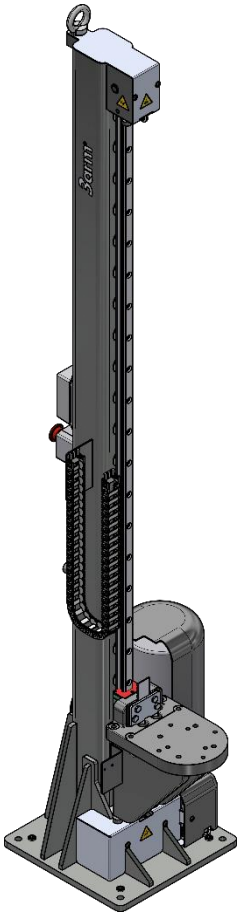
INSTRUCTION MANUAL

ELECTRIC COLUMN

3arm®



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DESIGN & QUALITY 3arm Made in Barcelona

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1 INTRODUCTION

Dear customer,

Congratulations on your choice, which encourages us to continue our work of providing our customers with a simple, reliable and versatile way to improve ergonomics at work.

We hope that these simple instructions will help you in the setting up and operating of the machine you have chosen. We suggest you pay special attention to the pages detailing installation, maintenance and safety concepts.

We wish your machine a long life and that you can confirm the excellent investment made by purchasing a lifting column compatible with 3Arm® products.

2 ABOUT THIS MANUAL

This document corresponds to the Electric Column instruction manual.

- ORIGINAL MANUAL-

Intellectual/Industrial Property Information:

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2.1 CONSIDERATIONS

- ✓ Before using the equipment, make sure to read this instruction manual and follow the usage and safety instructions correctly.
- ✓ All instructions listed in this manual refer to the individual equipment. It is the responsibility of the end user to analyse and apply all necessary safety measures required for the end use.
- ✓ This manual must be kept throughout the entire life of the equipment, in a place close to the equipment for further reference.
- ✓ If you find any part of this manual unclear, confusing or inaccurate, please do not hesitate to contact your 3arm® and/or Roscamat® dealer.
- ✓ The content of this manual is subject to change without prior notice.
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- ✓ The illustrations shown in this manual may differ in some details from your specific configuration and should be understood as a standard representation.

Paragraphs indicating assembly, adjustment, installation or maintenance steps remain framed with a brown background.

The paragraphs with highlighted information remain framed with a grey background.

2.2 VERSION

Document	Revision Date
INSTRUCTION MANUAL	24/10/2025

3 SAFETY INFORMATION

3.1 SCOPE OF APPLICATION

This section contains very important information related to the safety of your equipment. It is aimed at all personnel involved in any phase of the equipment's lifecycle (transport, assembly and installation, commissioning, adjustment-learning, operation, cleaning, maintenance, troubleshooting, dismantling/decommissioning).

3.2 WARNINGS AND GENERAL CONSIDERATIONS

- ✓ The equipment described in this document has been constructed in accordance with current technology and applicable safety standards. However, improper use or poor integration by the end user can create injury risks.
- ✓ The equipment should only be used in perfect technical condition, respecting safety standards and considering this document.
- ✓ Any fault that could affect safety must be rectified immediately.
- ✓ No modifications to the equipment should be made without the proper authorization from TECNOSPIRO MACHINE TOOL, S.L.U.
- ✓ The equipment should only be operated for its intended use; any other use is strictly prohibited. Any use other than the indicated one will be considered as incorrect and not permitted. The manufacturer assumes no liability for any damage resulting from such misuse.
- ✓ It is the responsibility of the integrator, owner, and/or end user to determine the suitability of the product for each use, as well as its installation location and the specific task definition within the limits set out in this manual.
- ✓ Do not use the equipment in any way not considered in this manual.
- ✓ The operator should only use the equipment after receiving appropriate instructions for its use.
- ✓ It is recommended that only one operator use the equipment simultaneously, any other usage should be evaluated by the integrator/end user.
- ✓ Manipulating moving and connecting elements during use is prohibited.
- ✓ When not in use, it is recommended to leave the carriage in the lowest position.
- ✓ The work area of the equipment and its immediate influence should comply with safety, health and hygiene conditions. It is the responsibility of the integrator/end user to conduct a study to ensure safety.

- ✓ The presence of third parties in the work area should be minimised to avoid any safety impact. Any other use requires an additional risk assessment.
- ✓ It is important that users acting as operators of this equipment are familiar with and sufficiently trained in the use of this product or similar ones.
- ✓ In any case, the operator must read and understand this manual before use, regardless of their knowledge, training or experience with similar equipment, especially the sections dedicated to installation, operation and safety.
- ✓ If you have any questions about handling or maintenance procedures, please contact your 3arm® and/or Roscamat® distributor.

3.3 EXCLUSIONS

The following uses are excluded from this equipment:

- ✓ Handling any component or functions of the equipment other than those specified in this manual.
- ✓ Use by people with some type of disability or animals.
- ✓ Use by people without the completed occupational risk prevention training.

This equipment should not be installed in:

- ✓ Corrosive areas.
- ✓ Dusty areas.
- ✓ Areas with high electromagnetic emissions.
- ✓ Areas with extreme temperatures (very high or very low).
- ✓ Areas with high humidity.
- ✓ Outdoor areas.

3.4 SIMBOLS AND ICONS

- ✓ Throughout this manual and on the machine structure, different symbols and pictograms can be observed, the meaning of which are summarised below:

	Danger. General danger symbol. It is usually accompanied by another symbol, or a more detailed description of the danger.
	Entrapment hazard
	Electrical hazard

3.5 SYSTEM INTEGRATOR

The system integrator or end user is responsible for integrating the machine into the installation, respecting all relevant safety measures.

The integrator/end user is responsible for the following tasks:

- ✓ Placement and correct installation.
- ✓ Connections.
- ✓ Risk assessment.
- ✓ Installation of necessary security and protection functions.

3.6 PERSONAL PROTECTIVE EQUIPMENT (PPE)

The personal protective equipment for this machine includes: **safety boots, safety helmet, safety glasses and safety gloves** for the transport, assembly and installation phases, commissioning and dismantling.

Safety footwear, safety gloves and safety glasses for the phases of adjustment and training, operation and fault finding and detection.

It is the responsibility of the integrator/end user to define the personal protective equipment required for the final application of the machine, to meet the essential health, safety and hygiene requirements

Operators must not wear loose clothing, rings or bracelets that could fall into the machine mechanism.

In addition, it is mandatory to keep hair tied back to avoid entanglement with the machine's moving parts.

3.7 TRAINING LEVEL OF INVOLVED PERSONNEL

All persons working with the machine must have read and understood the documentation in the safety chapter.

The minimum training level for the use of the equipment is as follows:

- Production Operators: occupational risk prevention course, complete training for the job positions and the machine's residual risks. Minimum one year experience in similar installations.

- Maintenance Operators: occupational risk prevention course, complete training in the handling, operation, maintenance and preservation of the machine and its residual risks. Minimum two years experience in similar installations and the necessary technical level to carry out tasks without issues.

- Cleaning Operators: occupational risk prevention course, training in the products and procedures necessary to carry out cleaning tasks.

- Apprentices/Students: They may only work on the machine under constant supervision by a responsible person from the installation.

- Public (non-operators): Visits or passage of any person can only be done by maintaining a minimum safety distance of two metres from the edges of the machine perimeter.

