

3arm[®]

MANIPULATORS



ERGONOMIC SOLUTIONS



3arm® is a division of the Tecnospiro Machine Tool Company located in Sant Joan de Vilatorrada a small village about 65 Km west of Barcelona.

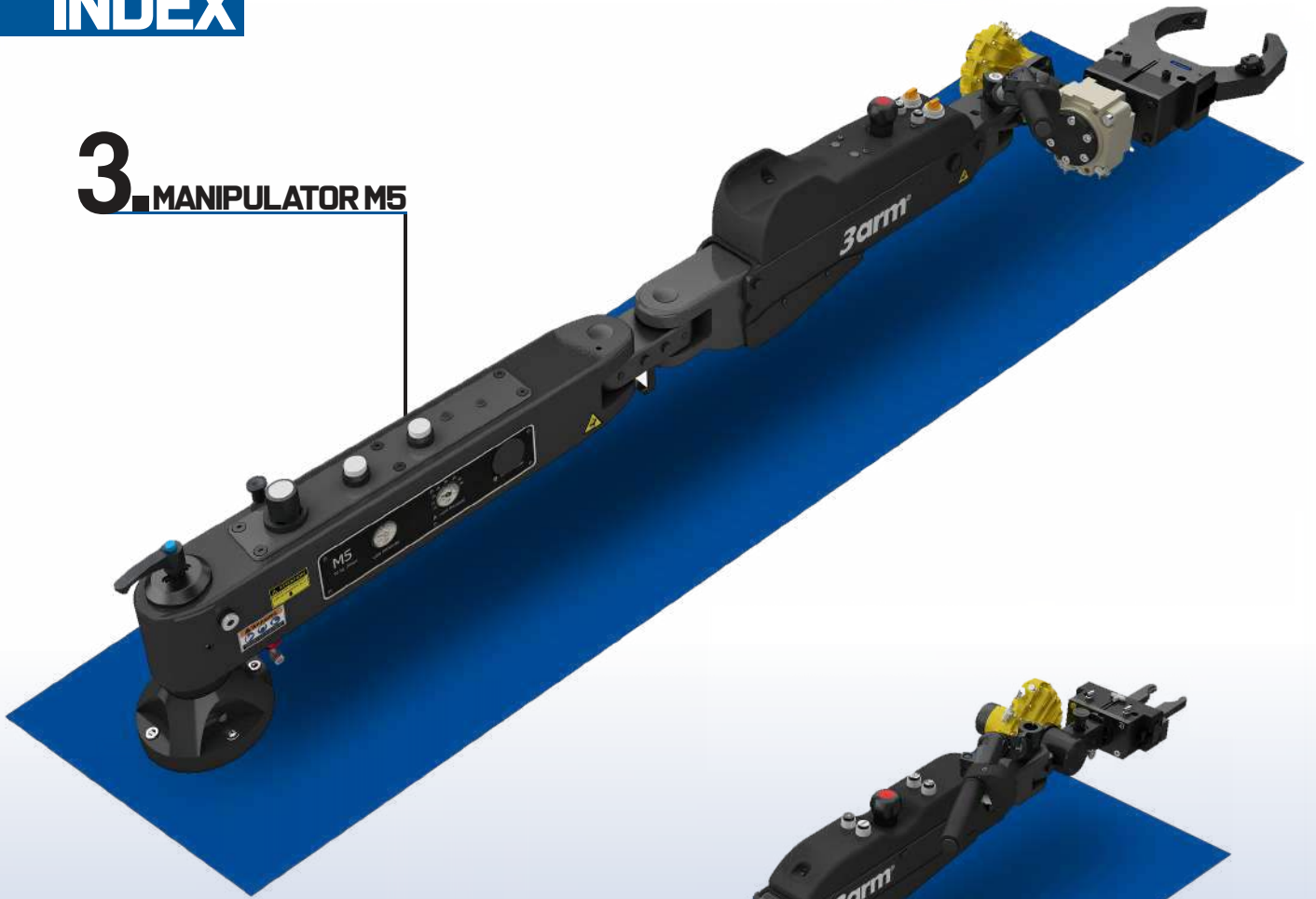
The company is family owned and has been in business since 1947. Utilizing a state of the art manufacturing facility and a dynamic engineering staff that has been very innovative in design and inventing new products.

The 3arm ergonomic arm is the strongest most dependable arm available in the world market place today. It can be used for assistance in assembly, deburring, off line machining, and all types of lifting operations. Where ever operator fatigue is concern for employee safety, productivity, or quality 3arm has a solution.

