



Sede Operativa

via G. Galilei trav. I° n° 12

25010 San Zeno Naviglio (BS)

tel 030.2161048 fax 030.2168077

www.bigaitalia.it

www.bigaitalia.com

info@bigaitalia.it

PRODUCTION MADE IN ITALY

The company Bigà Italia is born for the design and construction of electric vehicle "Bigà": small electric tractor with multiple uses, great autonomy and efficiency thanks to the technical quality of the materials used. Bigà products solve logistic problems of people and materials, focusing the construction on safety, easy costs, according to the regulations Legislative Decree 81/08, with reference to Article IV title. 167 for manual handling of loads (bcm) (see Annex at the end of page). Patented product and registered trademark is today marketed and used in various fields: in companies for material handling, airports, cemeteries, watches, ports, greenhouses, farms, resorts, holiday parks, farms, entertainment agencies, amusement parks.

Dynamic company, always attentive to the evolution of the market and malleable in terms of new proposals, Bigà Italia is today a reference point for the study of new technologies to simplify the world of material handling. Today specialized in the production, in small series, of special carts for individual and specific customer requirements. Gold medal by the Chamber of Commerce of Brescia, as better industrial invention: "Example of adaptation of the product to market requirements, symbol of imagination and creativity of small and medium enterprises in Brescia". Prize "Environment Friendly Innovation" by Legambiente with the Milan Polytechnic, Bocconi University and Confindustria. CUNA certification.

Currently the production is completely made in Italy and is divided into several areas:

A. ELECTRIC TRACTORS TO MOVE IMPORTANT WEIGHTS IN ECONOMY

Bigà APE 2/3 TON TRACTOR: small tractor with a towing capacity of 3,000 kg. with the possibility of 2/4/6 batteries (140 to 350 A) with towing hook . Cheap, easy to handle, autonomy 6 hours in continuous, low maintenance , characteristics that make this electric vehicle a point of arrival.



B. SMALL TRACTORS HAULER TO MOVE PEOPLE AND TROLLEYS

Bigà type A: Speed 16 km / h - grade ability 16 % - 50 kg load over the driver.

Born for the fast move of staff within large spaces. For the director, the department head, control, maintenance, surveillance and carry small pieces. Autonomy 10 hours to total discharge, TUV certified. With the chariot speed of 16 Km / h the time of movement of people is reduced by 25 times (men walk 4 km /.). Easy to use: you go up, you start, you arrive and you are already in motion (dynamic movement). Average daily gain of time 40 minutes. Produced entirely in Italy.



Bigà type B: Speed 10 km / h towing 400 kg .

Tractor Biga type B - 10 Km / h solves two problems, move quickly enough and the chance, by attaching quickly a trolley of our production, to move various materials up to 300 kg. In the various sectors of production, speed, maneuverability in tight spaces, turns on itself with our trolley " type 1S " in a 200 cm ray, enters quickly in the various departments. Emergency and maintenance of bulky and heavy materials (trolley 120x80 cm capacity kg . 300). Avoid the disproportionate use of large and expensive means for moving small volumed goods. Time saving 40 minutes a day.



Bigà type C: Speed 6 km / h towing 800 kg .

Our quintessential tractor. Small but with big towing capacity and long range, trolling up to three trucks of meals, trolleys built by large Italian companies, all with a pretty low price and inexpensive maintenance almost zero . Convenience and simplicity of use.



Bigà type Easy: Technical characteristics, power and use identical to the versions type A / B / C but with easier body and with an important possibility to mount an adjustable turning seat and swivel .



C. ELECTRIC TROLLEYS TO MOVE ON ALL TYPES OF FLOORS

Bigà FOOT: handy, small 90x60 cm fits into any lift, carrying capacity up to 250 kg.

Bigà FOOT 500: two sizes 80x120 and 90x155 cm to solve any handling problem of material man to the ground, without any effort for the operator, batteries 102 A.

Bigà FOOT CINO: Measures up to 220 cm x 80 cm with the receiver to be used on asphalt batteries 140 A.



D. LOADING BEDS SEATED MAN PICK-UP TOWING CAPACITY FROM 300 TO 800kg

Bigà PICK-UP small electric platform for goods transport and for ground picking. cm. 151x74 with floor payload. Cm 95x74, autonomy 5 hours in continuous, battery acid/gel, headlight, rear lights, horn, front drum brake, rear disc brake, parking brake, ignition key, security button man on board, battery charge indicator, forward neutral and reverse selection lever, quick external battery charger, lever for immediate detachment of the batteries, super elastic tires.