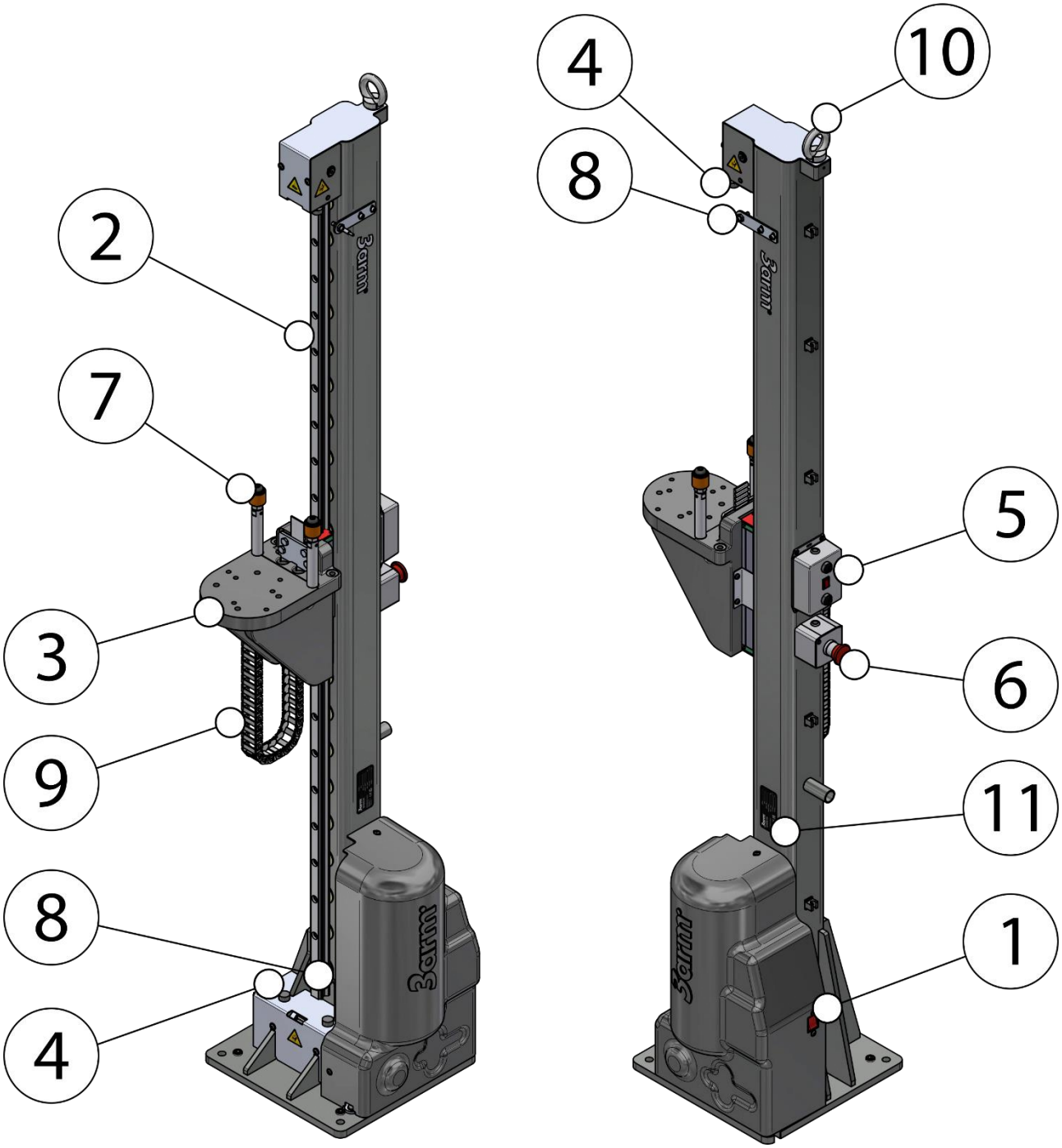
3.8 RESIDUAL RISKS

The residual risks of the equipment are:

- ✓ Striking and crushing of hand or foot by falling tooling objects.
- ✓ Striking and crushing during the movement of the column support.
- ✓ Striking and cuts from the structure of the column itself.
- ✓ Entanglement, striking, and/or crushing from possible falling or toppling of the column.

4 GENERAL DESCRIPTION AND TECHNICAL INFORMATION

4.1 MAIN PARTS



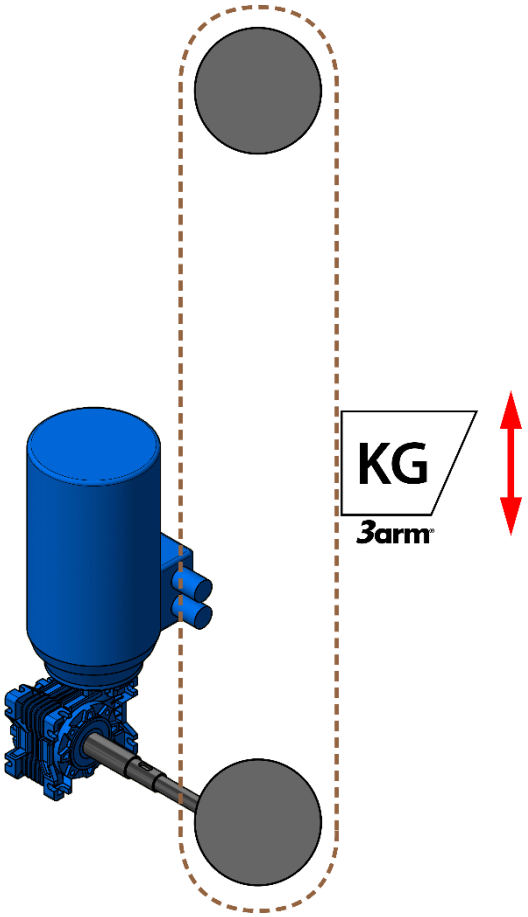
1.- Main switch
2.- Linear guide
3.- Carriage
4.- Travel stop
5.- Control box
6.– Emergency stop
7.- Anti-rotation stop
8.- Limit switch sensor
9.- Cable carrier chain
10.- Eyebolt
11.- Identification plate