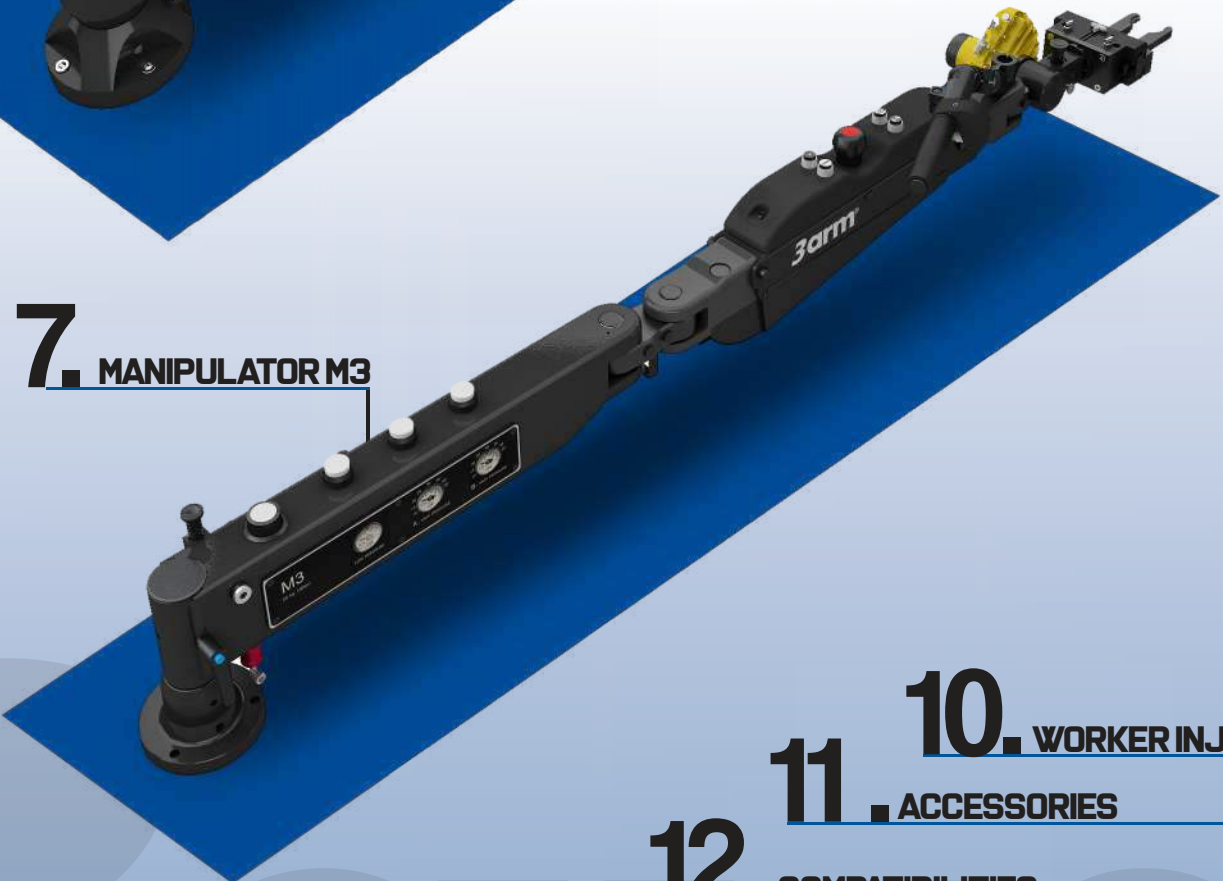


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SAFETY WARNING 3ARM products are engineered and manufactured with safety in mind. The heat treat specifications exceed or meet all standards. All of the products manufactured by 3ARM are designed to perform without any undue safety issues when caution, common sense and proper safety practices are followed. The use of cutting tools and toolholders is safe when proper application and protection guidelines are observed. Even when these proper precautions are taken, it is possible that fragments of a cutting tool, cutting material, or holding device may be thrown at a very high rate of speed and have potential to cause severe bodily harm. It is imperative that general safety precautions and safety glasses be used at all times.

MANIPULATOR M5

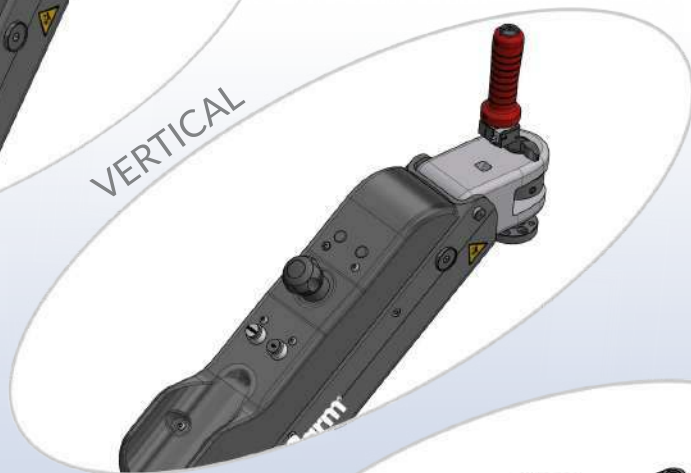
3ARM Manipulator M5 can be equipped with a variety of specialty gripping tools. It is engineered to manually handle, center and set loads of up to **50kg in a weightless condition**, in any direction. The Manipulator aids the operator in precise ergonomic work handling, effortlessly and safely.

The M5 offers the most custom arm configurations to move parts to and from conveyors, assembly lines, machine tools and much more.

