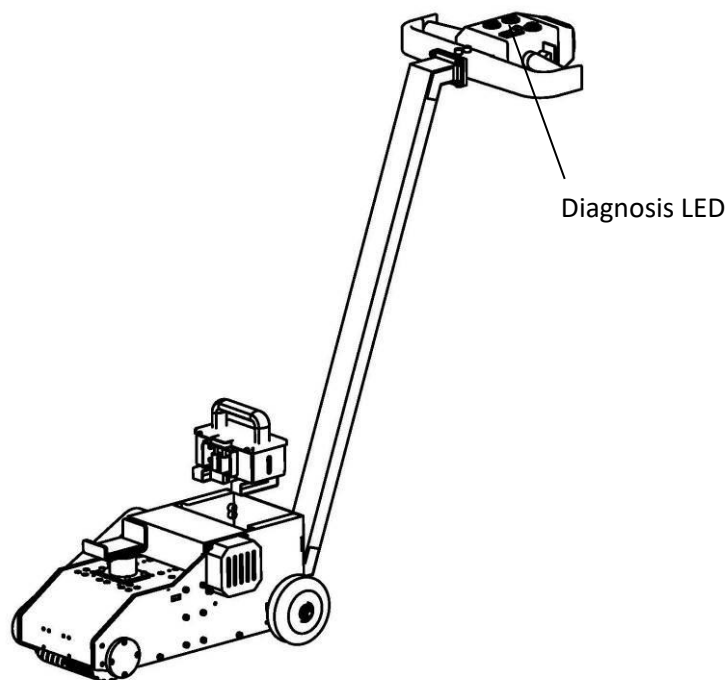
- Do not disassemble, crush or puncture a battery
- Do not dispose of a battery in fire
- Do not immerse the unit in any liquid
- Do not expose a battery to temperatures above 40°C (104°F) and below 5°C (41°F)
- Do not use a damaged battery
- Do not leave batteries unused for extended periods of time, either in the product or in storage

BATTERY STORAGE AND DISPOSAL

- Store the batteries separately from the product
- Store the batteries at temperatures between 15°C and 20°C (59°F and 68°F)
- Always check and follow your applicable regulations before disposing of a battery

malfunctions diagnosis

In case of anomaly or not functioning of the **movicart** system, please count the number of flashes of the diagnosis LED to identify the problem and solve it using the schedule below:



NUMBER OF FLASHES	DIAGNOSIS	SOLUTIONS/REMEDIES
1	Motor already powered at start (forward gear)	Turn off/on with throttle in zero position
2	Motor already powered at start (backward gear)	Turn off/on with throttle in zero position
3	Battery tension too low	Charge the battery
4	Battery tension too high	Use another battery and contact Renova
5	Throttle not at position zero at start	Turn off/on with throttle in zero position
6	Broken throttle (potentiometer)	Replace the throttle
7	Overheating	Cool the electronic board
8	Programming error eeprom	Turn off/on. If the problem persists, contact Renova
9	Error on control's power	Turn off/on. If the problem persists, contact Renova