4.2 DESCRIPTION AND PRINCIPLE OF OPERATION

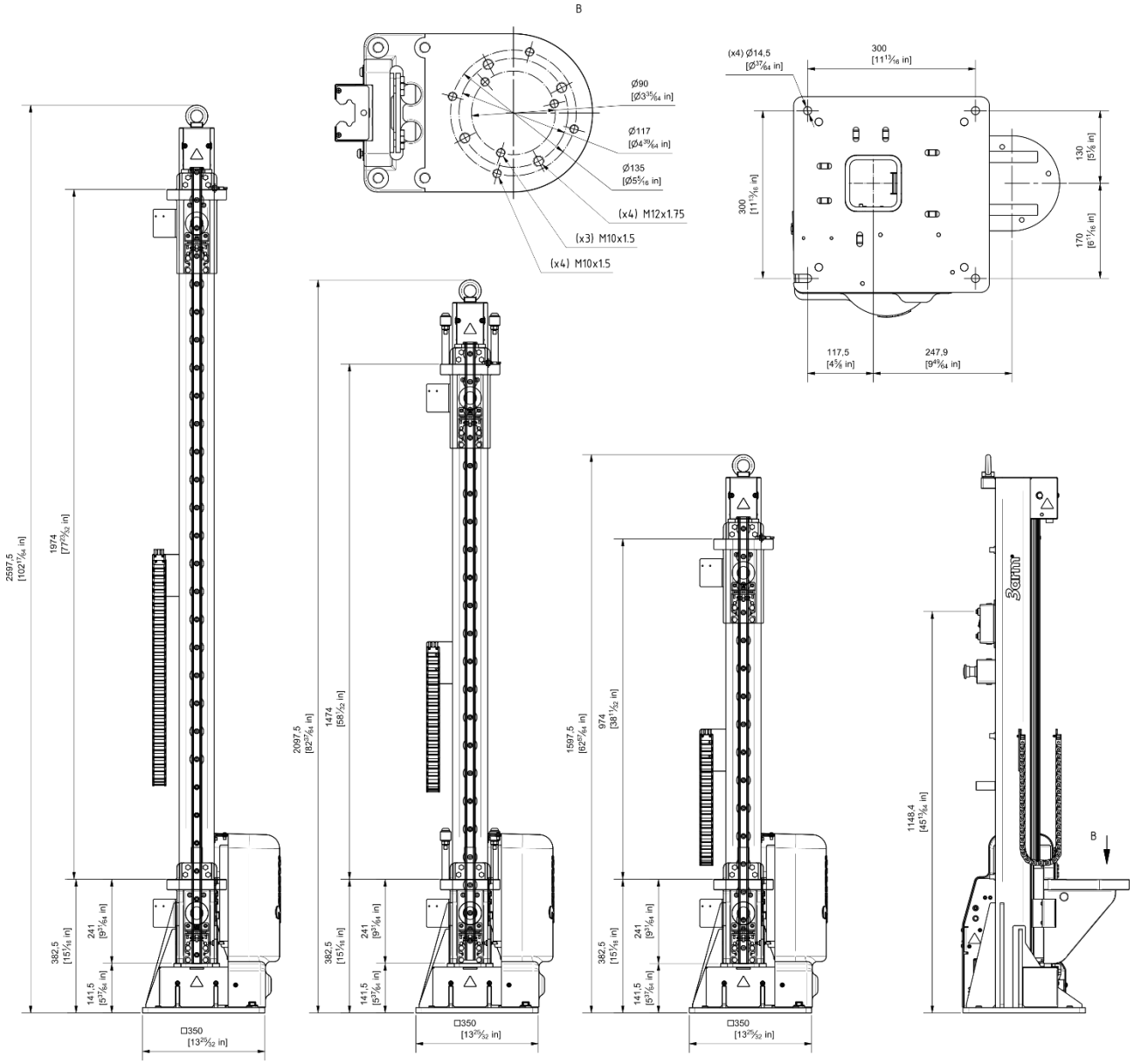
The electric column is designed for the lifting of 3Arm equipment, such as zero-gravity arms of various series and manipulators, manufactured by Tecnospiro Machine Tool, S.L.U.

An electric gear motor together with a toothed belt shall move the carriage along the designate guide in an upward or downward direction as the buttons are pressed.

An NC electro-brake in the motor will keep the carriage stationary in the position determined with the controls.



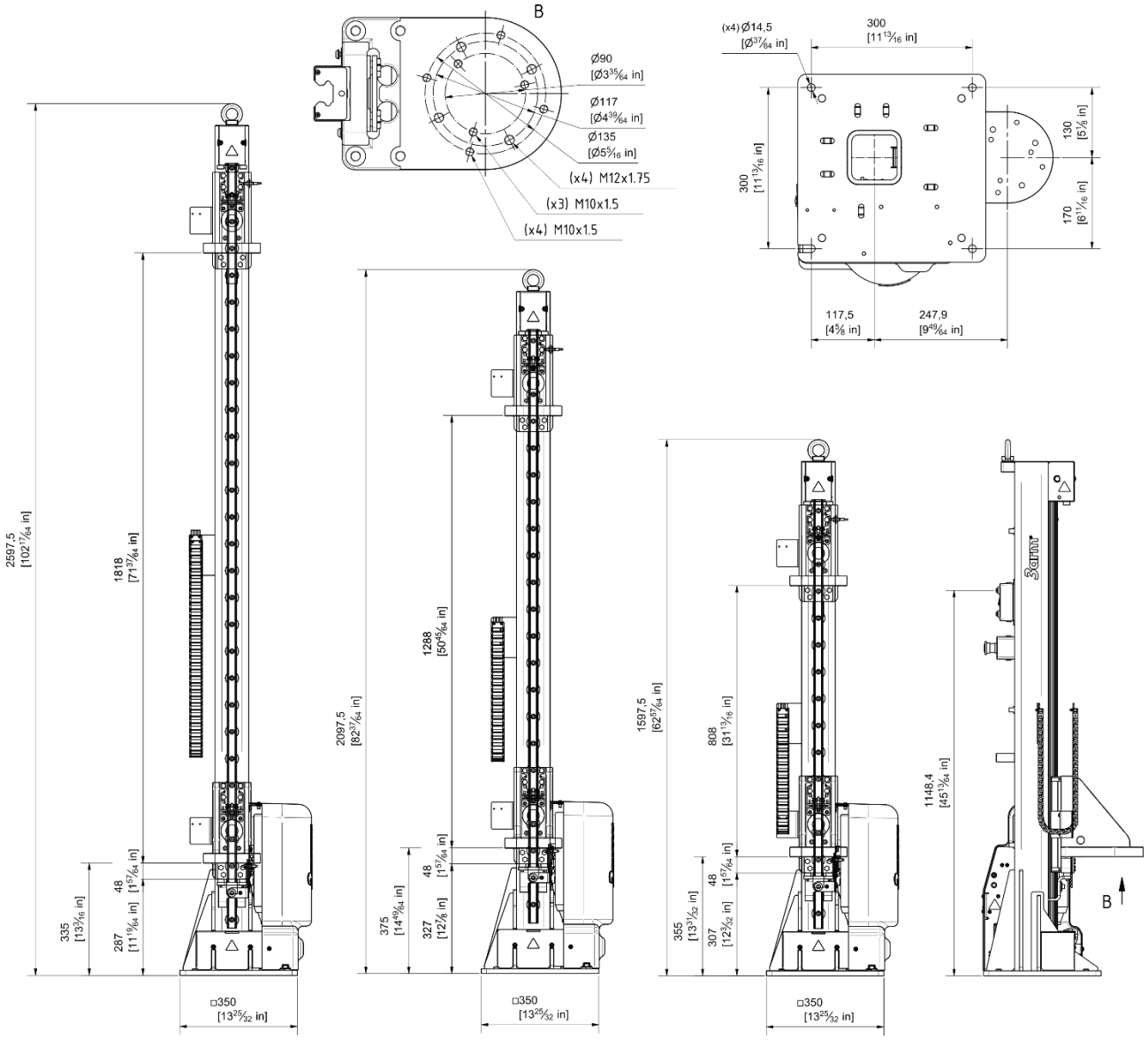
4.3 DIMENSIONS



2500 Electric column

2000 Electric column

1500 Electric column



2500 Electric column
Ceiling

2000 Electric column
Ceiling

1500 Electric column
Ceiling

4.4 TECHNICAL SPECIFICATIONS

GENERAL TECHNICAL SPECIFICATIONS		
Load capacity		
	Load range (BS)	0 - 150 kg *(0 – 331 lb.)*
Travel range		
	1500 Column	974 mm *(38.3”)*
	2000 Column	1474 mm *(58”)*
	2500 Column	1974 mm *(77.7”)*
	1500 Column Ceiling	808 mm *(31.8”)*
	2000 Column Ceiling	1288 mm *(50.7”)*
	2500 Column Ceiling	1818 mm *(71.6”)*
Weight		
	1500 Column	88 kg *(194 lb.)*
	2000 Column	101 kg *(223 lb.)*
	2500 Column	114 kg *(251 lb.)*
Electrical specifications		
	Supply voltage	230 Vac 50 Hz
	Power	1 500 W
	Protection class	IP24
Working conditions		
	Temperature	-10 to +50ºC
	Relative humidity	Max. 50 %
	Environment	Industrial environments

4.5 IDENTIFICATION

A sticker on to the structure identifies your equipment and indicates the following characteristics.