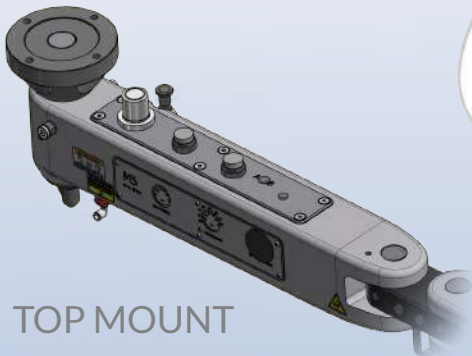
BASIC



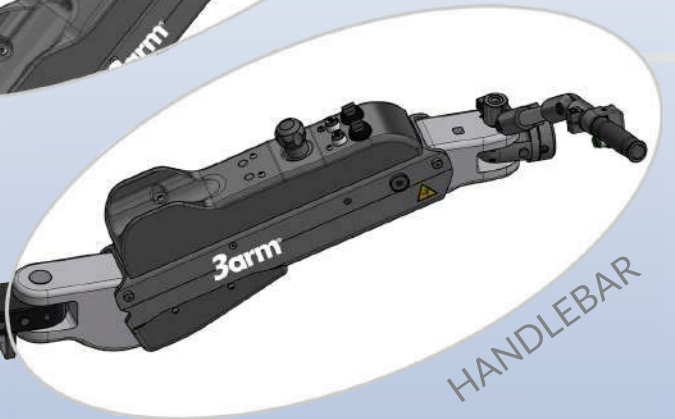
VERTICAL



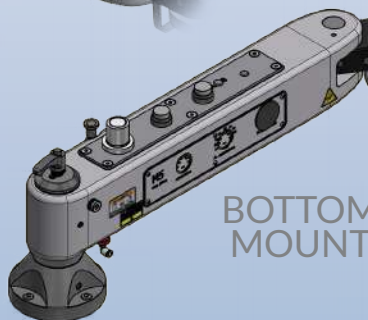
TOP MOUNT



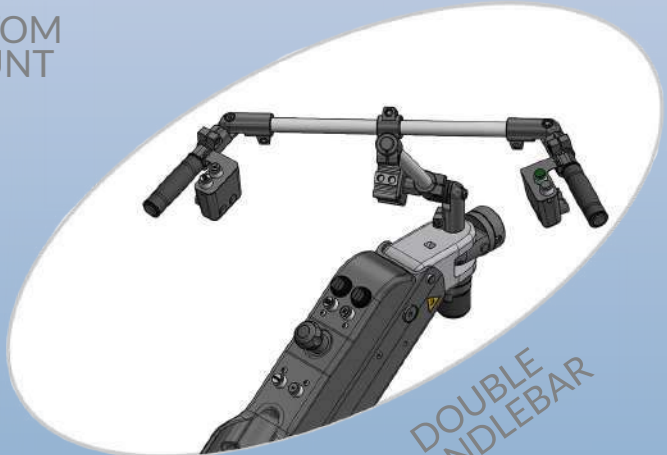
HANDLEBAR



BOTTOM MOUNT

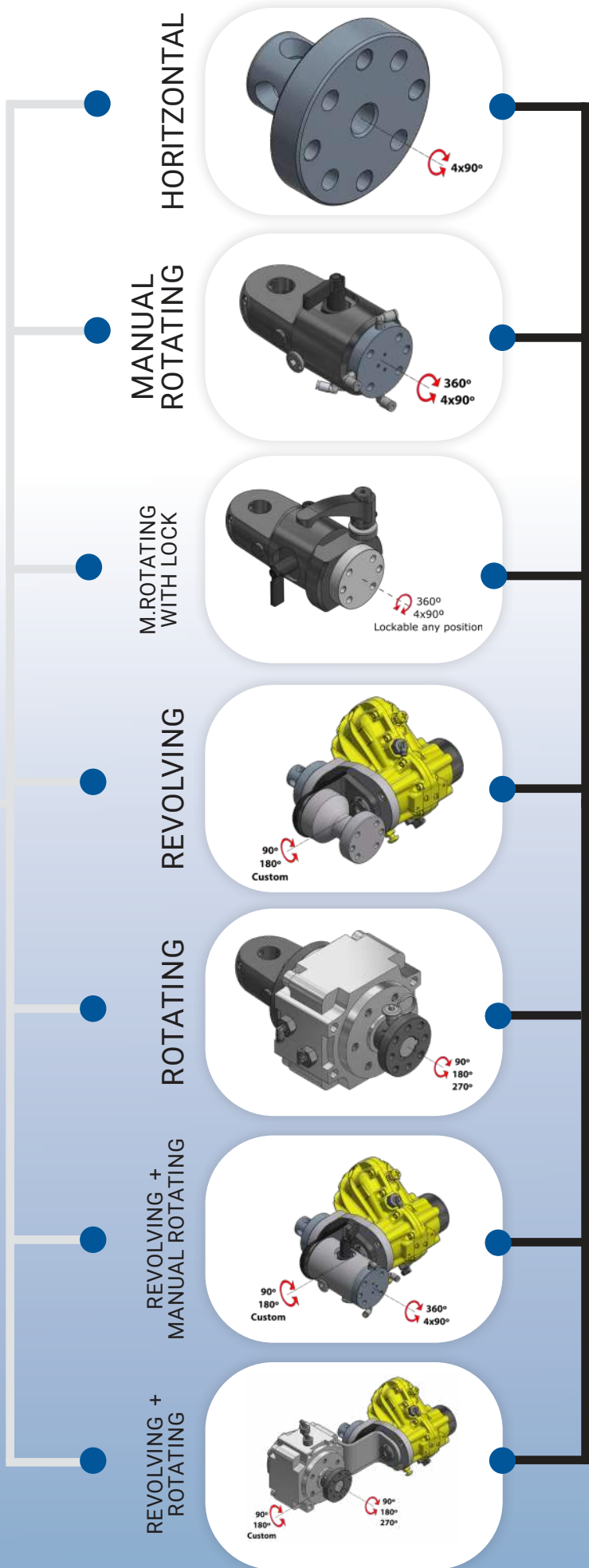


DOUBLE HANDLEBAR

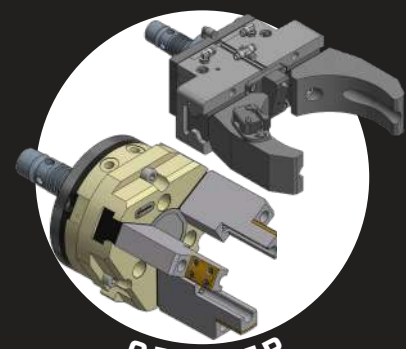


AUTOMATIC DOUBLE HANDLEBAR





Gripping Systems



GRIPPER



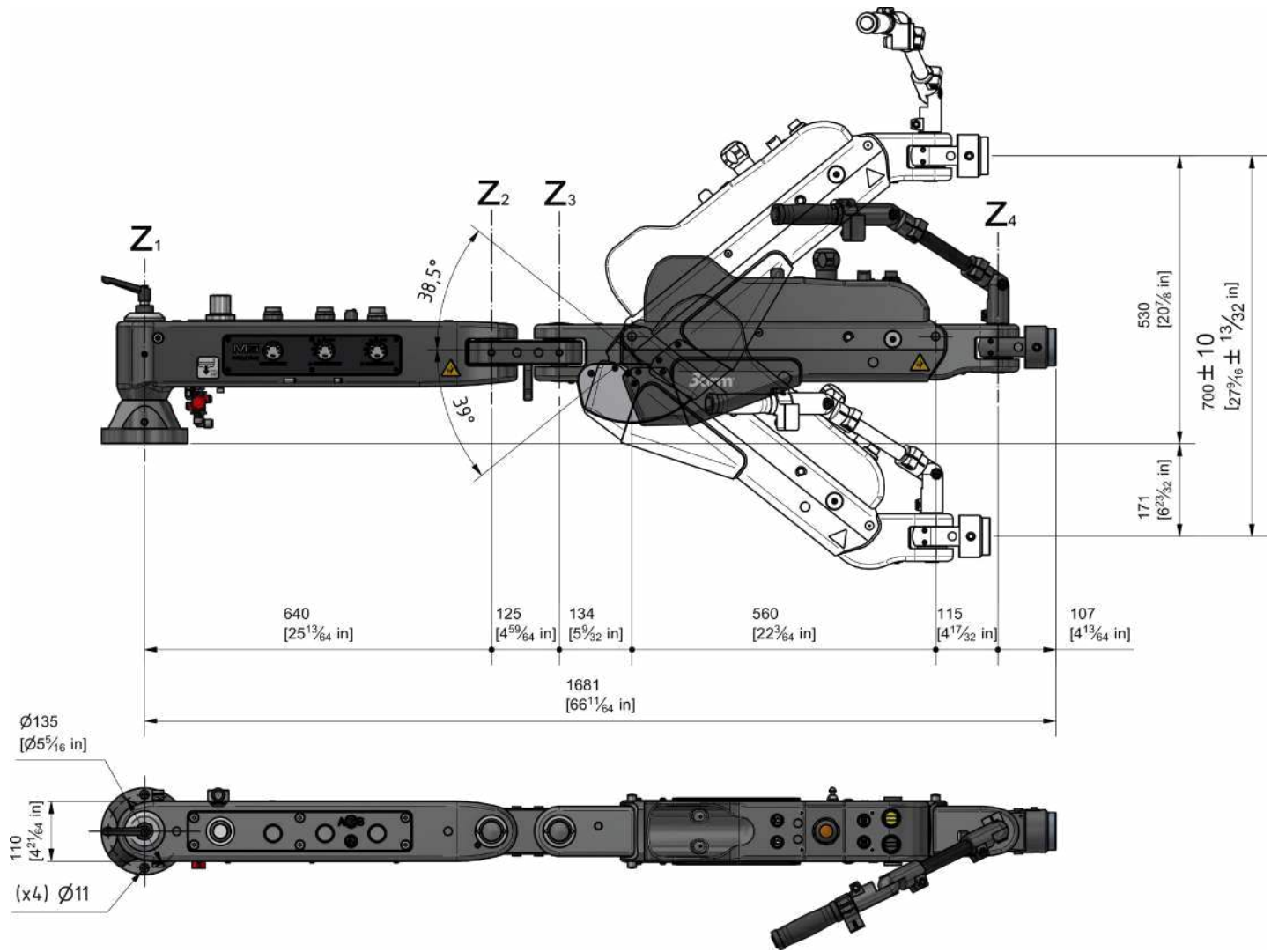
MAGNET



VACUUM



CUSTOMIZED



M5 FEATURES

PNEUMATIC SPECIFICATIONS

Supply fluid	Pressurized air
Max. working pressure	0.7 Mpa (7 bar)
Min. working pressure	0.45 Mpa (4,5 bar)
Maximum instantaneous consumption	515 dM5/min

MOVEMENTS

ZX Plane	± 39°
Working radius in XY plane	1680 mm (65.7")
Z1 Axis	360°
Z2 Axis	180°
Z3 Axis	180°
X Axis	360°/ 4 x 90°
Vertical travel	700 mm (27")

DIMENSIONS AND WEIGHT

Height	335mm (13.6")
Length	963 mm (37.9")
Width	283 mm (11.2")
Weight	48 Kg (106 lb)

WORKING CONDITIONS

Temperature	+5 to +50°C
Relative humidity	Max. 70%
Environment	Indoor industrial settings