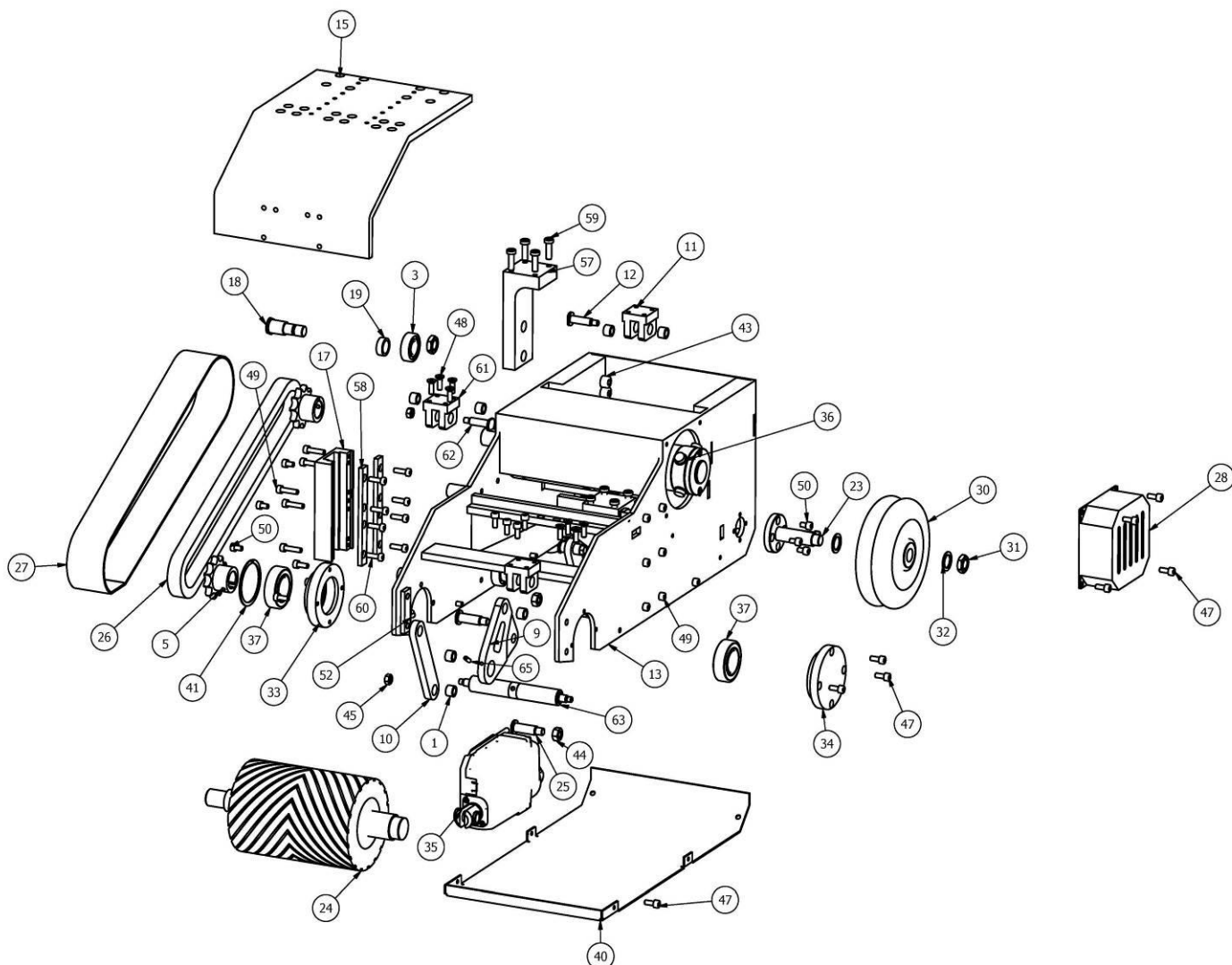
ATTENTION!

If, by pressing the UP button, the lifter plate does not rise, press the DOWN button and drop the lifter plate down to the lowest point. Later, press the UP button again to raise the lifter plate.

PLEASE NOTE:

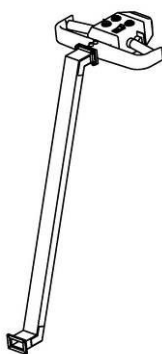
Please see warranty conditions on the warranty sheet.

components descriptions and code



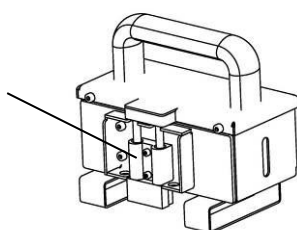
POSITION	CODES		DESCRIPTION	Q.TY
	MCE400	MCE400E		
1	B70-0011	B70-0011	sintered bronze bushing	11
3	C30-0033	C30-0033	radial ball bearing	4
5	I30-0004	I30-0004	sprocket chain	2
6	MREP0012	MREP0012	battery centering on MRE's battery	1
7	E50-0001	E50-0001	anderson plug connector	1
9	MCEP0061	MCEP0061	triangular lever	1
10	MCEP0001	MCEP0001	upper connecting rod	2
11	MCEP0003	MCEP0003	triangle lever support	1
12	MCEP0063	MCEP0063	triangle lever axle	1
13	MCEP0052	MCEP0052	frame	1
15	MCEP0051	MCEP0051	plate lifter	1

