

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.

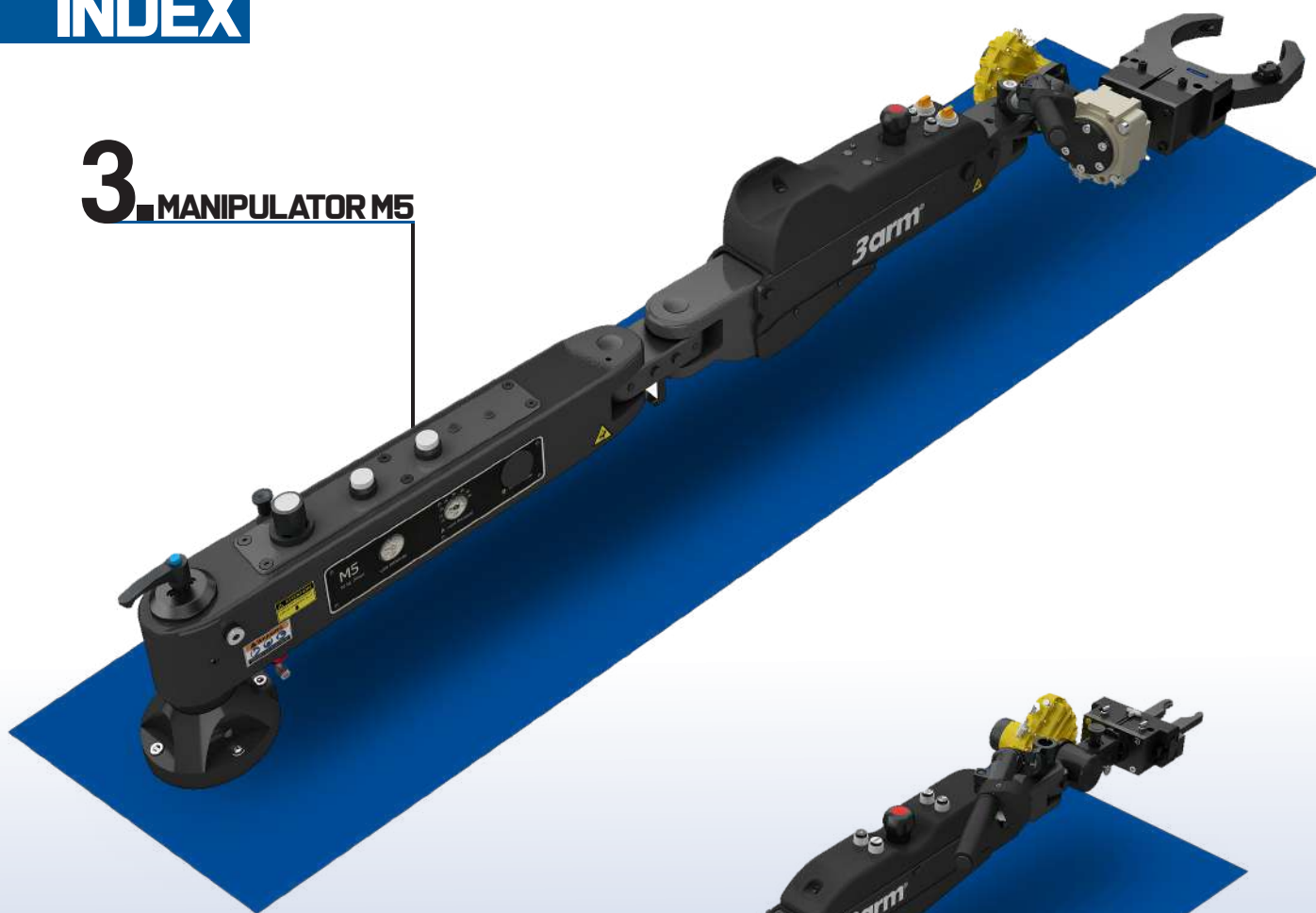
The company is family owned and has been in business since 1947. Utilizing a state of the art manufacturing facility and a dynamic engineering staff that has been very innovative in design and inventing new products.

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.