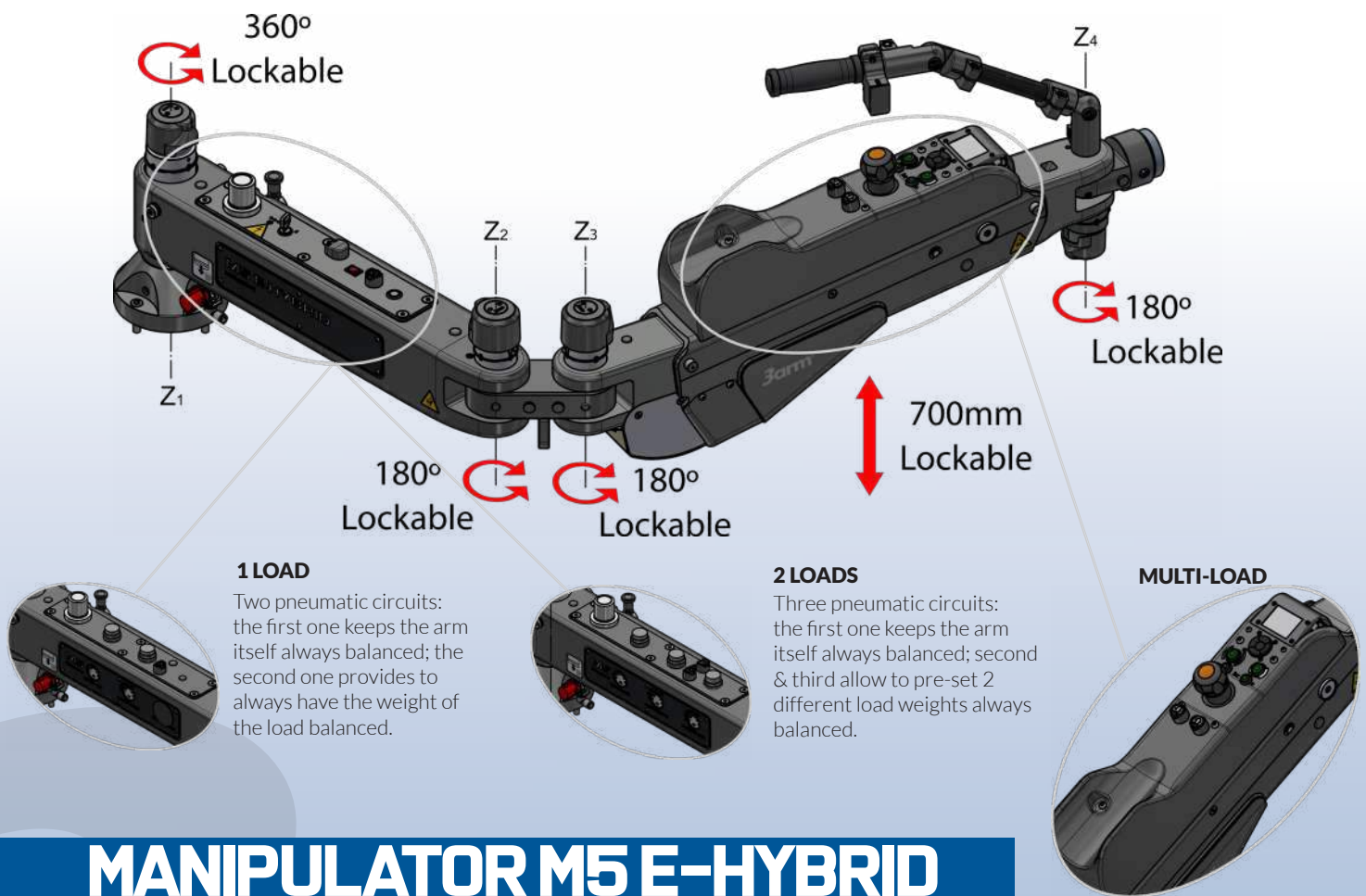
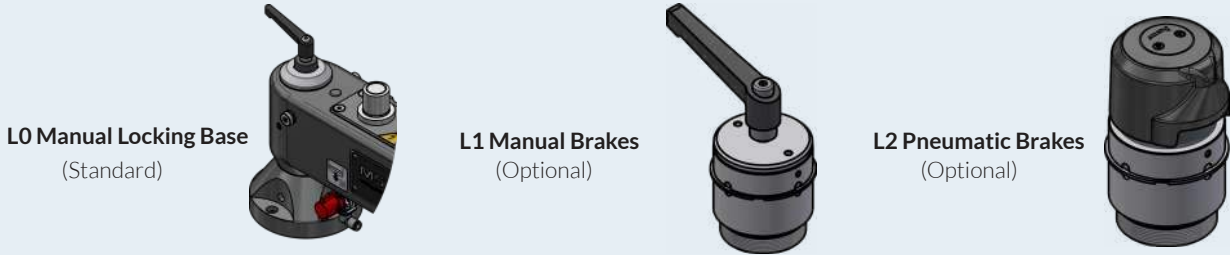
LOAD CAPACITY

Maximum net load, range	0-50Kg (0-110 lb)
Maximum net load	50 Kg (110 lb)
Maximum gross load (load gripping system + load to be manipulated)	70 Kg (154 lb)

BRAKE OPTIONS & LOADS

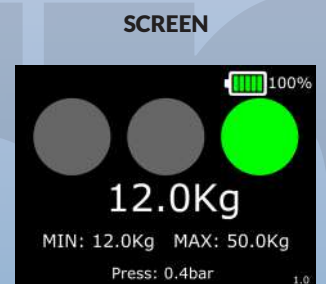
MANIPULATOR M5

Can be equipped with a base manual brake, manual brakes or pneumatic brakes to completely lock all the axis of the arm allowing the operator to move and lock in position the part to manipulate.



MANIPULATOR M5 E-HYBRID

Two pneumatic circuits and electric controls. The first circuit keeps the arm itself always balanced; the second one allows the arm to have any load weight balanced. The electric controls allow to set a minimum and a maximum load required and balance each different load in between at the moment of picking it up. The screen shows the operator the current stage the manipulator is of the operation sequence.