17	MCEP0054	MCEP0054	bearing guide lifter	2
18	MCEP0056	MCEP0056	bearing axis lifter	4
19	MCEP0058	MCEP0058	bearing spacer lifter	4
23	MCEP0019	MCEP0019	rear wheel axle	2
24	MCEP0010	MCEP0010	rubber shaft	1
25	MCEP0020	MCEP0020	actuator axle	2
26	C10-0023	C10-0023	simple chain	1
27	MCEP0021	MCEP0021	cover chain	1
28	MCEP0022	MCEP0022	cover motor	1
30	R95-0004	R95-0004	rear wheel for movicart	2
31	D14-0002	D14-0002	low nut	6
32	R60-0001	R60-0001	washer	4
33	MREP0145	MREP0145	roller drive open flange	1
34	MVRP0024	MVRP0024	roller drive closed flange	1
35	A95-0008	A95-0008	actuator 24V DC	1
36	M65-0028	M65-0028	motor 24V DC	1
37	C30-0004	C30-0004	bearing	2
38	MREP0013	MREP0013	battery centering pin	2
39	S15-0038	S15-0042	electronic board	1
40	MCEP0064	MCEP0064	bottom cover	1
41	A70-0003	A70-0003	seeger	1
43	V50-00022	V50-00022	screw	12
44	D10-0005	D10-0005	nut	2
45	D10-0002	D10-0002	nut	5
47	V50-0007	V50-0007	screw	23
48	V53-0005	V53-0005	screw	8
49	V50-0054	V50-0054	screw	12
50	V50-0027	V50-0027	screw	11
52	L51-0006	L51-0006	rounded key	1
57	MCEP0053	MCEP0053	lifter bearing support	2
58	MCEP0055	MCEP0055	bearing guide cover	4
59	V51-0005	V51-0005	screw	8
60	V51-0008	V51-0008	screw	16
61	MCEP0059	MCEP0059	connecting rod support	2
62	MCEP0060	MCEP0060	connecting rod axle	2
63	MCEP0062	MCEP0062	triangular connecting rod axle	1
65	G38-0007	G38-0007	screw	1
66	MCEP0057	MCEP0057	electronic board support frame	1

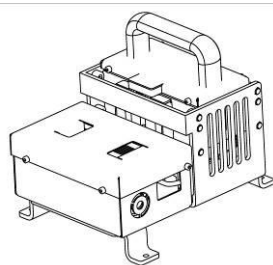


67	MCEP0066	complete handle
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Plug discharger -
movicart



	KITBATTMCE	battery 24 V
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	KITCHRMCE220	charger 220V 50-60 Hz SCHUKO PLUG
	KITCHRMCE110	charger 110V 50-60 Hz 3 PIN US PLUG

SPARE PARTS REQUEST

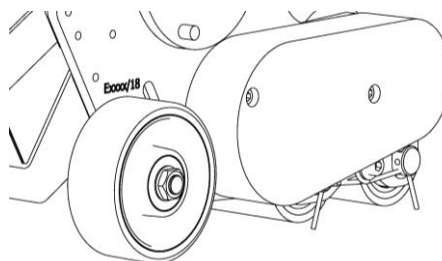
Please always communicate the serial number of your **movicart** when requiring spare parts together with the code of the spare parts needed.

Each **movicart** is provided with its serial number.