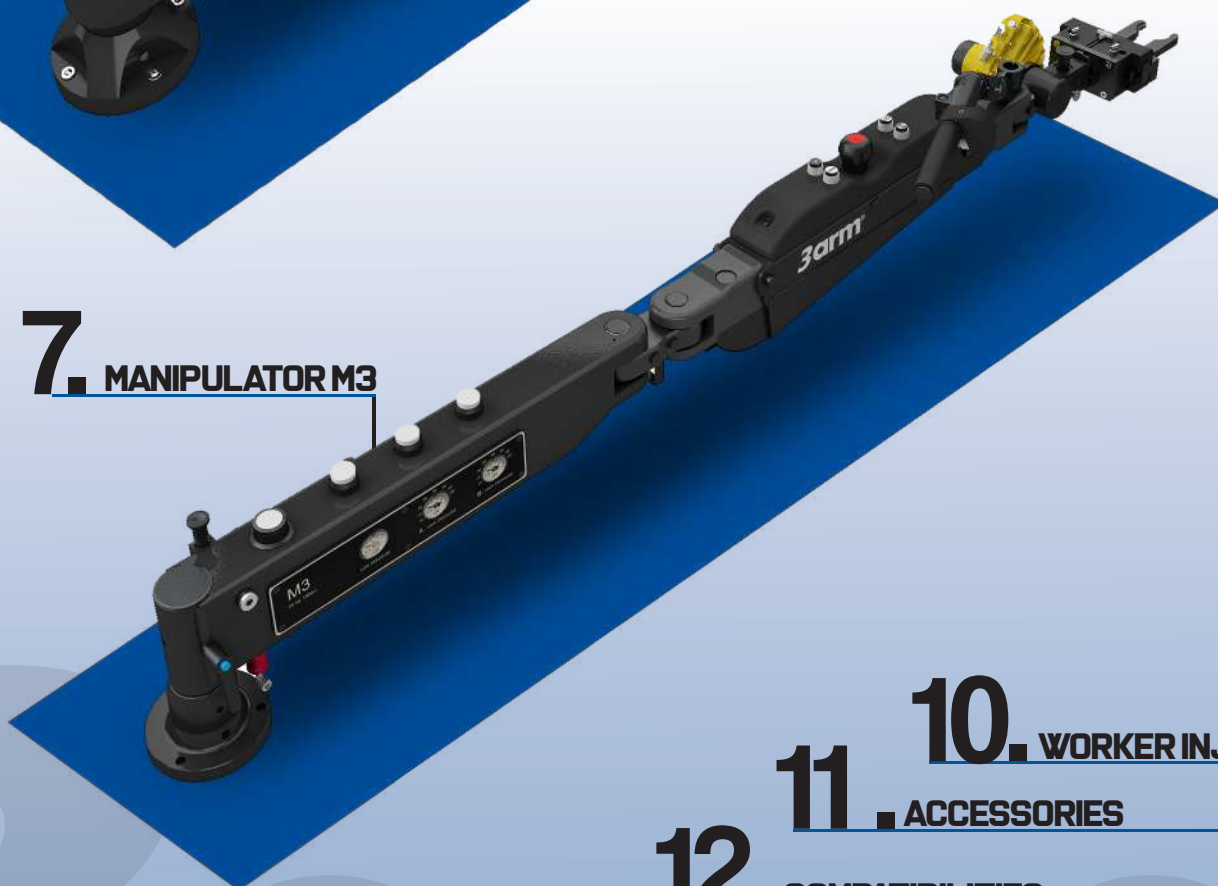


INDEX

3. MANIPULATOR M5



7. MANIPULATOR M3



10. WORKER INJURY

11. ACCESSORIES

12. COMPATIBILITIES

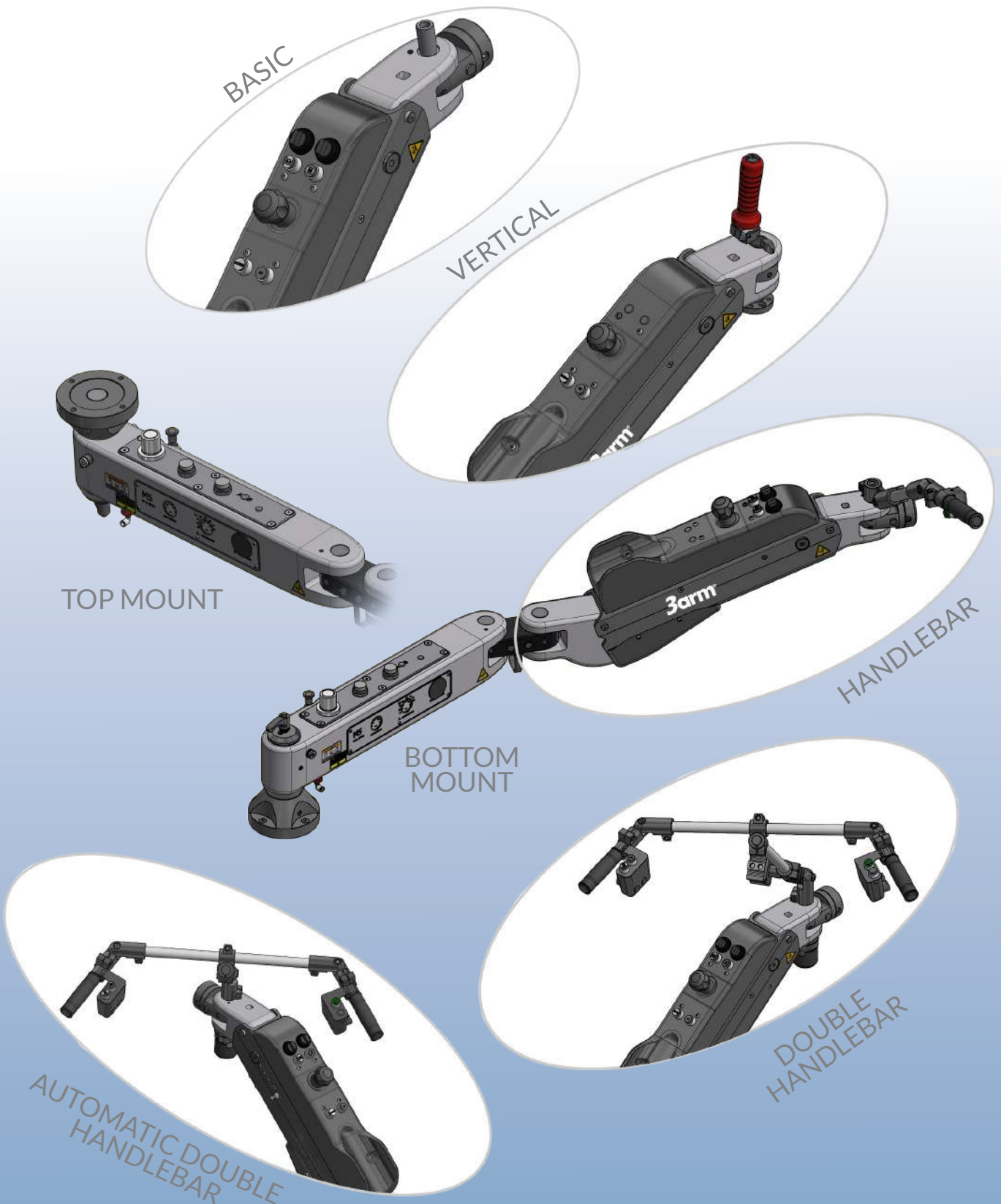
13. APPLICATION QUESTIONNAIRE

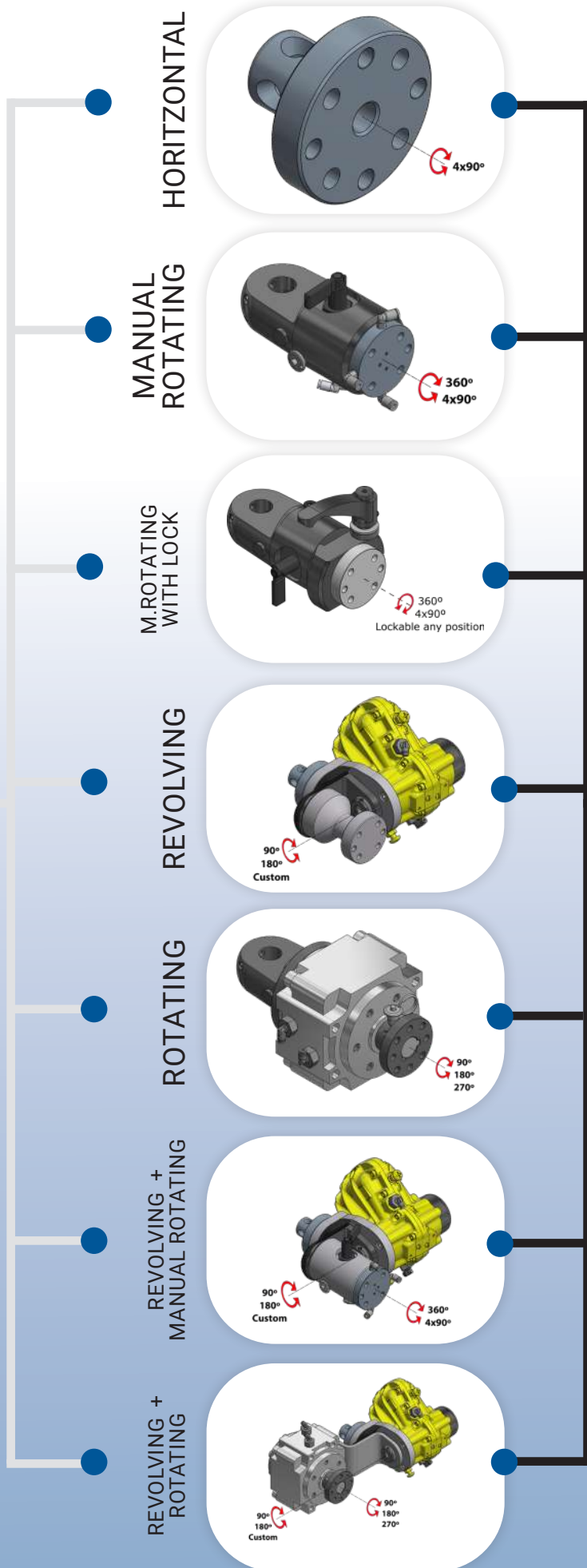
SAFETY WARNING 3ARM products are engineered and manufactured with safety in mind. The heat treat specifications exceed or meet all standards. All of the products manufactured by 3ARM are designed to perform without any undue safety issues when caution, common sense and proper safety practices are followed. 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

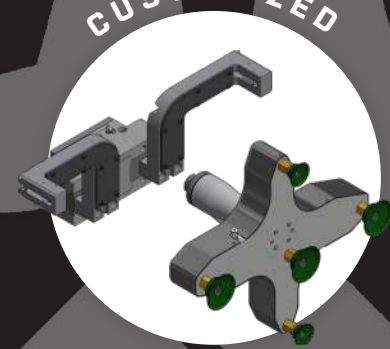
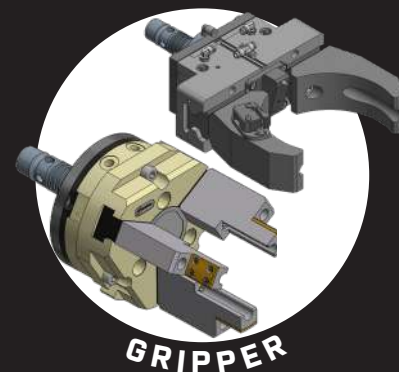
3ARM Manipulator M5 can be equipped with a variety of specialty gripping tools. It is engineered to manually handle, center and set loads of up to **50kg in a weightless condition**, in any direction. The Manipulator aids the operator in precise ergonomic work handling, effortlessly and safely.