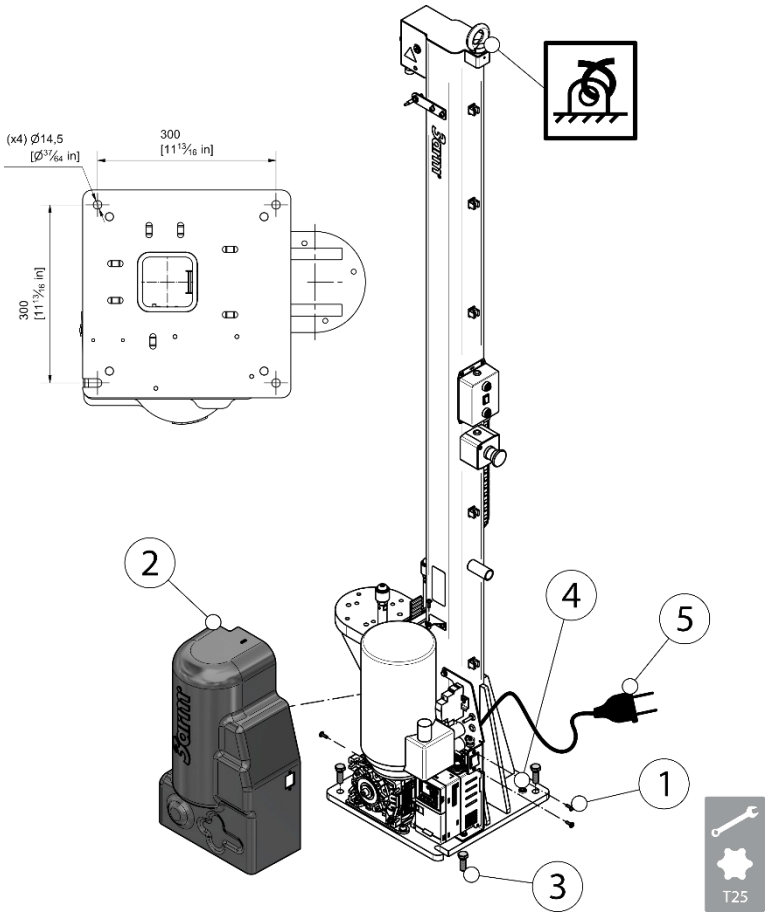
CE marking, Manufacturer (name, address and company name), Date of manufacture, Serial number, Model, Designation, Maximum working load, Voltage and Power.

5 INSTALLATION

INSTALLATION

✓ This column has been designed for use with 3arm® and ROSCAMAT® products, as well as with 3arm® and ROSCAMAT® compatible accessories. In any case, the integrator, owner and/or end user is responsible for determining the suitability of the product for each use, as well as its place of installation, the specific definition of the task to be performed within the limits set forth in this manual.

1. Remove the column from the original packaging using the eyebolt.
2. Remove the screws (1) (Torx 25 wrench) and take off the cover (2).
3. **Fix the column** to the surface using screws (3) (fixed wrench) suitable for the chosen location or a similar fastening system approved by the integrator.
4. **Adjust the studs (4)** to prevent slight rotations due to uneven flooring.
5. Replace the cover (2) and screws (1) (Torx T25 wrench).
6. **Install your equipment**[1] on the column support using the supplied screws.
7. **Connect the plug (5)** to the power supply.



1 Refer to attached 3Arm® equipment manual.

RECOMMENDATIONS IN THE INSTALLATION ON THE FLOOR (PAVEMENT)

The lift must be installed on a horizontal floor with a minimum thickness of 150 mm of concrete with strength of 30N/mm^2 (C25/30).

In addition, the floor must be flat and well-levelled.

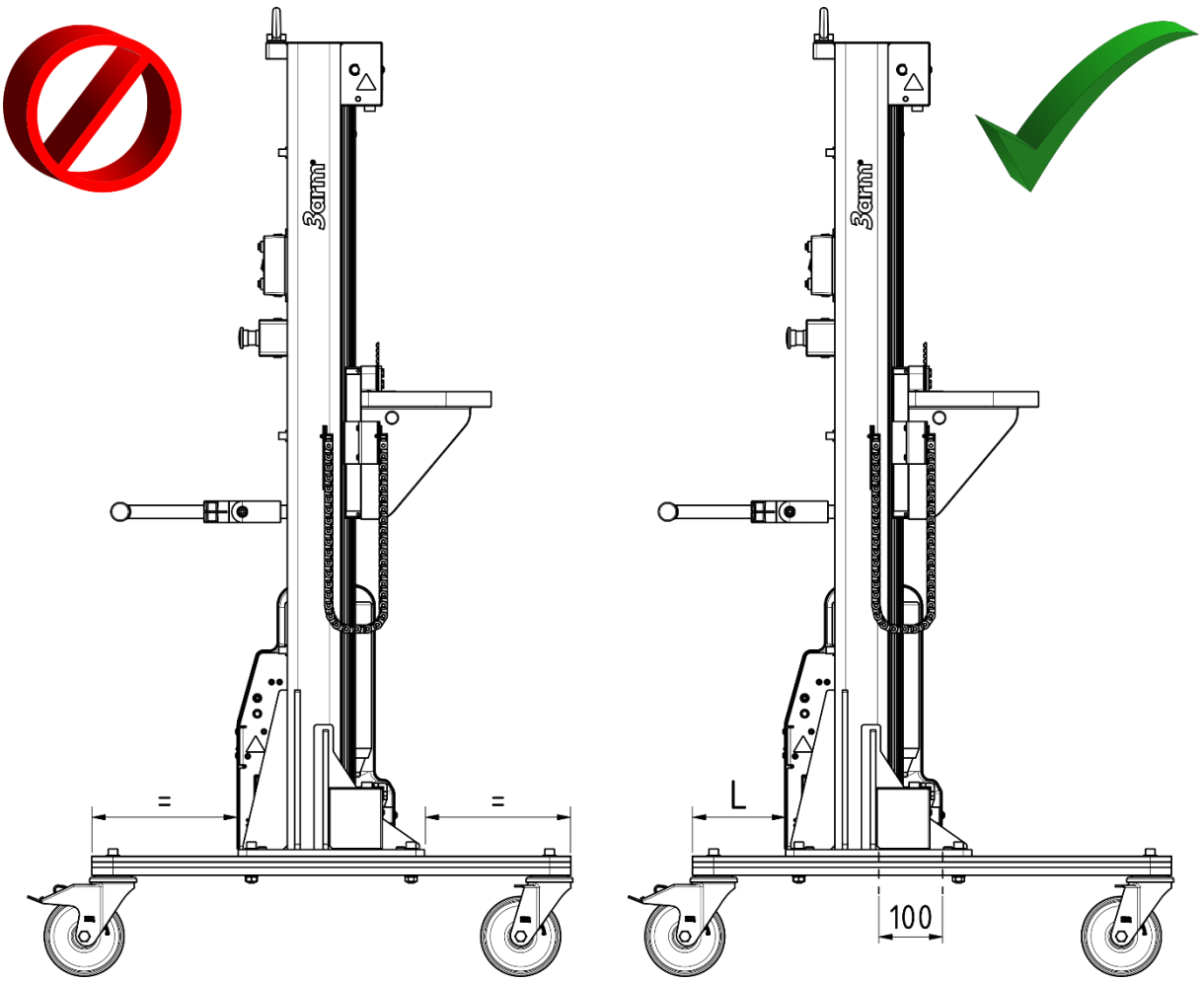
For special applications, consult the contractor (bricklayer).