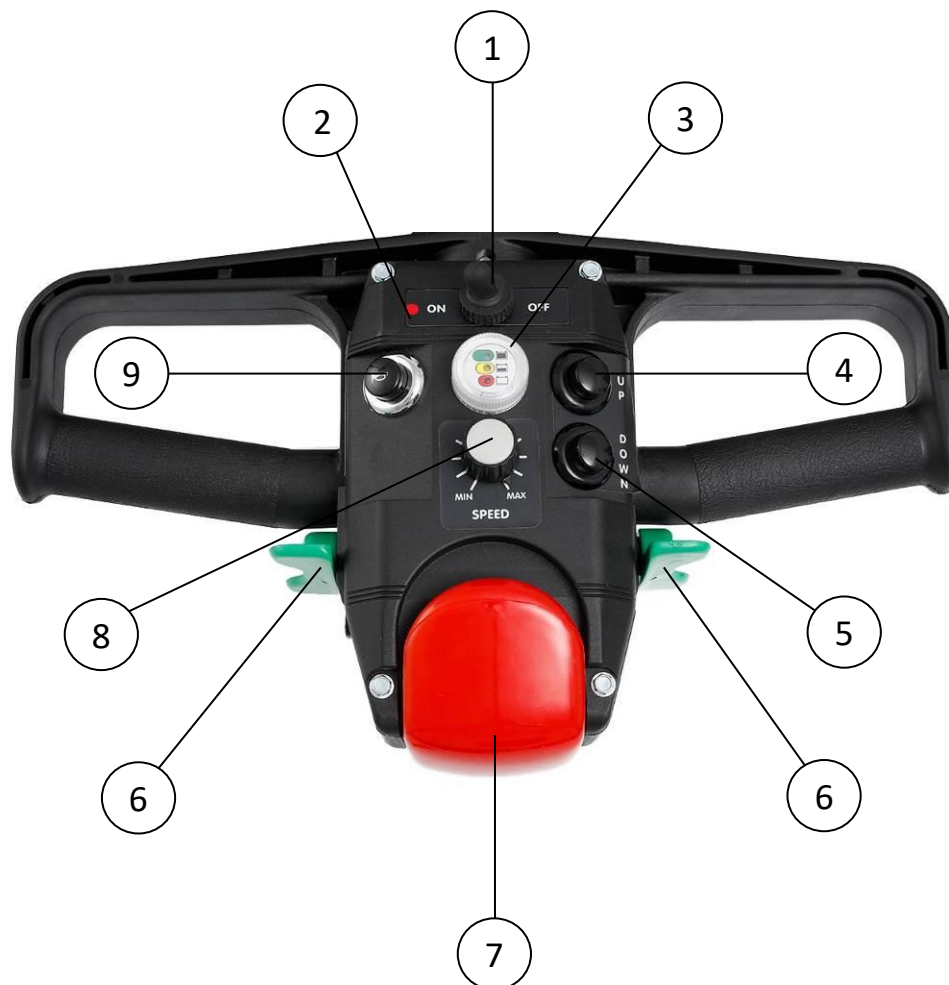
Please find the serial number of your **movicart** stamped on the **movicart** frame, above the rear wheel.

Example in the picture on the right.

Please find the serial number also on the warranty sheet provided with the **movicart** and on the Declaration of Conformity in this manual



control panel



1	Power ON/OFF
2	Power on red LED and diagnosis function. If it lights up intermittently, count the flashes and read the corresponding anomaly to page 8.
3	Battery charge status indicator
4	Control button for raising the lifter plate
5	Control button for lowering the lifter plate
6	Butterfly throttle Pushing the top of the lever, the Movicart moves forward (forward gear) Pushing the bottom of the lever, the Movicart moves backward (reverse gear)
7	Emergency stop belly button with anti-crushing safety function for the operator
8	Potentiometer that fixes the maximum speed of the engine (the speed is then adjusted by the operator with the throttle as in point 6)
9	Acoustic horn button

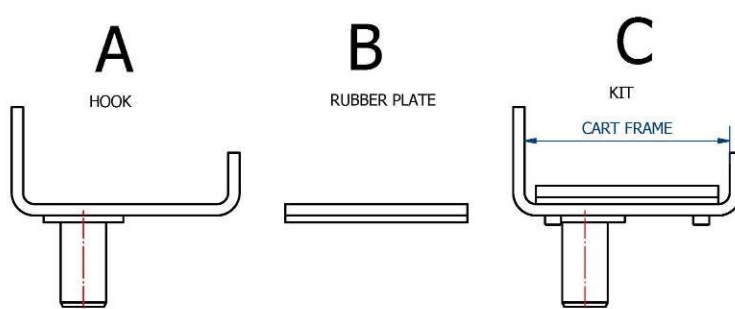
optionals and accessories

The wide range of available options for **movicart** allows it to be used with various types of carts, both in terms of tube sizes of the structure to be handled, and height above the ground of the frame itself.