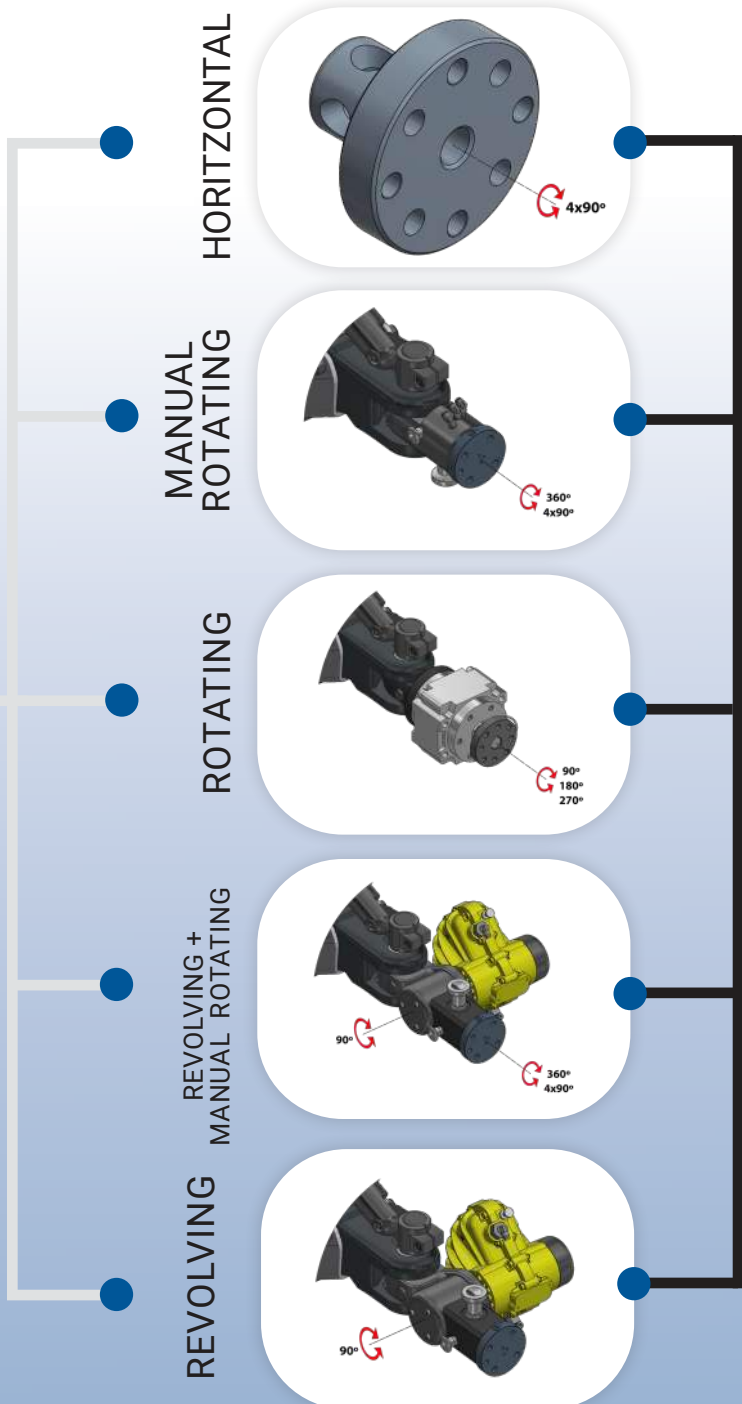


MANIPULATOR M3

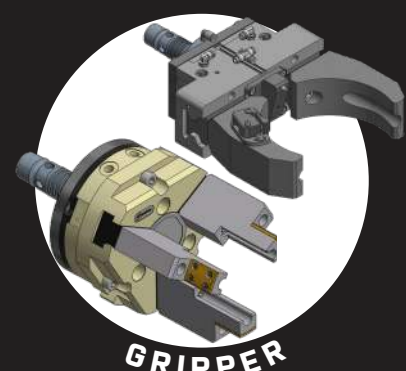
Being the lightest manually controlled load manipulator, is particularly easy to handle.

The **3arm Manipulator M3** can be equipped with a variety of specialty gripping tools. It is engineered to manually handle, center and set loads of up to **25kg in a weightless condition**, in any direction. The Manipulator aids the operator in precise ergonomic work handling, effortlessly and safely.





Gripping Systems



GRIPPER



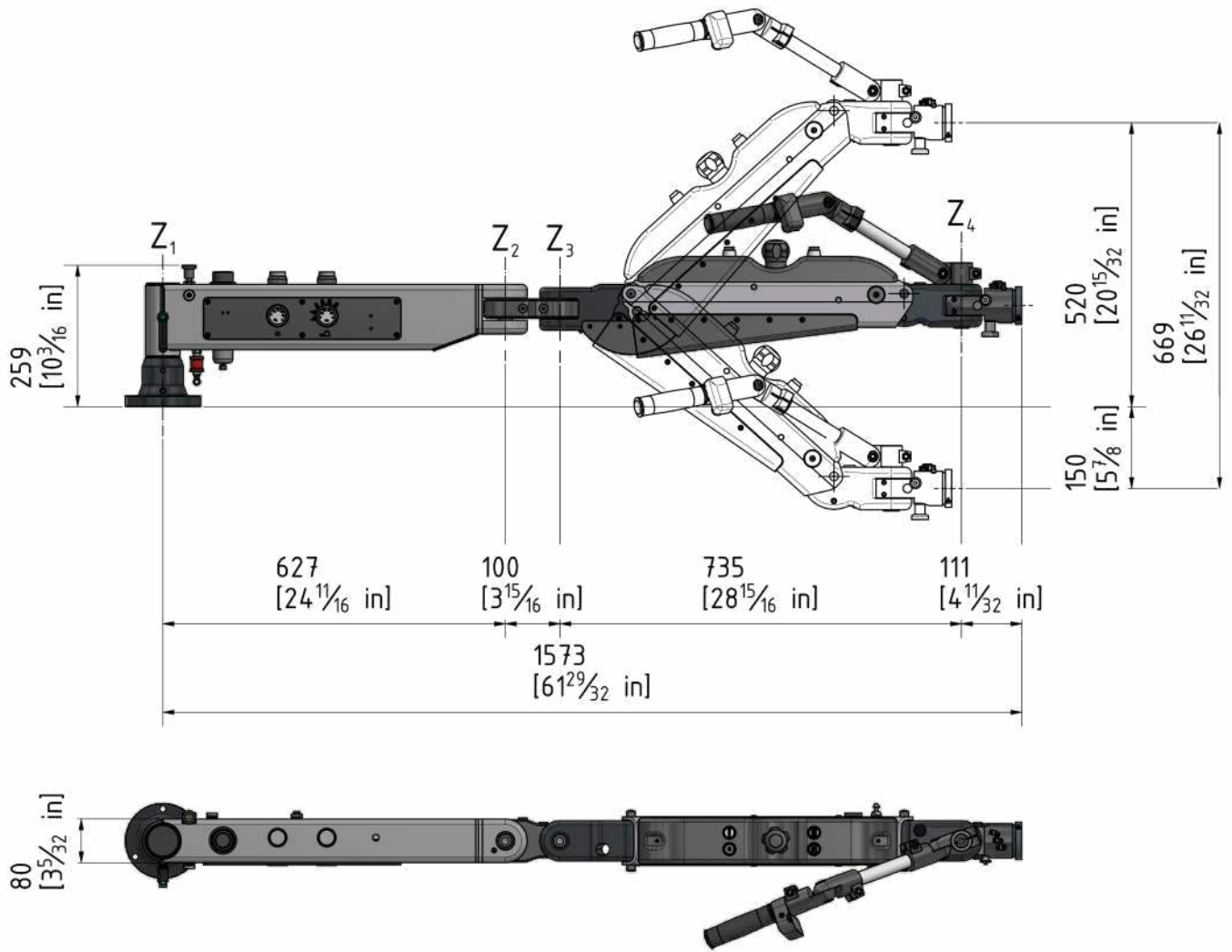
MAGNET



VACUUM



CUSTOMIZED



M3 FEATURES

PNEUMATIC SPECIFICATIONS

Supply fluid	Pressurised air
Max. pressure of air supply	0.8 Mpa (8 bar)
Max. working pressure	0.7 Mpa (7 bar)
Maximum instantaneous consumption	325.5 dM3/min