E. MINI TRUCK WITH CAGE TO MOVE GOODS AND WASTE

Bigà APE: one body tractor and dump 230 cm long, 190 cm high and 90 cm wide, with capacity up to two cubic meters, COMPACT AND HANDY capacity of 300 kg and 100 kg on 17% slope.



F. ELECTRIC TRACTORST TO MOVE TROLLEYS. LATERAL LOAD. H.8

Bigà Pick Up L1/2R: to carry 2 Roller with lateral load 600 kg. These tractors in addition of carrying 1/2 ROLLER can pull our trolley PAD charged back with other 1/2 ROLLER.



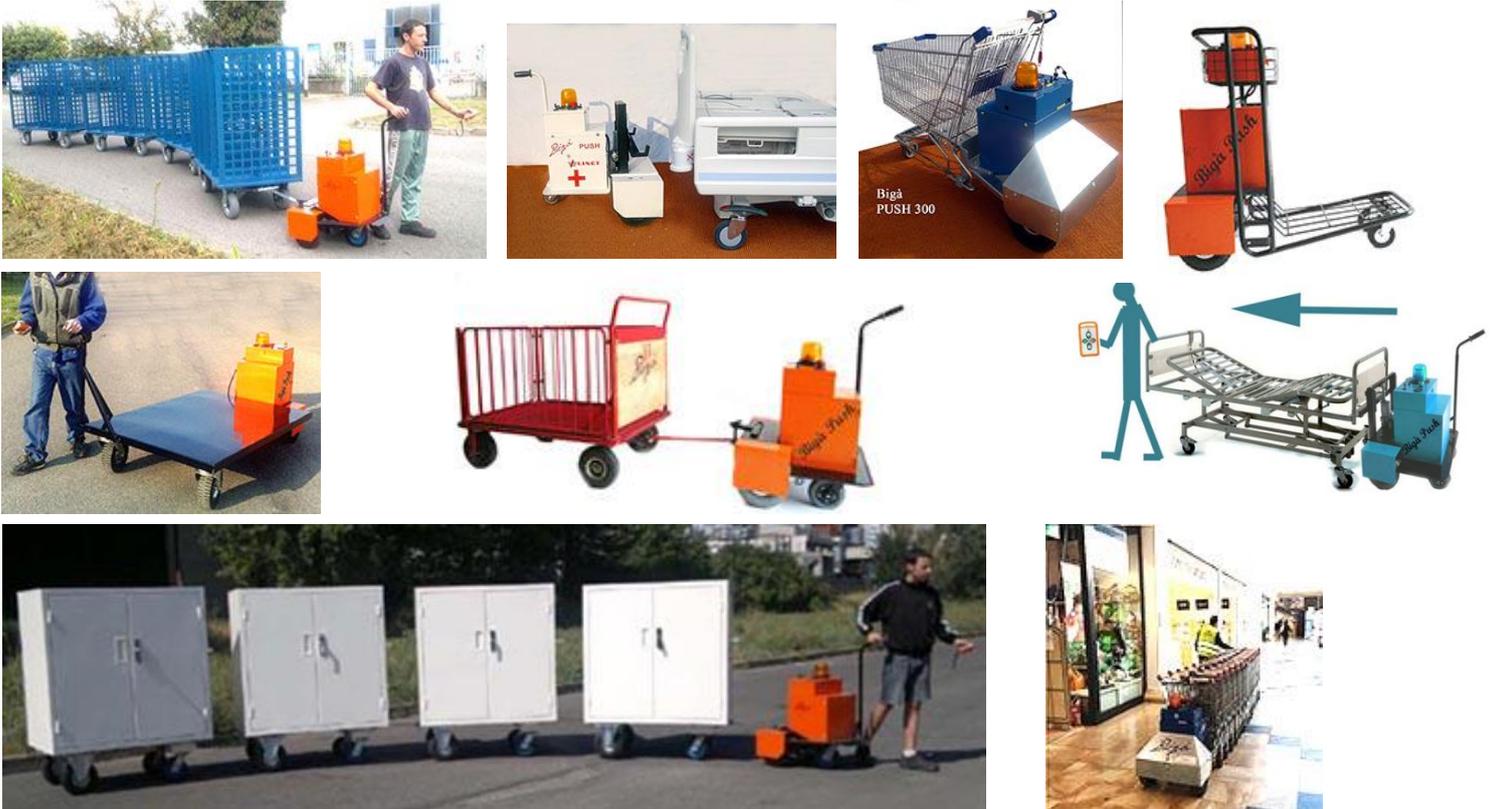
G. ELECTRIC TRACTORS TO MOVE TROLLEYS. POSTERIOR LOAD.