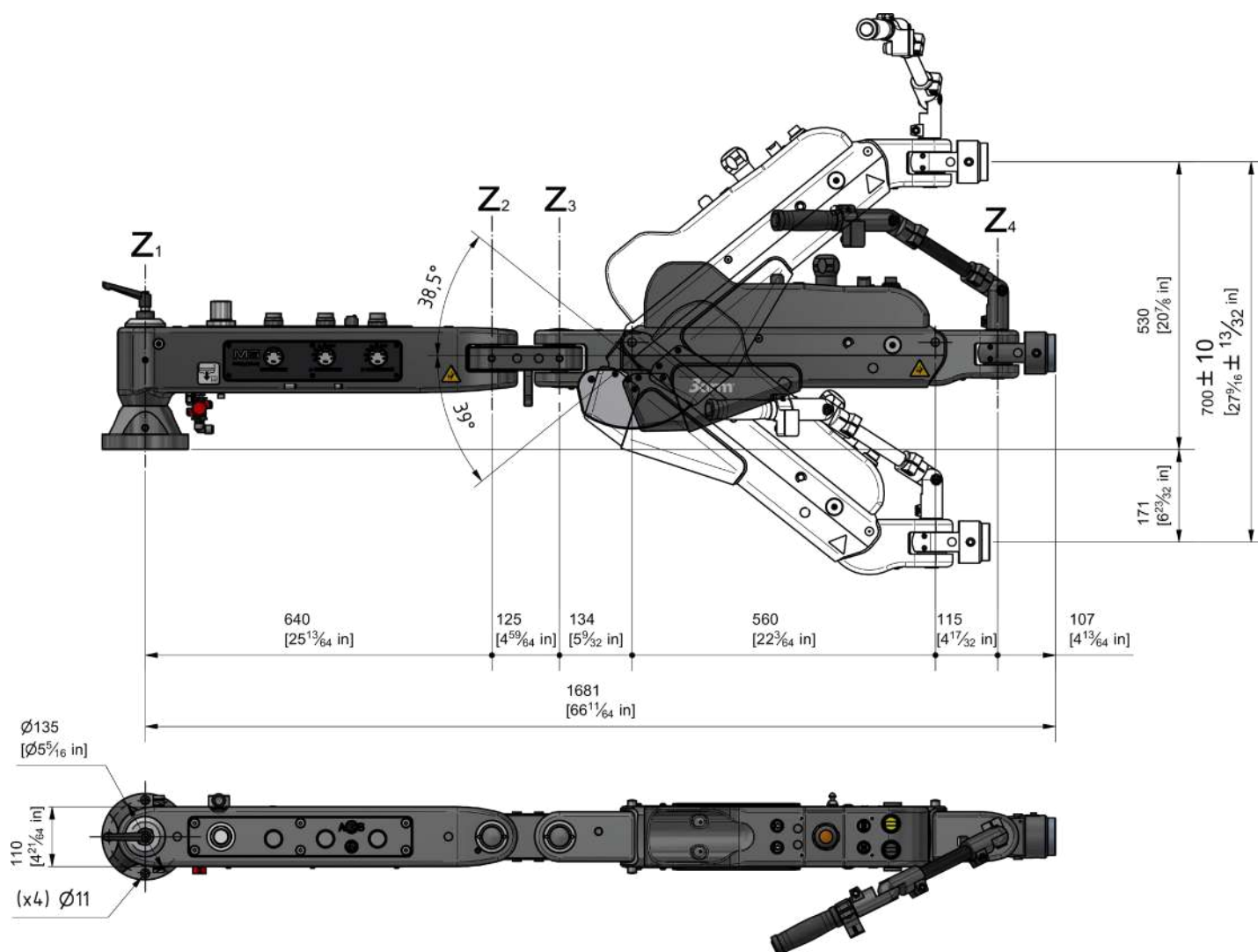
The M5 offers the most custom arm configurations to move parts to and from conveyors, assembly lines, machine tools and much more.





Gripping Systems





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")
Lenght	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

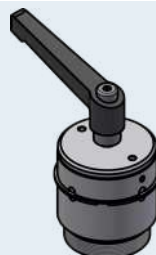
MANIPULATOR M5

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.