MOVEMENTS

ZX Plane	± 42°
Working radius in XY plane	1573 mm (61.9")
Z1 Axis	360°
Z2 Axis	180°
Z3 Axis	180°
Z4 Axis	180°
Vertical stroke	669 mm (26.3")

DIMENSIONS AND WEIGHT

Height	325 mm (12.8")
Length	886 mm (34.9")
Width	220 mm (8.7")
Weight	30 Kg (66 lb)

WORKING CONDITIONS

Temperature	-10 to +50°C
Relative humidity	Max. 70%
Environment	Internal industrial

LOAD CAPACITY

Maximum net load, range	0-25Kg (0-55 lb)
Maximum net load	25 Kg (55 lb)
Maximum gross load (load securing device + load to be handled)	35Kg (77lb)

Manufacturing Industry Worker

INJURY

SOURCE: U.S. BUREAU OF LABOR STATISTICS

PREVENT THE PROBLEM WITH

MOST COMMON TYPE OF INJURY



Sprains and Strains



Cuts and Lacerations



Fractures

MOST COMMON CAUSE OF INJURY



Overexertion



Repetitive Motions



Struck, Cut or Caught by Equipment

APPLYING ERGONOMICS



Weightload is Taken Off of the Worker



Worker Can Be More Productive with Less Strain



Eliminate the Most Common Causes of Worker Injury

WORKER SAFETY



Worker's Limbs are Kept at a Safe Distance from



Get the Tool into Tight Spaces, While Keeping Workers Safe.



Eliminate the High Costs of Worker Injury



ACCESSORIES

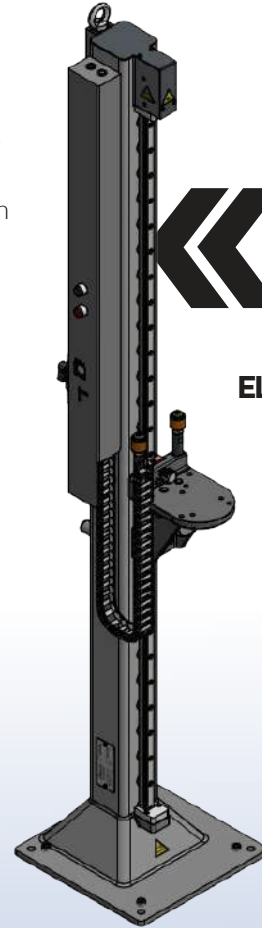


MOUNTING COLUMN
From 275 to 1600 mm



TROLLEY WITH COLUMN

Add mobility and reach by mounting your 3arm® on a Trolley with Column



Achieve extreme vertical reach with an Elevator

ELEVATOR D100

1500 mm
2000 mm
2500 mm



LIFTER PR
300 / 500 / 750 mm



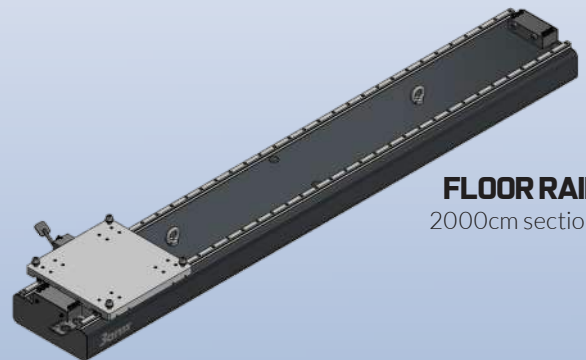
Add even more vertical reach with your Column