Do not install equipment in an environment such as:

- ✓ Areas with explosion or fire hazards.
- ✓ Outdoor areas.
- ✓ Corrosive areas.
- ✓ Areas with extreme temperatures (very high or very low).
- ✓ Areas with high humidity.
- ✓ Areas with high electromagnetic emissions.

5.1 SAFETY CONSIDERATIONS FOR INSTALLATION

The installation of the electric column along with the carriage must be carried out ensuring its correct arrangement as detailed below.



INSTALLATION

- ✓ The column installation must be done with an eccentricity of 100 mm with respect to the centre of the carriage.
- ✓ For safety, it must be verified that the indicated measure L corresponds to the values shown in the following table before concluding the installation. Note that the distance L should be measured from the side coinciding with the wheels with the brake lever.

L values:

	L (mm)
Carriage 700x700	75 mm *(2.9")*
Carriage 800x800	125 mm *(4.9")*
Carriage 900x900	175 mm *(6.8")*

6 ADJUSTMENTS

6.1 ADJUSTMENT OF THE UPWARD-DOWNWARD SPEED

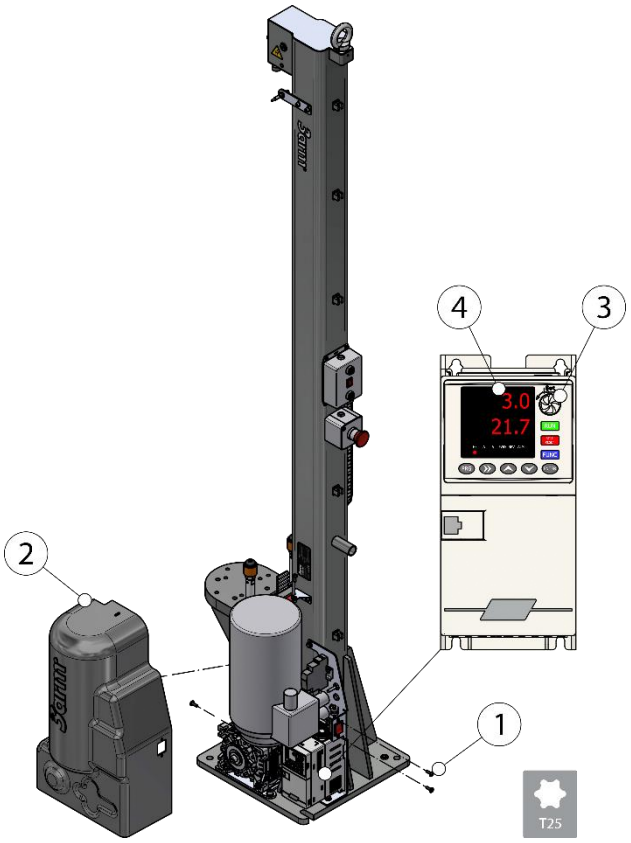
This column is equipped with two speeds, a slow one (🐢) and a fast one[2] (🐇), both speeds are factory preset.

It is possible to adjust the upward and downward speed to suit the working conditions.

To adjust the slow speed (🐢):

1. Remove the screws (1) (Torx 25 wrench) and take off the cover (2).
2. Rotate the dial (3) of the variator:
   - **Clockwise** to increase the speed.
   - **Counterclockwise** to reduce the speed.

To determine that the adjustment made is appropriate, operate the column to perform movement and check on the variator display (4) that the consumption (Amps) does not increase compared to the initial value[3]. This way, the life of the equipment will be prolonged.



MAXIMUM SPEED

✓ In no case shall the maximum speed exceed 150 mm/s.

2 The fast speed cannot be adjusted, it is factory preset. If you wish to reduce the fast speed, please consult your 3Arm© distributor.

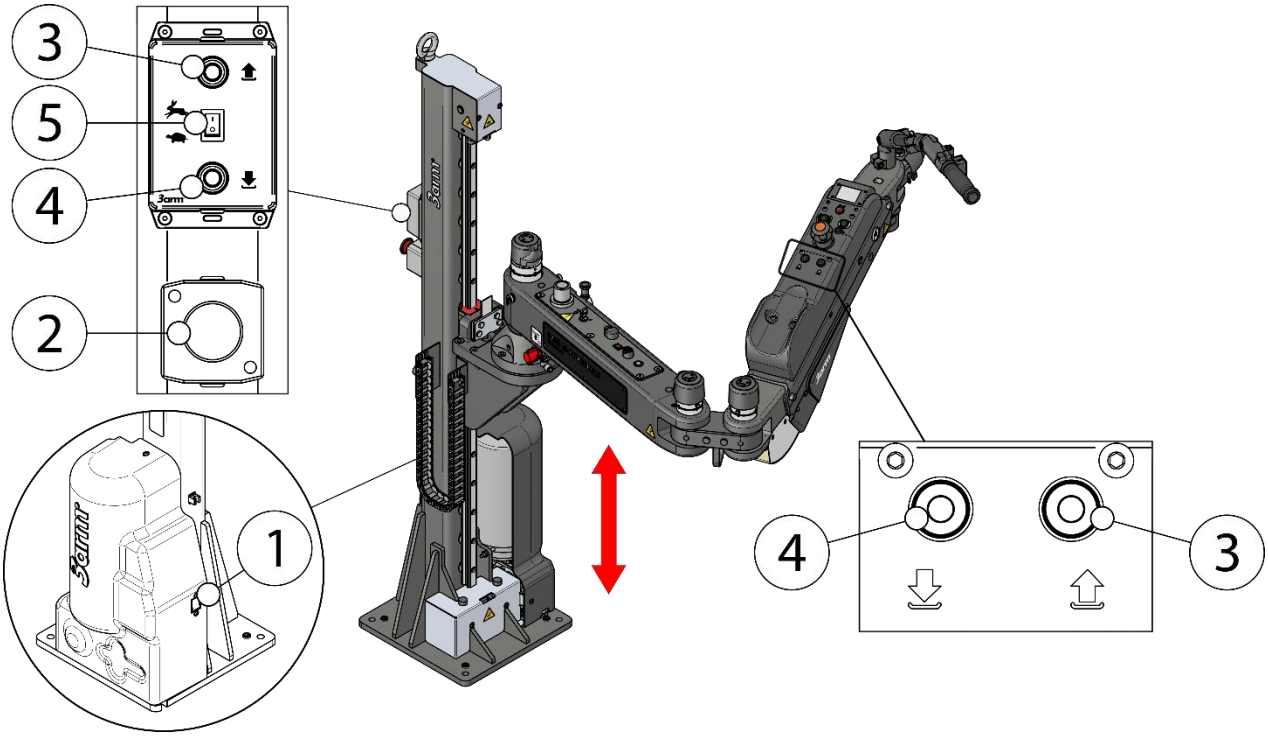
3 The reference amperage value is 3.0A (±10%)

7 OPERATION

The column can be operated from the control panel and its 3Arm® equipment (dual operation).

1- Turn on the main switch (1).
2- Ensure that the emergency stop (2) is not activated by turning the knob clockwise.
3- Press and hold the button (3) or (4) until the appropriate position is reached:
- Button (3) ( ): Upward movement.
- Button (4) ( ): Downward movement.