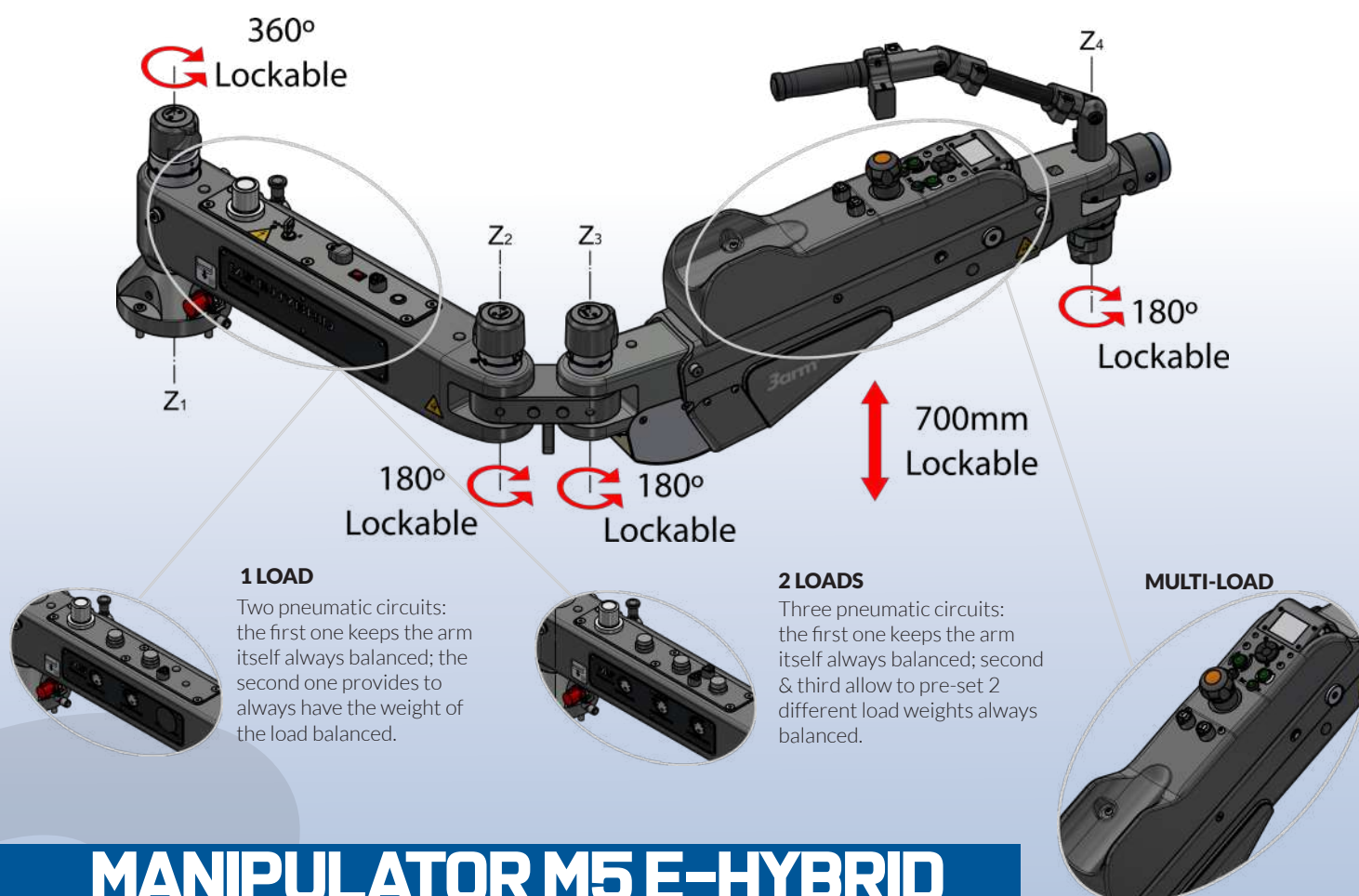
L0 Manual Locking Base
(Standard)



L1 Manual Brakes
(Optional)



L2 Pneumatic Brakes
(Optional)



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.

SCREEN

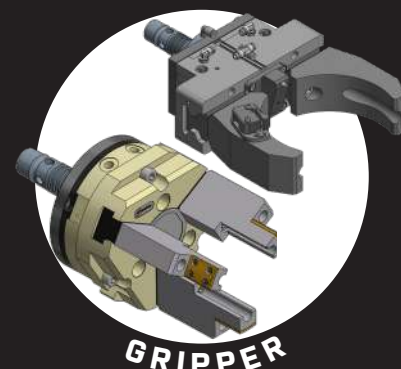
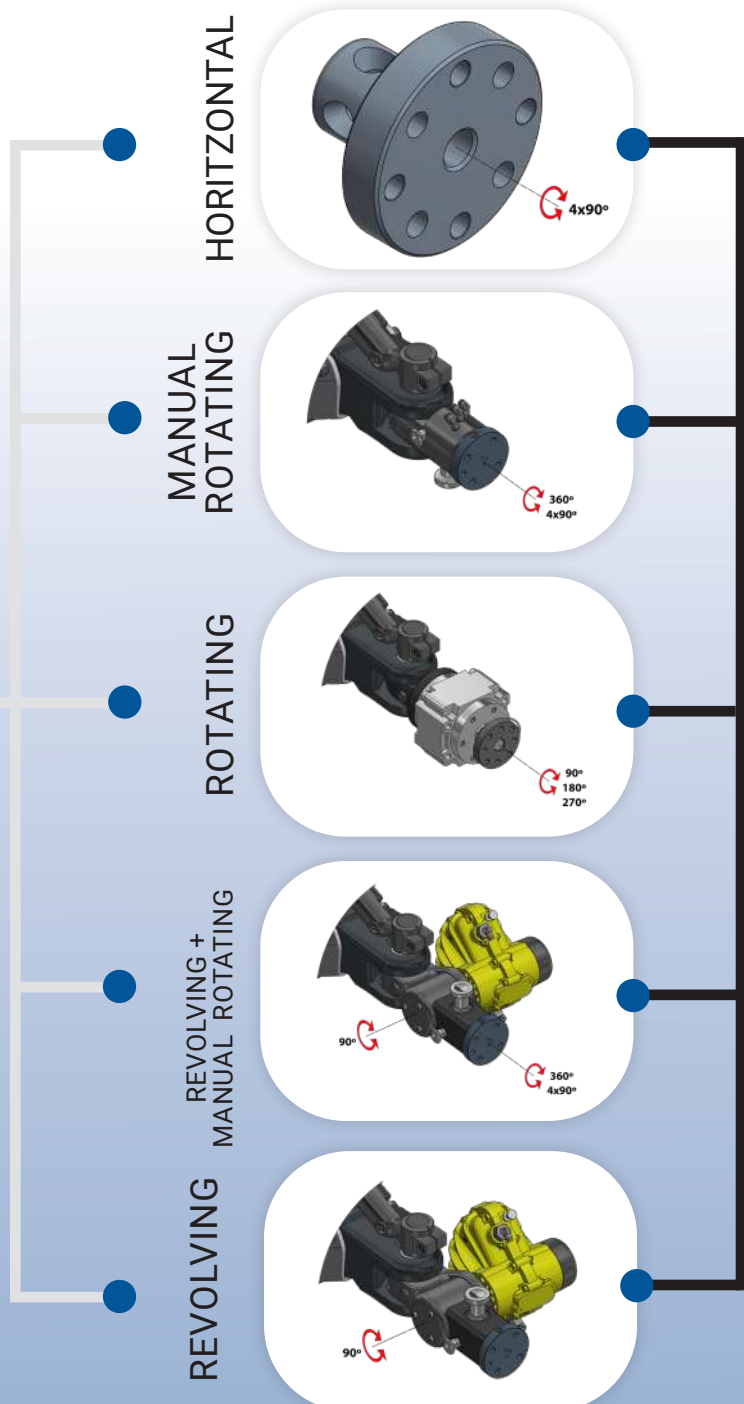