If a hole is available on the structure, **movicart** has, among its options, a pin coupling that allows the movement of different cart types with particular structures that cannot be coupled with the standard options.

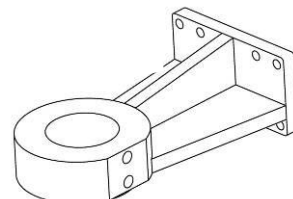
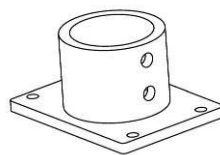
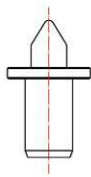
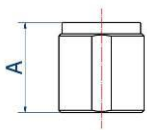
The combination of the numerous accessories allows the interfacing with most of the existing carts. However, Renova is always available to solve customer problems by creating customized accessories.

CART GRIPPERS



CART FRAME (mm)	A	B	C
30-50	MCEP0068	MCEP0077	MCEP0087
50-80	MCEP0070	MCEP0080	MCEP0088
80-120	MCEP0072	MCEP0083	MCEP0089
120-150	MCEP0074	MCEP0086	MCEP0090

BUSHINGS



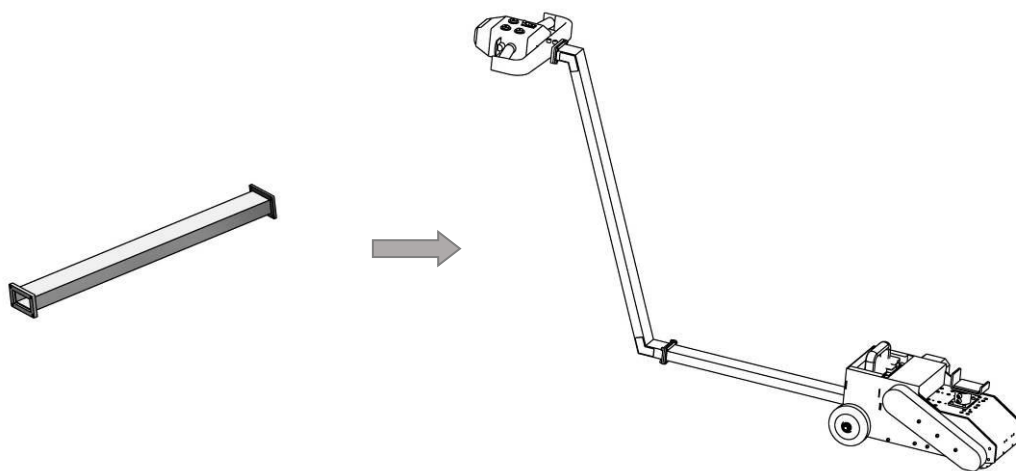
A (mm)	CODE
40	MCEP0096
75	MCEP0097
110	MCEP0098
145	MCEP0099
180	MCEP0100
215	MCEP0101

MCEP0102

MCEP0016

MCEP0065
(only for MCE 400)

HANDLE EXTENSION



MCEP0104	Handle extension, 610 mm
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To use the handle extension, it is necessary to disassemble the handle and disconnect the cables between the handle and the **movicart**.

After that, connect the extension cables with those of the **movicart** and fix with the 4 screws the extension cable to the **movicart**.

Repeat the operation on the other side of the extension cable, connecting the cables to the handle previously disassembled until obtaining the same configuration as the image above.

instructions for a proper use

Movicart has been designed for handling most of the carts on the market, equipped with two fixed wheels and two pivoting wheels.