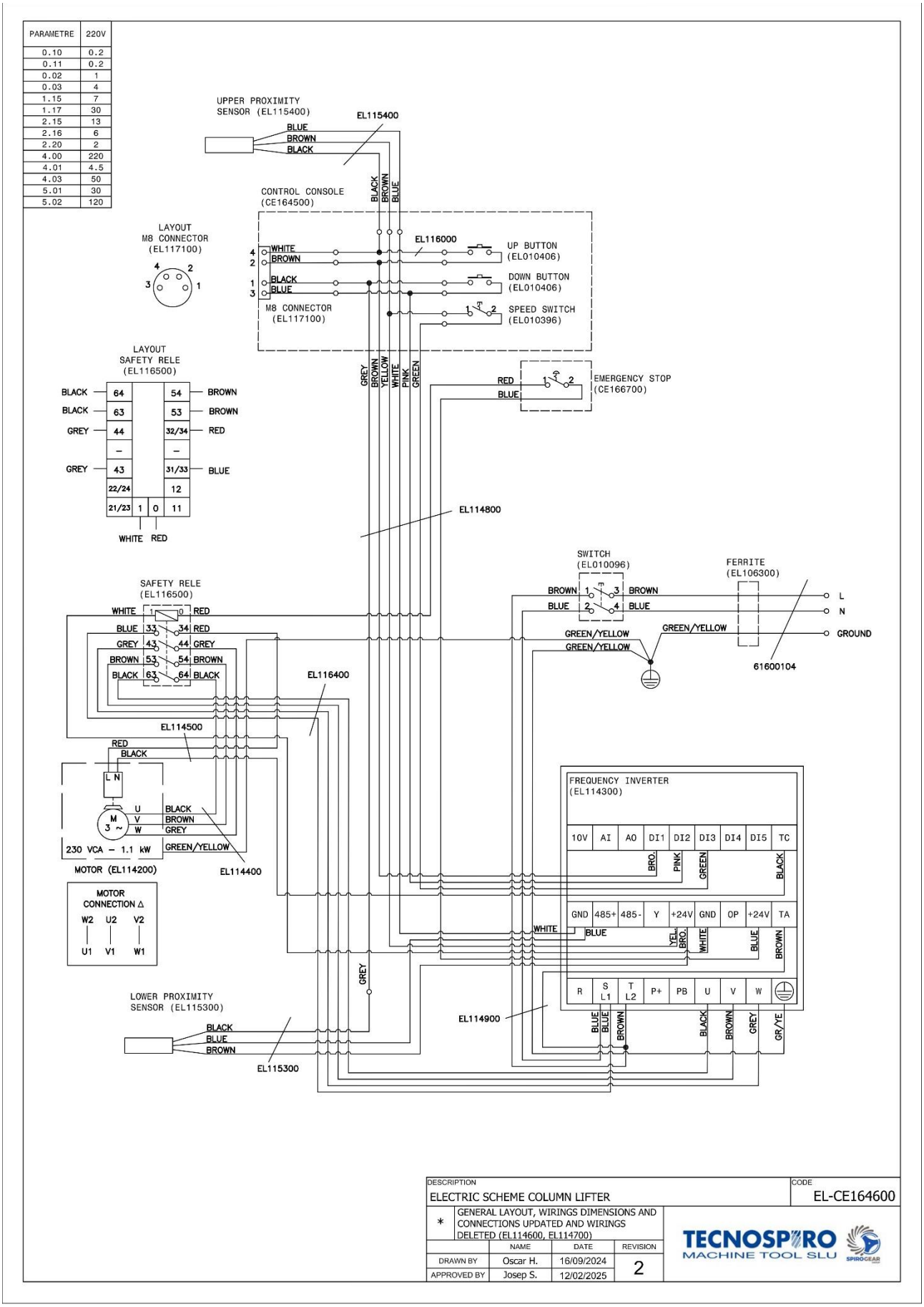
You can select the fast speed ( )(I) or the slow speed ( )(0) with the switch (5).



WARNING

✓ During prolonged periods of inactivity, it is recommended to position the carriage at the lower end of the column.

7.1 ELECTRICAL DIAGRAM



8 MAINTENANCE

8.1 BELT

The belt is a very important element that requires special attention for proper use and to extend the life of the equipment. Follow the following points:

Periodically, each month, a visual inspection of the belt should be carried out to check its surface condition:

- Disconnect the system, to ensure that it is stopped and cannot cause harm.
- Inspect for cracks or excessive wear.
- Check if the internal wires of the belt are out of place, appear damaged or show rust (inspect the internal and external parts).

For cleaning the belt, the following methods can be used (in order of suitability):

- Compressed air
- Damp cloth with water at less than 60º
- Damp cloth with mineral oil or grease
- Damp cloth with alcohol-free fuel

WARNING

DO NOT allow the PU belt to come in contact with synthetic oil or alcohol. This could damage the belt.

Every 6 months or every 30 km of guide travel (whichever comes first), the belt should be tensioned [See TENSIONING THE BELT] after first checking the tension [See CHECK BELT TENSION] and tensioning if necessary.

Every 3 years or every 70 km of guide travel (whichever comes first), it is recommended to change the belt as preventive maintenance [See REPLACING THE BELT].

8.1.1 CHECK BELT TENSION

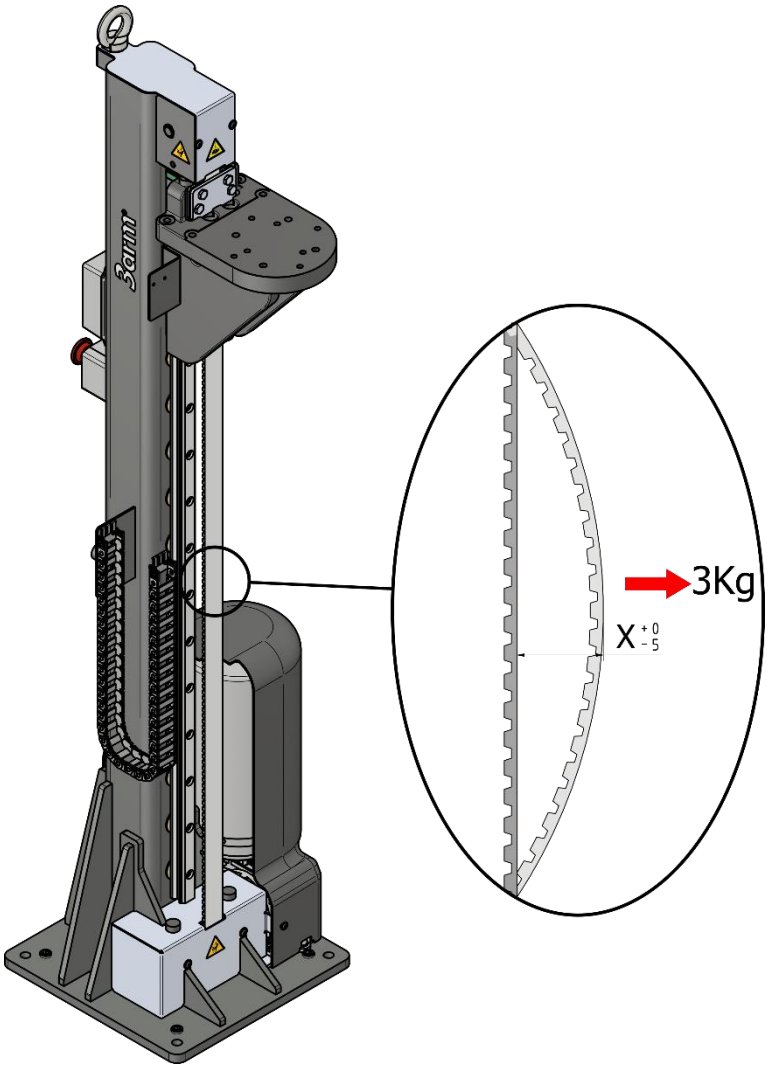
1. Raise the column to its upper position [See OPERATION].