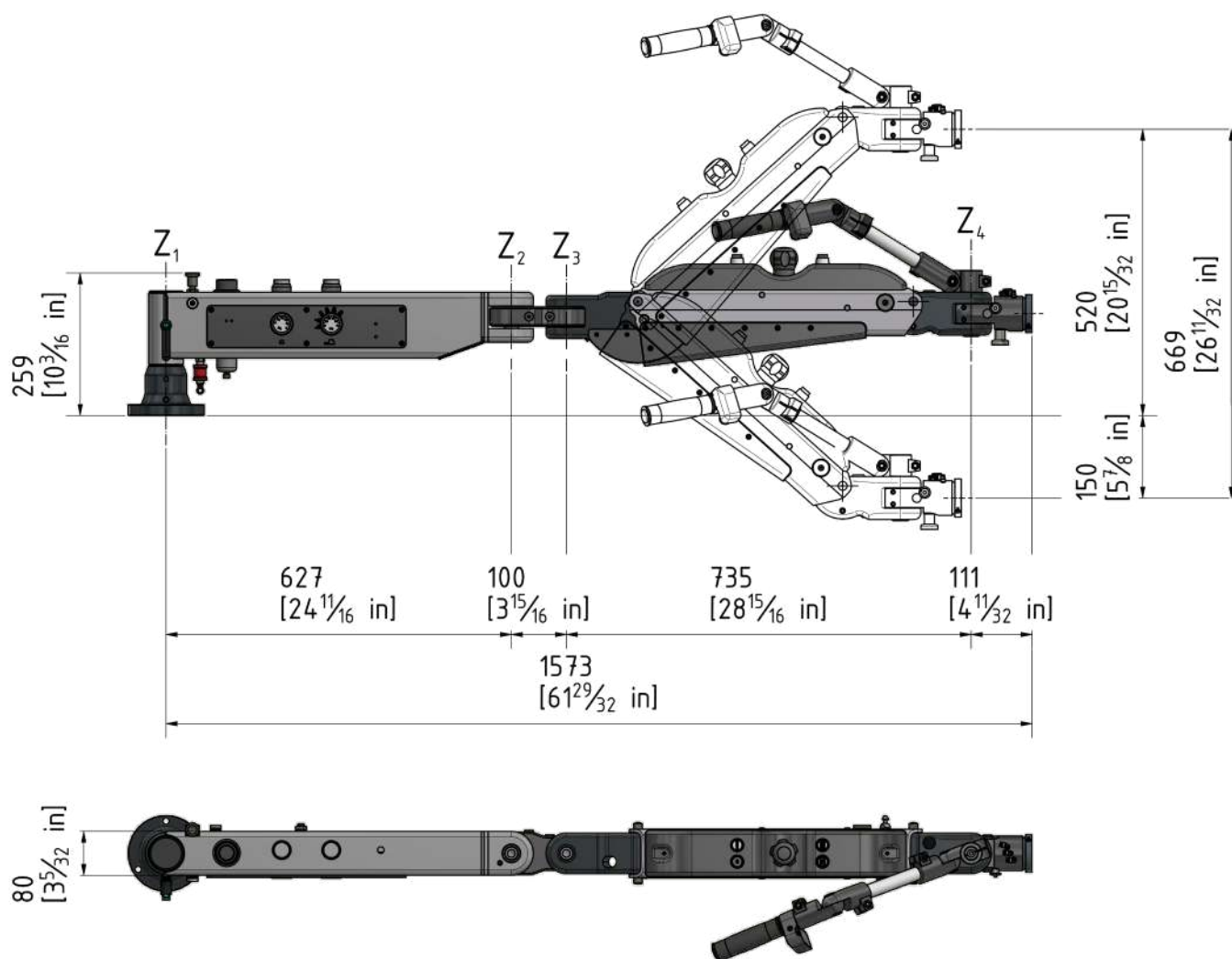
MANIPULATOR M3

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.







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

MOST COMMON TYPE OF INJURY

Sprains
and StrainsCuts and
Lacerations

Fractures

MOST COMMON CAUSE OF INJURY



Overexertion

Repetitive
MotionsStruck, Cut or Caught
by Equipment

PREVENT THE PROBLEM WITH

APPLYING ERGONOMICS

Weightload is Taken
Off of the WorkerWorker Can Be More
Productive with Less
StrainEliminate the Most
Common Causes of
Worker Injury

WORKER SAFETY

Worker's Limbs
are Kept at a Safe
Distance fromGet the Tool into Tight
Spaces, While Keeping
Workers Safe.Eliminate the High
Costs of Worker Injury