Bigà Pick Up P1/2R: to transport in small spaces 1/2 ROLLER. Posterior load 300/600 kg



H. PUSHER/HAULER ROBOT TO MOVE TROLLEYS AND BEDS

Bigà Push Kit: operator on the ground, it allows this pusher/hauler to be used for some special functions such as handling **shopping carts** in supermarkets, **luggage carts** in airports, **any cart** that has a hitch, as well to be turned into a **bed mover**, great innovation allows one person, after positioning the pusher at the foot of the bed, to lead the patient driving on the side of the head, pressing the push forward, stopping or reversing simply pressing a button on the remote control. This way to move the bed allows a better visibility at intersections of the corridors, seeing those arriving and at the same time check the patient. Equipped with two-speed system, brake system and release electro plate fitted with actuator, the kit Push is an innovation of great importance. Ability to safely tow 2000 kg and 250 kg on the plane on 12% slopes. The Bigà Push can be driven by remote control or by electric cable with lever return "forward behind" and central stop.



I. SMALL TRACTOR WITH ANTERIOR LOW LOADING PLATFORM

Bigà D: transportation of a resident in wheelchair with an electric vehicle of small dimensions: 190x85 cm. This solution allows the operator to see directly the patient or the charged material and the path, enter and leave the elevators with a depth of 200 cm.



L. PICKING SMALL TRACTOR POSTERIOR LOAD PLATFORM. MAN STANDING

Bigà Picking: Versatile electrical vehicle, to make the materials PICKING simple, fast, economic. The guide allows you to speed up the pickings and in the meanwhile to get on and off the vehicle very quickly, saving time (dynamic movement). The resilient wheels plus, allow this vehicle to move on smooth floors and on asphalt. The flow rate may be more than 300 kg. on the platform while towing is allowed up to 700 kg. Ability to lengthen the load floor.



M. AUTOCARRO ELETTRICO PORTATA 1000 KG PER TRASPORTARE TUTTO

Bigà TRUK TRUCK: Truck for internal use with 140 cm x 90 cm loading platform. Total size cm 295 x 90. Capacity 1 ton, towing 2.500 kg. Super elastic solid plus tires diameter 30 cm, autonomy 6 hours in continuous, low maintenance, characteristics that make this electric vehicle a point of arrival.



N. SIZED TROLLEYS CONFORM TO TITLE III ART. 70 AND ATTACHMENT V D.LGS 81/2008

TROLLEY PAD 2: trolley with steering ring system for a precise conduction in turns. Wheels diameter 26/30 according to need. Very handy and scrolling. Load floor H 8



TROLLEY SERIES 4000: Conform to art. 70 attach. V

The lowered trolley 4000 is the spearhead of the trolleys in the Bigà Italia production. This trolley is sized on request of the customer, according to the real needs of load and size. Size wheels, side rails, protections, are from time to time designed and built in relation to the floor, the place and the stress of use of the vehicle itself, creating a product that will last over time. The capacity ranges from 100 kg. 2,000 kg ensuring an always perfect rolling. It is manufactured with load floor sized from 240 cm to 400 cm and a width from 90 to 180 cm. External dimensions max. 500 x 180 cm.



O. BIGÀ MOPED electric. Omologated for road use, the only motorcycle in the world with a guide standing. Speed 16 km / h 50% insurance exempt from stamp x 5 years.

BIGÀ TYPE S speed 16 km / h – grade ability 16% - 50 kg load over the driver.

Born to move fast and environmentally friendly in urban traffic. Appropriate body for municipal police, firefighters, private security, bike rental for areas with limited traffic in city centers. Autonomy 10 hours total discharge, TUV certification. Approved version road: full of arrows, position lights and low beams, stop, horn and speedometer. Electric moped insurance with 50% discount, stamp-free for five years.