The operating conditions require that the floor, on which the carts are moved, must be smooth, free from steps, holes, rails, and all kinds of fixed and non-fixed obstacles that may prevent its free movement.

After having installed the appropriate coupling type to that cart, bring **movicart** to the correct position with the forward/reverse commands. Later, with the UP/DOWN buttons, hook the cart to secure it to the **movicart**, which is now ready to perform its function.

The lifter plate supporting the coupling for the cart must be regulated in height using the UP and DOWN buttons in order to guarantee a sufficient push on the dragging roller to exercise the roller traction and, therefore, the **movicart** movement with the hooked cart.

If pressing the accelerator the hooked cart doesn't move, but the **movicart** slips, just press the UP button a little bit more (without the cart wheels lifting off the ground) until the **movicart** starts to move and drag the cart.



ATTENTION!

Pay attention not to lift the cart wheels that must always be in contact with the ground. Raising the **movicart** lifter until the cart wheels are detached from the ground can cause irreversible damage to the **movicart** itself.

Movicart is equipped with an emergency stop belly button safety system that safeguards the operator, in case he should get trapped between a fixed obstacle (e.g. a wall) and the movicart itself, by blocking the cart movement and reversing its direction instantly.

Movicart is also equipped with an acoustic warning device with push-button control at the Operator's discretion.

The bidirectional wheels of the **movicart** allows it to move in two directions simultaneously during its operation. In this phase the operator must be aware that the translation speed has to be reduced to avoid jamming or overturning of the movicart.

In order to optimise the choice of the most suitable speed for the working phase, **movicart** is equipped with a maximum speed regulator that, in combination with the accelerator, which is controlled by the operator, finds the ideal speed for the handling of that cart type.



ATTESTAZIONE DI VERIFICA DELLA CONFORMITÀ CONFORMITY VERIFICATION STATEMENT

in accordo all'ultima revisione del Fascicolo Tecnico costituito dall'azienda di seguito riportata.
according to the last revision of the Technical File issued, by the following company.

Verifica effettuata secondo i requisiti sotto riportati.
Verification done according to the below requirements.

RENOVA S.r.l.

Sede legale / Registered site: Via Palmanova 24 20132 Milano
Sede operativa e amministrativa / Operative and Admin. site:
Viale Rimembranze 93, 20099 Sesto San Giovanni – Italia

dichiara che il/i seguente/i prodotto/i: / *declares that the following product(s)*

Descrizione description	Attrezzatura per la movimentazione di carrelli con 2 ruote fisse e due ruote pivotanti, su pavimenti piani e senza scalini o dossi Equipment for handling trolleys with 2 fixed wheels and two pivoting wheels, on flat floors and without steps or bumps
Nome Name	Movicart
Modello Model	MCE400 e MCE400E

è/sono conforme/i ai seguenti requisiti: / *fulfil(s) the following requirements*

alla Direttiva 2006/42/CE relativa alle macchine
(procedura di valutazione in accordo all'allegato VIII)
directive 2006/42/EC "Machinery directive"
(conformity assessment according to annex VIII)

Norma/e Applicata/e: / *applied standard(s)*
EN ISO 12100:2010

Revisione / Revision: A
Prima Emissione / First issue: 28/10/2020
Data di Revisione / Revision date: 28/10/2020

Procuratore Speciale
EUROCERTIFICATIONS S.r.l.

Eleonora Angioletti



EUROCERTIFICATIONS S.r.l. (P.IVA: 04336060167)
Sede Legale: e Uffici Operativi: via Puccini, 1 - 24040 – Madone (BG)
tel. 035 4997726 fax. 035 4943471 e-mail: info@eurocertifications.it website: www.eurocertifications.it



DICHIARAZIONE DI CONFORMITÀ CE
alla Direttiva 2006/42/CE relativa alle macchine in accordo all'allegato IIA
EC DECLARATION OF CONFORMITY
according to 2006/42/EC machinery directive annex IIA

RENOVA SRL

Sede legale-Legal site: Via Palmanova 24 20132 Milano

Sede operativa/amministrativa-Operative site: Viale Rimembranze 93, 20099 Sesto San Giovanni