SHOULDERS

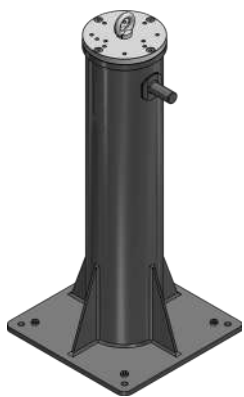
BACK

HANDS

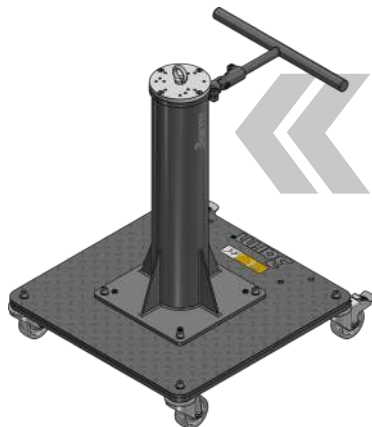
KNEE

ANKLES

ACCESSORIES

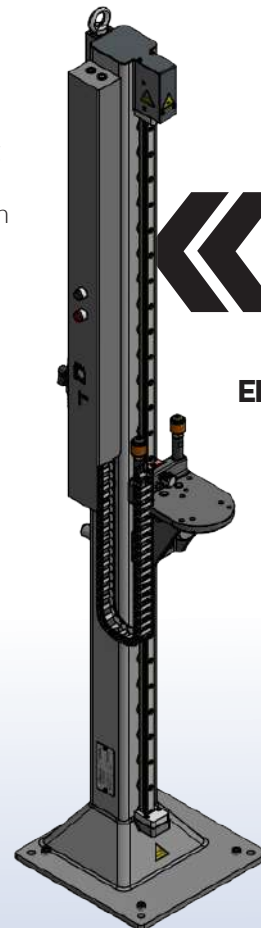


MOUNTING COLUMN
From 275 to 1600 mm



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



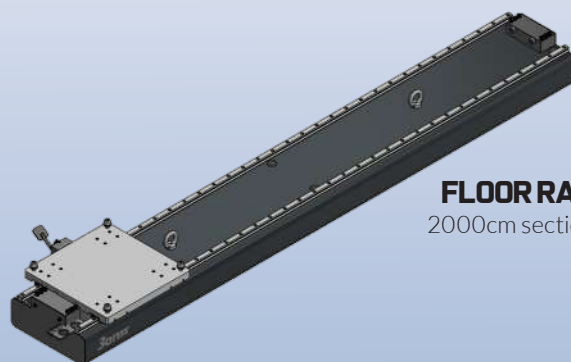
Add even more vertical reach with your Column