P. WHEEL RIMS ALUMINUM 4-INCH 5-SPOKE, OUR MOLD PRODUCTS



**Q. MANUAL TROLLEYS TO MOVE ON ALL TYPES OF FLOOR
SEE CATALOGUE ATTACHED**

ON REQUEST CHARACTERISTICS DATA SHEETS OF ALL PRODUCTS

BIGA.....STRANGE.....THINGS



- Bigà for skating floor.**
- Bigà for vagns buffers.**
- Bigà for metro railways.**
- Bigà Pick up for railways.**
- Towable Garbage Bins.**



SELEZIONE DI ALCUNE AZIENDE CHE GLA' USANO LA BIGA' CON SODDISFAZIONE

AZIENDE:

Trenitalia S.P.A.
Nestle' Italiana S.P.A.
Iveco Fiat
Tiesse Robotic S.P.A.
Pietro Carnaghi S.P.A.
L.A.S. Mobili S.P.A.
Vei Electric System S.P.A.
Normalien S.P.A.
Autodemolizioni Pollini
Amac S.A.S.
Marchi Group S.P.A.
Servizi Italia Spa
Coopservice coop. Soc. p. A.
Comarch S.R.L.
Dussmann Service Srl
Burlodge S.R.L.
Elior Group Italia S.P.A.
Rubinetterie Flli Frattini S.P.A.
Socar S.P.A.
Lorandi S.P.A.
Gessi S.P.A.
Sirap-Gema S.P.A.
Beretta Fabbrica D'armi S.P.A.
Cima Arredobagno S.P.A.
Cir-Food S.P.A.
Rubinet. Ottone & Meloda S.P.A.
Az. Trasporti Milanesi -A.T.M. spa
Mission Group srl
Wuber S.P.A.
Ikea
Unico S.P.A.
Del Tongo Arredamenti S.P.A.
Jungheinrich Italiana S.P.A.
Cardinale Group
Golden Lady S.P.A.
Cefla Dental Group
Comune Di Palazzolo Acreide
Hopital Service
Gruppo Manutencoop
Ica System
Vivenda Spa La Cascina Group
Global Cri Srl La Cascina Group
Transpart Fiat Group Comau
Magris S.P.A.
Gemeaz Cusin Spa
F. Divella Spa
Scavolini spa

AEROPORTI:

G. Galilei - Pisa
C. Colombo - Genova
Aeroporto Catania
Falcone E Borsellino - Palermo
Lamezia Terme
Orio Al Serio Bergamo
Sagat Caselle Torino
Fiumicino Roma
Ciampino Roma

PORTI:

Cantiere Marina Di Ragusa
Marinara Ravenna - Seaser S.P.A

OUTLET - C.COMM.LI

Village Franciacorta Brescia
Fidenza Village
Val di Chiana Village Arezzo
S. Angelo Village Pescara
C.Comm.le Leonardo. Roma

C.Comm.le Freccia Rossa Brescia
C.Comm.le Auchan Bussolengo
C.Comm.le Auchan Bergamo
C.Comm.le Auchan Rescaldina
C.Comm.le Auchan Mazzano
C.Comm.le Auchan Concesio
C.Comm.le Il Carosello - Carugate
C.Comm.le Il Gigante - Usmate

OSPEDALI:

Novara Osp. Maggiore
Ospedale Borgomanero
Roma Policlinico Umberto I°
Ospedale Manzoni Lecco
Brescia Poliambulanza
Giussano - Desio
Ospedale Maggiore Crema
Pieve Di Coriano MN
Casa di cura Villa Regina Arco TN
Bologna Maggiore
Bologna Bellaria
Bologna S. Orsola Malpighi
Milano Ist. Ortop. Gaetano Pini
Milano Istituto Mario Negri
Ospedale di Monza
Riabilitativo Motta Di Livenza TV
Civile Di Teramo
O. S. Cosma E Damiano Pescaia PI
Ospedale Di Ferrara
Ospedale Di Bari
Ospedale Di Pordenone
O. Niguarda Ca' Granda Milano
Ospedale S. Carlo Di Potenza
Ospedale G. Rummo Benevento
Casa di Ricov S.M Ausiliatrice BG
Ospedale Carlo Poma Mantova
Casa di riposo Apsp Pergine Tn
Casa di riposo Don Bosco BZ
O. Oglio Po Vicomosciano CR
Policlinico Tor Vergata Roma
Ospedale Civile di Brescia
Sant'Anna di BS. G. S. Donato
A.O.U. Federico II Napoli
Ospedale Cattinara - Trieste
ASL1 - L'Aquila
Osp. Orbassano - Torino
Ospedale Lucca
Ospedale Monselice
ASL Teramo
Ospedale di Rivoli
O. S. Annunziata Taranto
Policlinico Catania
O Villa Regina Arco di TN
Casa di cura Don Bosco BZ