2. Using a load cell in the middle part of the belt, apply an outward force of 3 kg.

3. Measure the displacement:

- Column 1500 -> $X = 50^{+0}_{-5}$
- Column 2000 -> $X = 55^{+0}_{-5}$
- Column 2500 -> $X = 60^{+0}_{-5}$

4. If it is more, the belt needs to be tensioned, and if it is less, loosen the belt [See TENSIONING THE BELT].

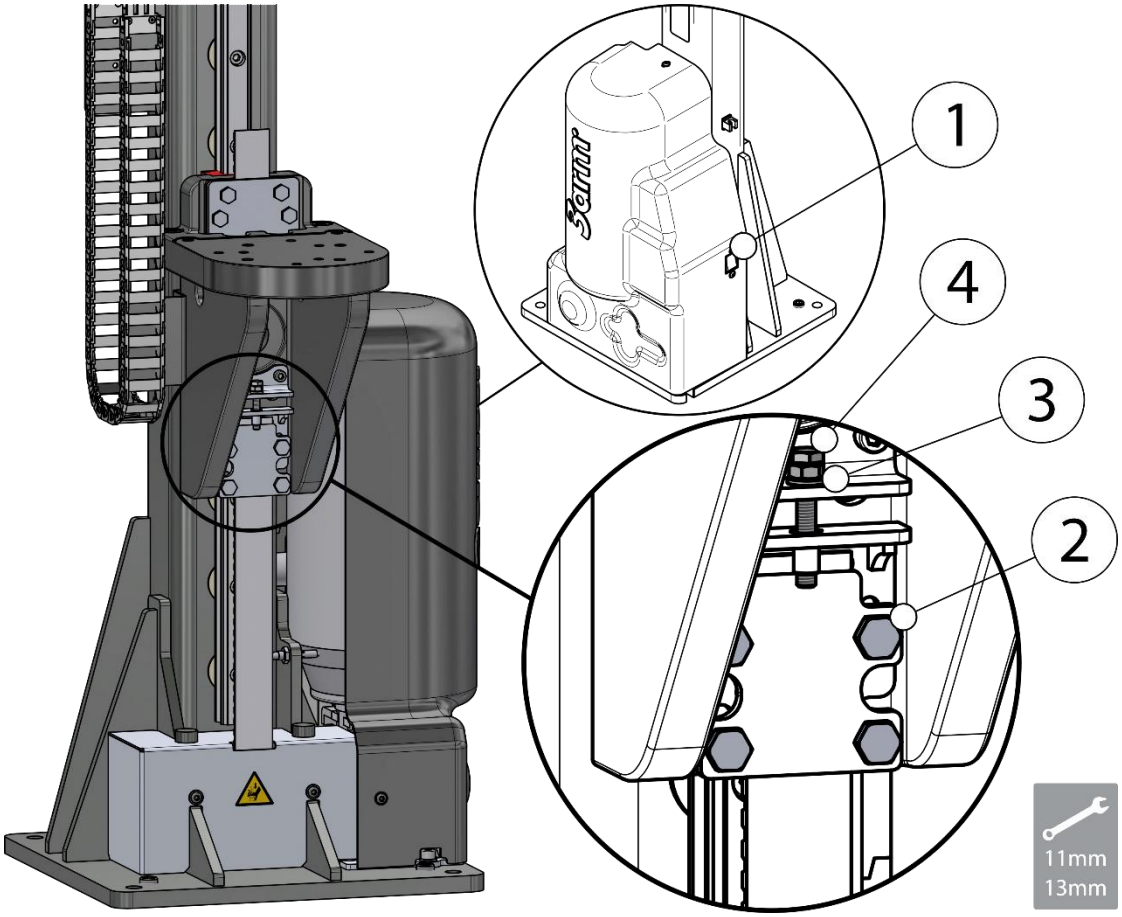


8.1.2 TENSIONING THE BELT

There are two variants for tensioning the belt, one for the desktop version and one for the ceiling version:

8.1.2.1 Desktop version

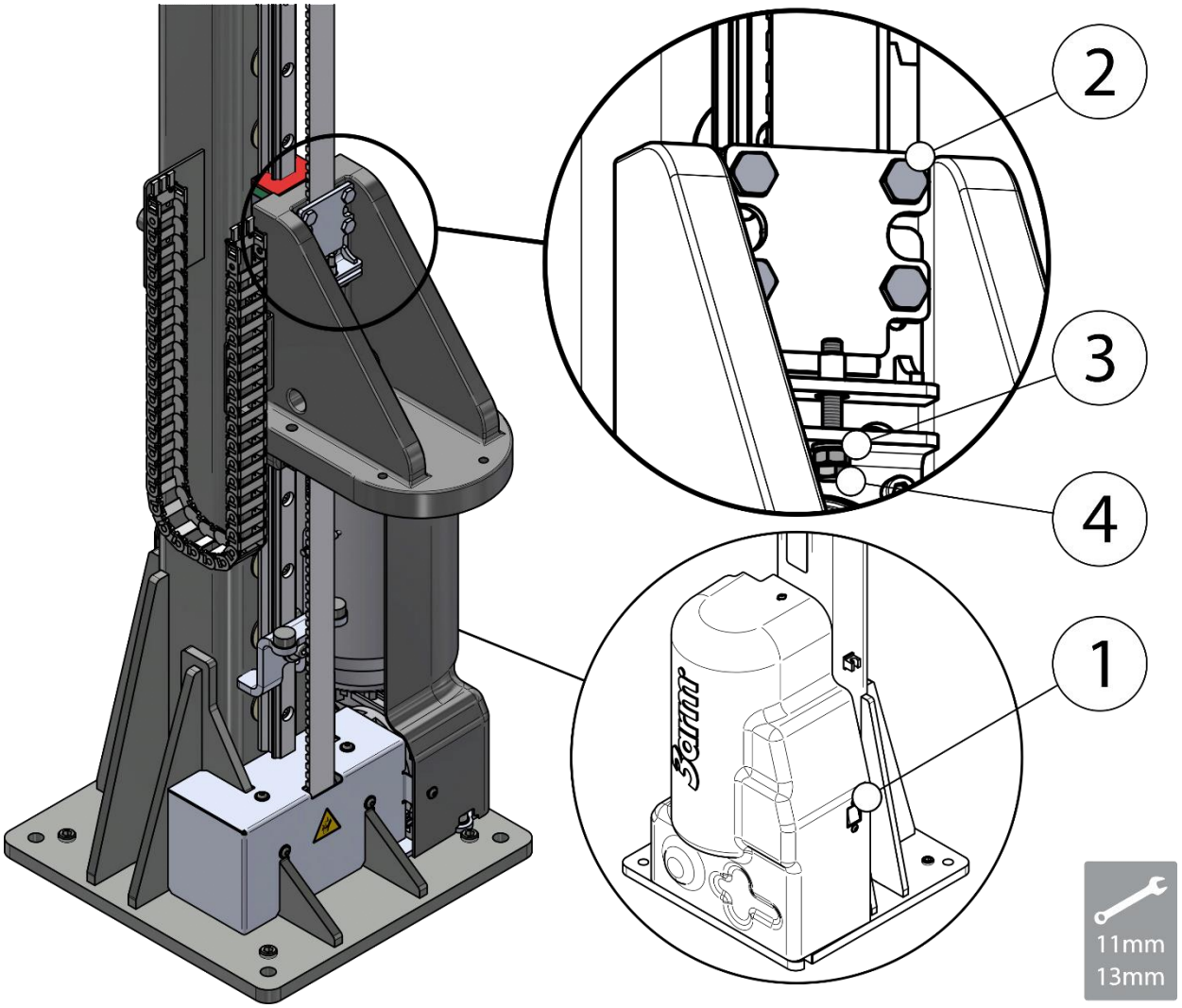
1.	Load the carriage with the maximum load to be lifted[4].
2.	Raise the column to access the tensioner [See OPERATION].
3.	Turn off the main switch (1).
4.	Place a stand or safety prop under the carriage (without touching) to support the load in case the belt slips during handling.
5.	Unscrew the screws (2) by ¾ turn (13 mm fixed wrench).
6.	Using two 10 mm fixed wrenches, tighten the tensioning nut (3) while holding the bolt (4).
7.	Secure the clamp plate by tightening the screws (2) (13 mm fixed wrench) to 8Nm.
8.	Check the belt tension [See CHECK BELT TENSION].
9.	Perform a lift/lower cycle and verify that the tension is correct. If not, start over.
10.	Mark the screws (2) with a marker to detect if the screws lose tension.