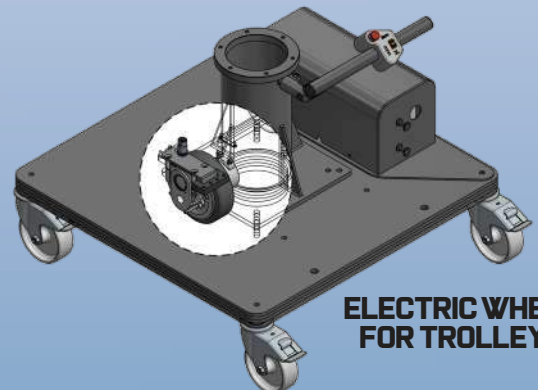
EXTENSION ARM 600



EXTENSION ARM 1000



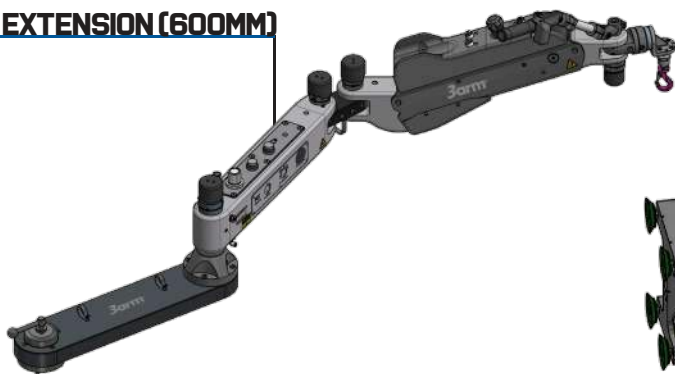
FLOOR RAIL
2000cm sections



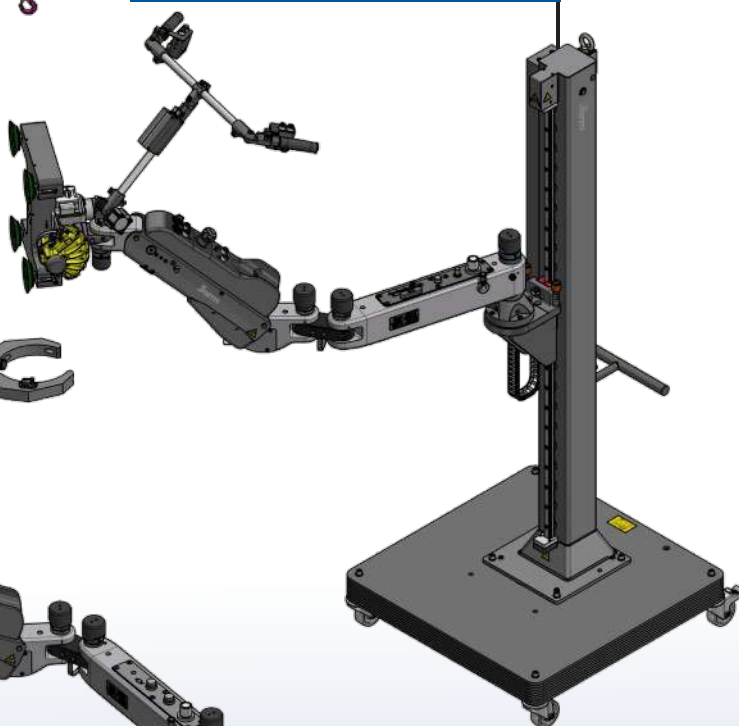
ELECTRIC WHEEL FOR TROLLEYS

COMPATIBILITIES

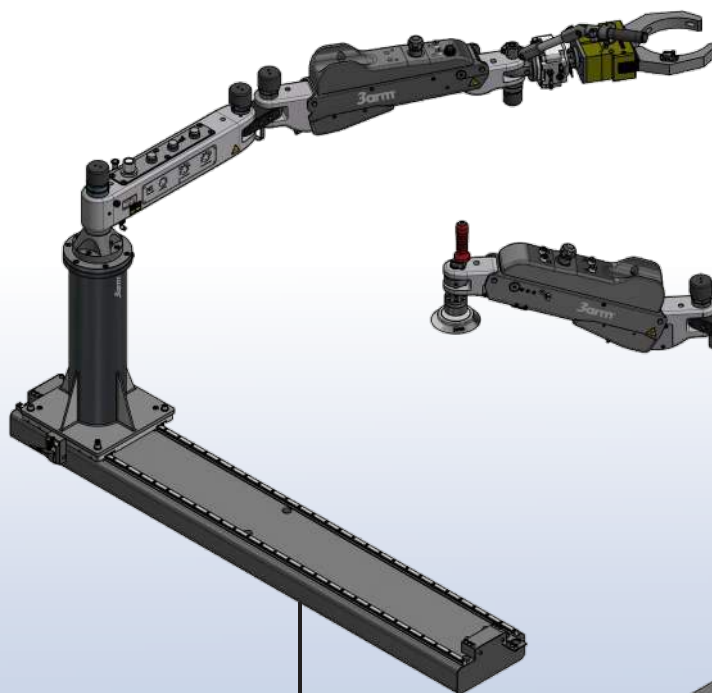
RADIAL EXTENSION (600MM)



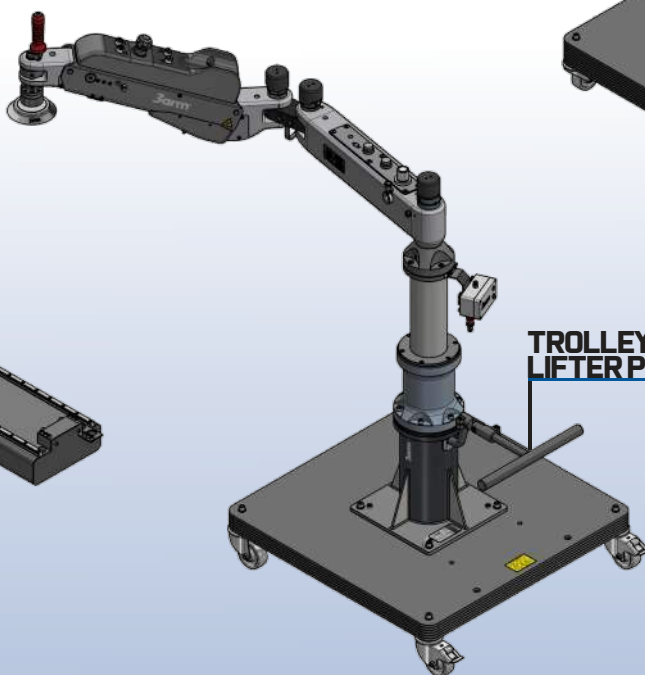
ELEVATOR 2000 D100 + TROLLEY



FLOOR RAIL (2M) + COLUMN



TROLLEY + LIFTER PR (500MM)



	Extension 600	Extension 1000	Trolley	Fix Column PR	Lifter PR	Floor Rail	D100 Column Lifter
Extension 600		●	●	●	●	●	●
Extension 1000	●		●	●	●	●	●
Trolley	●	●		●	●	●	●
Fix Column PR	●	●	●		●	●	●
Lifter PR	●	●	●	●		●	●
Floor Rail	●	●	●	●	●		●
D100 Column Lifter	●	●	●	●	●	●	

Compatible ● Incompatible ● Consult ●

COMPATIBILITY CHART

APPLICATION QUESTIONNAIRE

1.

CONTACT DETAILS

Name:

Phone:

Company:

Website:

Email:

State/Country:

2.

TYPE OF LOAD/PART

Part material:

(Wood, Metal, Ceramic, Glass...)

Please provide 3D Model

(*stp or *.iges format)

Dimensions (mm):

Weight to manipulate (kg):

3.

WORKING CONDITIONS

Pick up point

Release point

A

mm

Specify fixture angle rotation if needed

MAX

Pick up (mm)

2000

1500

1000

500

0

Release (mm)

2000

1500

1000

500

0

MIN

FLOOR

FRONT VIEW

V axis angle range (Revolving)

90° Others

U axis angle range (Rotating)

90° 180° 270°

*In case of top mount, indicate dimension Z

Units for weight (Kg), Height & Reach A & Z (mm). For other units, please indicate.

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ERGONOMICS IN YOUR HANDS

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