DICHIARA CHE
/ DECLARE THAT

il prodotto/
the product

Attrezzatura per la movimentazione di carrelli

con 2 ruote fisse e due ruote pivotanti,
su pavimenti piani e senza scalini o dossi
Equipment for handling trolleys
with 2 fixed wheels and two pivoting wheels,
on flat floors and without steps or bumps

Descrizione /
description

Nome / Name

Movicart

Modello / Model

MCE400 e MCE400E

Anno di
fabbricazione e
costituzione
fascicolo tecnico/
Production year

2020

N° matricola



E' CONFORME
/FULFILLS

alle seguenti Direttive Europee:

/ the requirements of the Directive:

alla Direttiva 2006/42/CE relativa alle macchine
(procedura di valutazione in accordo all'allegato VIII)

directive 2006/42/EC "Machinery directive"

(conformity assessment according to annex VIII)

Norme applicate/applied standards

EN ISO 12100:2010

Nome e indirizzo della persona stabilita nella Comunità europea autorizzata a costituire il fascicolo tecnico /

Name and address of the person established in the EU Community authorized to compile the technical file

Firma della persona autorizzata a redigere la dichiarazione a nome del fabbricante o del suo mandatario

Signature of the person empowered to draw up the declaration on behalf of the manufacturer or his authorized representative

UGO RE

Amministratore /
General manager

Nome / name

Funzione / function

Firma / signature

Luogo / Place MILANO Data / date 28/10/2020

La presente dichiarazione di conformità è rilasciata sotto la totale responsabilità esclusiva del fabbricante

This declaration of conformity is issued under the total sole responsibility of the manufacturer

	<p align="center">DICHIARAZIONE DI CONFORMITÀ UE EU DECLARATION OF CONFORMITY</p> <p>In accordo alla direttiva 2014/34/UE del Parlamento europeo e del Consiglio, del 26 febbraio 2014 , concernente l'armonizzazione delle legislazioni degli Stati membri relative agli apparecchi e sistemi di protezione destinati a essere utilizzati in atmosfera potenzialmente</p> <p><i>According to 2014/34/EU directive on the harmonisation of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres</i></p>
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Ragione sociale / manufacturer	<p align="center">RENOVA SRL</p> <p align="center">Sede legale/legal site: Via Palmanova 24 20132 Milano</p> <p align="center">Sede operativa/operative site: Viale Rimembranze 93 20099 Sesto San Giovanni(MI)-Italy</p>
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dichiara che / declare that

Prodotto/Product Name	Spingi bobine ed attrezzature e per la movimentazione di carrelli Reel pushers and equipment and for cart handling
Tipologie/Types	Movicart Moviroll
Categoria ATEX ATEX category	3
Matricola/serial number	

E' CONFORME
FULFILS

alla Direttiva Europea **2014/34/UE**
the European Directive **2014/34/EU**

Prodotto di categoria 3 per zone ATEX 2-22/ ATEX category 3product for 1-22 ATEX classified zone



Sono stati applicati i seguenti standard tecnici
The following technical standards have been applied:

EN 1127-1:2019
EN ISO 80079-36:2016 (ex EN 13463 – 1)
EN ISO 80079-37:2016 (ex EN 13463 – 5)
Controllo interno della fabbricazione in accordo alla EN ISO/IEC 80079-34:2020
Interna Fabrication Control according to EN ISO/IEC 80079-34:2020

RENOVA applicando il marchio **CE** garantisce che il progetto, la costruzione delle attrezzature sopra menzionate rispondono ai requisiti della Direttiva **2014/34/UE**
La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.

RENOVA by using the **CE** marking guarantee that design, construction of equipment mentioned above fulfil the requirements of the Directive **2014/34/EU**
This declaration of conformity is issued under the sole responsibility of the manufacturer.



Renova srl – viale Rimembranze 93 – 20099 Sesto San Giovanni - Italy – tel: +39.02.2700.7394 – fax: +39.02.2570.8635
www.renova-srl.com – email: support@renova-srl.com