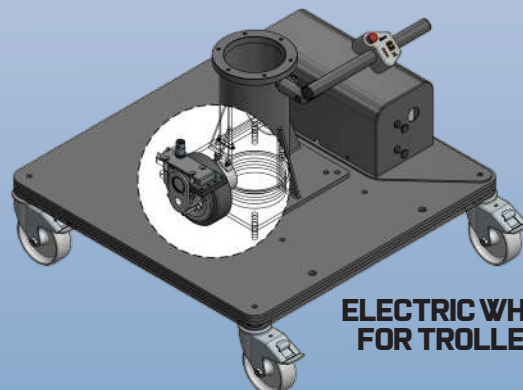
EXTENSION ARM 600



EXTENSION ARM 1000



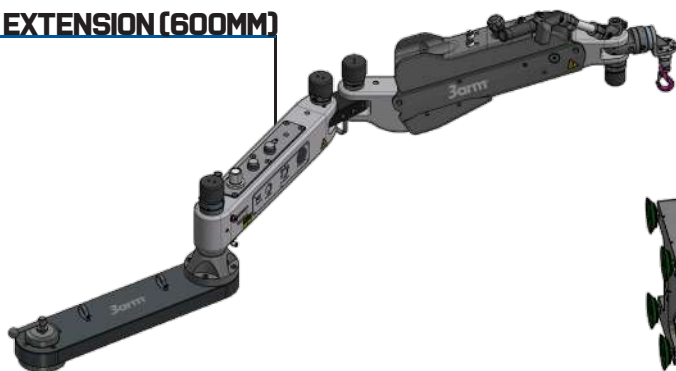
FLOOR RAIL
2000cm sections



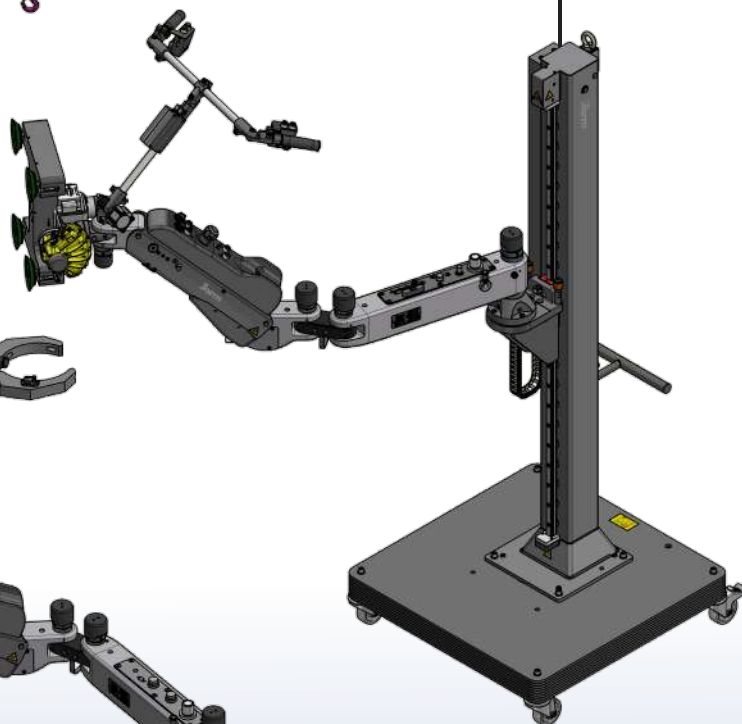
ELECTRIC WHEEL FOR TROLLEYS

COMPATIBILITIES

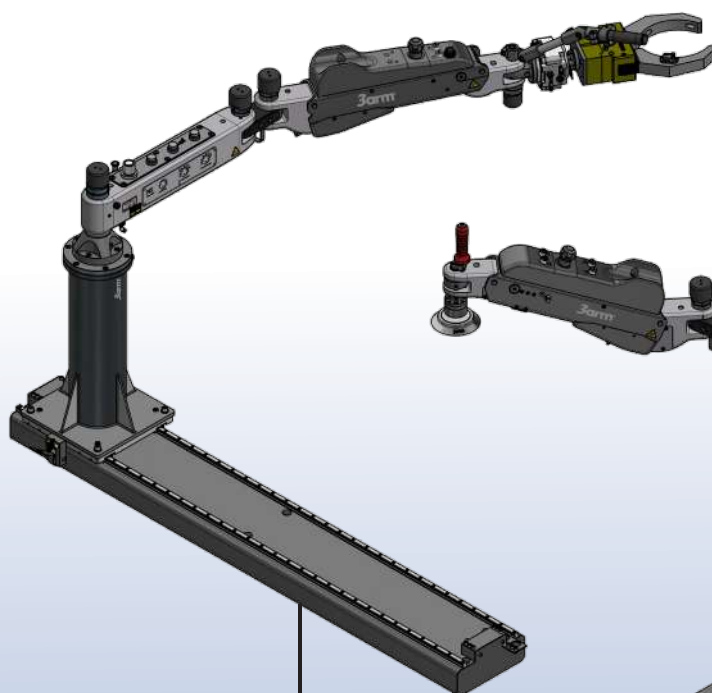
RADIAL EXTENSION (600MM)



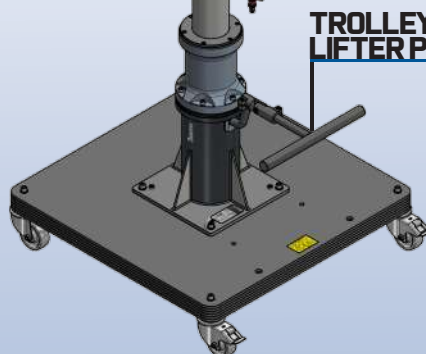
ELEVATOR 2000 D100 + TROLLEY



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

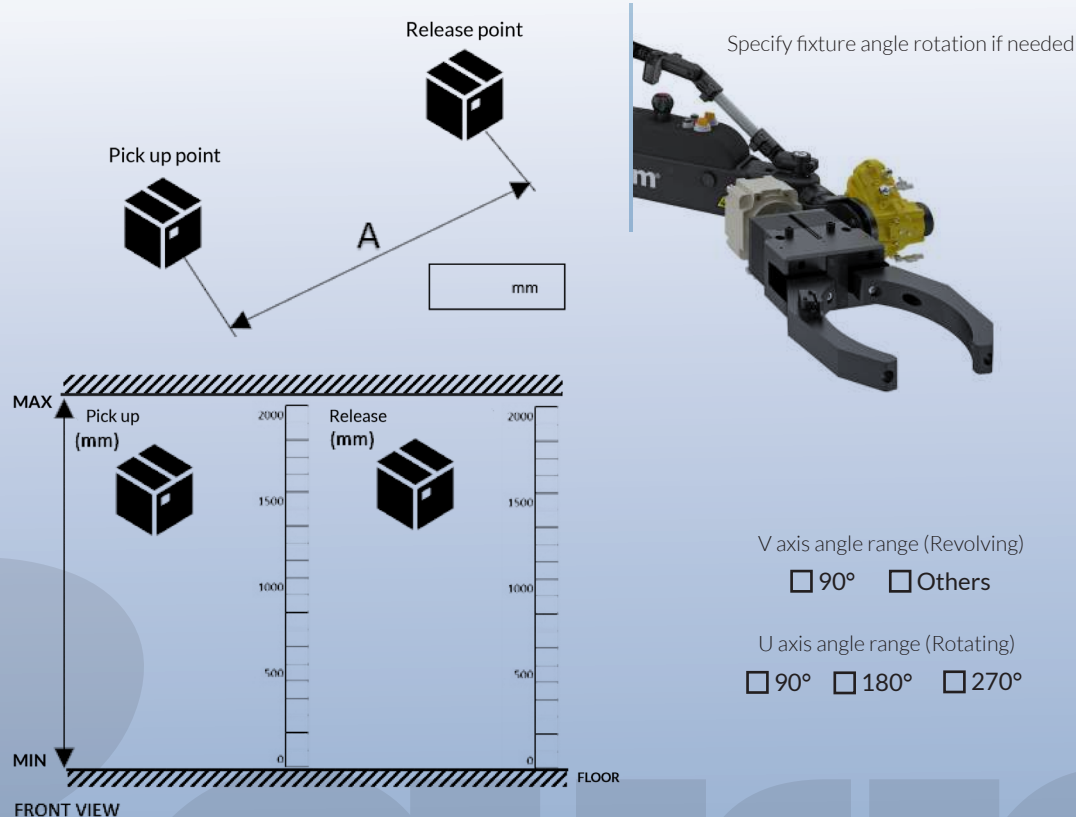
(*stp or *.iges format)

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)

Release (mm)

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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NOTES



ERGONOMICS IN YOUR HANDS

www.3arm.net



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