PUBBLICITA' E SPETTACOLI

Dams Spettacoli - Ravenna
Circo Lidia Togni
Format S.A.S. - Assisi -
Music Line - Domodossola
Nardi Andrea - Macerata
Edicom - Bergamo
Freeway & Associati S.R.L.
P.Art S.A.S. -Forli
Show Planet - Chieti
Il Coriandolo - Programma Europa
Orange Line
Eventi Extralarge Milano
Magic Production Caserta

HOTELS -VILLAGGI -PARCHI:

Crioula Hotel - Capoverde
Hotel Hemeraude - Caraibi
Vill. Turistico Nausicaa Calabria
Camping Tavolara - Sardegna

Fort Village - Sardegna
Camping Rocchette-Grosseto
Villaggio Kartibubbo - Sicilia
Residence La Brunese -Otranto
Aqualand Del Vasto
Parco Prov. Monteclaro di Cagliari
Parco Paradise City -Siracusa
Parco Zoo Etnland - Catania
Villaggio Capo Calava' - Messina
Aqualandia - Jesolo
Zoo Safari Di Fasano (BR)
Hotel Principe Viareggio
Hotel Visconti Palace Roma
Villaggio Club La Brunese (LE)

VIGILANZE:

La Celere
Vigilantes - Taormina
Fidelitas Spa
Lombarda sicurezza
Mondialpol Sicilia
Mondialpol Arezzo
Il Globo Vigilanza Pistoia
Italpol Srl Chieti
Servizi Italia srl
D.R. Security Service
Cons. Gruppo Faro Monza
Bsf Barani Group Roma
Duomo sicurezza

CMITERI:

Torre Del Greco (Napoli)
Brescia
Vercelli
Ferentino (Frosinone)
Reggio Calabria
Quartu S. Elena (Cagliari)

CASA CIRCONDARIALE MESSINA

CASA CIRC.tempio pausania olbia

CENTRO IPPICO FRANCIACORTA

VIGILI DEL FUOCO AQOSTA

GEIE TRAFORO MONTE BIANCO

ISTITUTO ZOOLOGICO CAPRI

MANUAL LOADS HANDLING

D.Lgs 81/08 TITOLO IV

With reference to art. 167 Legislative Decree 81/08 for the manual loads handling (MMC), we mean every weight transporting or supporting, done by one or more workers, including lifting, putting down, pushing, pulling, carrying or moving a load, which, for their characteristics or as a result of unfavorable ergonomic conditions, entail risk of pathologies biomechanical overload, in particularly back injury.

By Legislative Decree 81/08 are deduced not only, which preventive measures should be taken to avoid this risk of overload pathologies, but also that, when there is the possibility, it is necessary, in order to reduce any risk, to prevent or make it less tiring these operations through the use of appropriate means. In this regard the art. 168, states that:

- The employer is obliged to take appropriate organizational measures, and to use the appropriate means, in particular mechanical equipment, in order to avoid the need of manual handling by workers.
- Where it is not possible to avoid the manual handling, the employer must take the necessary organizational measures, or provide for the employees themselves the appropriate resources, in order to reduce the risk that the operations of manual handling of such loads can lead.

The evaluation of these risks must, therefore, consider the amount of a whole series of individual factors and elements of risk, which are listed below (with reference to what is shown in attach. XXXIII):

1. Characteristics of the load:

Handling can bring a risk of disease if the load is too heavy, bulky or difficult to grasp, if it is unstable or its contents risks to move, when his position implies that the same should be held or manipulated at a distance from the trunk, or with bending or twisting of the trunk itself. Finally, if there is the possibility that for shape, texture or structure of the load, it involves injury to the worker in the event of a collision.

2. Physical effort required:

A physical effort may present a risk of overload pathologies if excessive (resulting in an increase of heart rate and breathing and having a negative effect over time on the joints), where it can be done only through twisting motions or with an unstable body position; if it could lead to a sudden movement of the load.

Based on these data, have been developed techniques to determine the so-called "weight limit recommended". In particular:

- for lifting actions you can refer to the method proposed by the NIOSH, which indicates that the maximum weight (under optimal conditions) allowed is 25 kg for men and 15 kg for women. (ISO 11228-1)
- for pushing and pulling actions, the reference goes to the method Snook & Ciriello, which provides values and guidelines for the evaluation of risk factors deemed relevant during the manual operations of push and pull, allowing the overall risk assessment. (ISO 11228-2: 2007)

Bigà Italia

www.bigaitalia.it www.bigaitalia.com

email info@bigaitalia.it

tel. 0302161048 fax 0302168077