4 Do not exceed 150 kg, maximum lifting load.

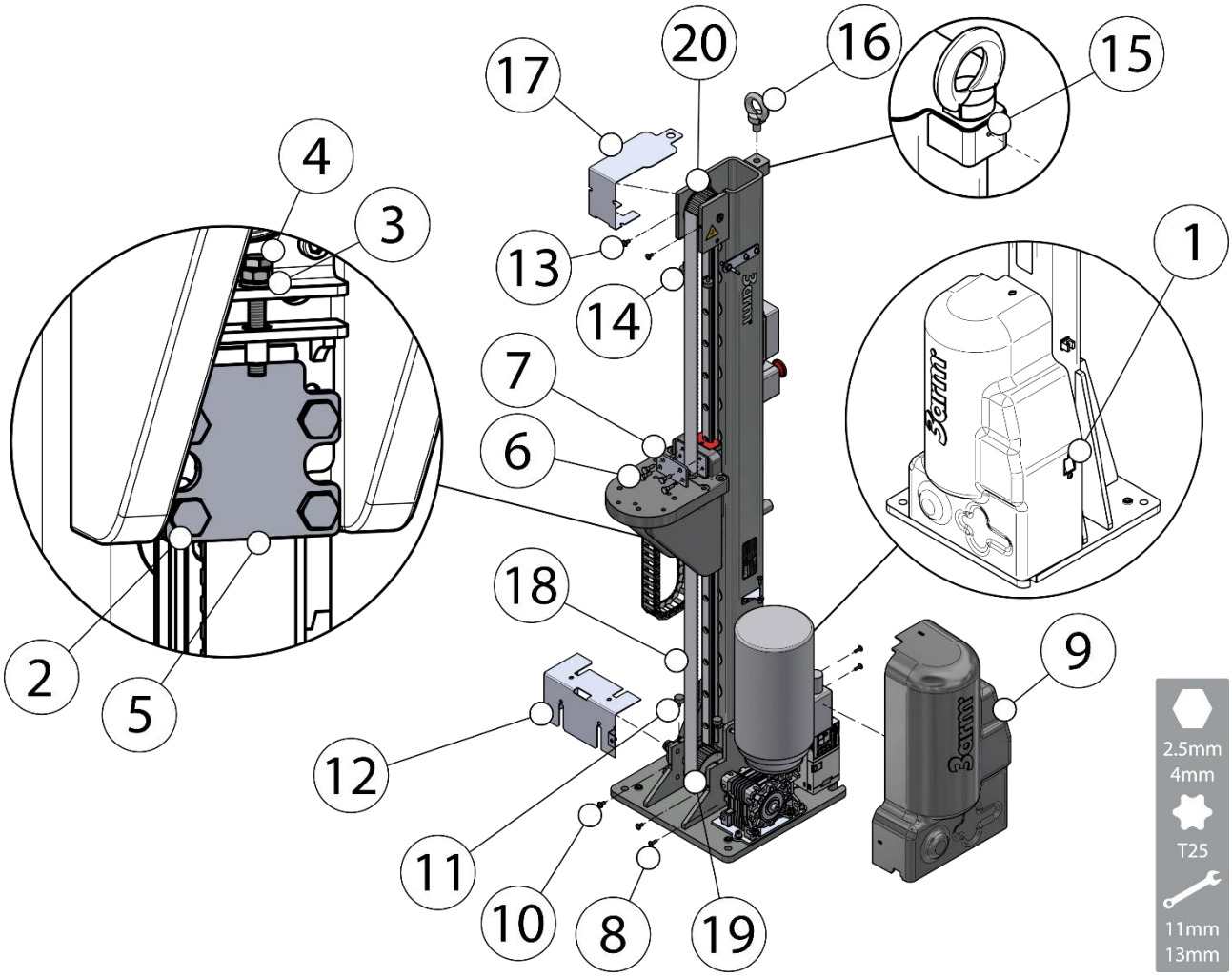
8.1.2.2 Ceiling version

1. Raise the column to access the tensioner [See OPERATION].
2. Place a stand or safety prop under the carriage (without touching) to support the load in case the belt slips during handling.
3. Turn off the main switch (1).
4. Unscrew the screws (2) by ¾ turn (13 mm fixed wrench).
5. Using two 10 mm fixed wrenches, tighten the tensioning nut (3) while holding the bolt (4).
6. Secure the clamp plate by tightening the screws (2) (13 mm fixed wrench) to 8Nm.
7. Check the belt tension [See CHECK BELT TENSION].
8. Perform a lift/lower cycle and verify that the tension is correct. If not, start over.
9. Mark the screws (2) with a marker to detect if the screws lose tension.



8.1.3 REPLACING THE BELT

1.	Remove all load from the carriage.
2.	Raise the column to access the tensioner [See OPERATION].
3.	Turn off the main switch (1).
4.	Place a stand or safety prop under the carriage to support any remaining load.
5.	Unscrew the screws (2) by ¾ turn (13 mm fixed wrench).
6.	Using two 10 mm fixed wrenches, unscrew the tensioning nut (3) while holding the bolt (4).
7.	Once the belt is untensioned, verify that the load is supported by the prop.
8.	Remove the screws (2) (13 mm fixed wrench) and remove the clamp (5).
9.	Remove the screws (6) (13 mm fixed wrench) and remove the clamp (7).
10.	Remove the screws (8) (Torx T25 wrench) and take off the cover (9).
11.	Remove the screws (10) (4 mm Allen wrench), the rubber stops (11), and take off the cover (12).
12.	Remove the screws (13) (4 mm Allen wrench), the rubber stops (14), loosen the stud (15) (2.5 mm Allen wrench), extract the eyebolt (16), and take off the cover (17).
13.	Remove the belt (18), releasing the motor pulley (19) and pulling from the free pulley (20).



14. Place the new belt (18) over both pulleys, passing it through the inside of the covers (12) and (17) beforehand.

15. Fix one end of the belt (18) to the support (21).

The 5 teeth of the belt must fit into position!

16. Pass the belt (18) over the free pulley (20) and then over the motor pulley (19) pulling the belt to synchronize the teeth of the belt with those of the motor pulley.

17. Place the cover (17) and secure it with the eyebolt (16), the rubber stops (14) and the screws (13) (4 mm Allen wrench). Secure the eyebolt by tightening the stud (15) (2.5 mm Allen wrench).

18. Place the cover (12) and secure it with the rubber stops (11) and the screws (10) (4 mm Allen wrench).

19. Place the cover (9) and secure it with the screws (8) (Torx T25 wrench).

20. Cover the belt with the clamp (7) and tighten the screws (6) (13 mm Fixed wrench 13) to 8Nm.

21. Fix the other end of the belt (18) to the tensioner (22). Untension it fully if the belt does not reach.

The 5 teeth of the belt must fit into position!

22. Cover the belt with the clamp (5) and tighten the screws (2) (13 mm Fixed wrench) evenly ¾ turn before fully tightening.

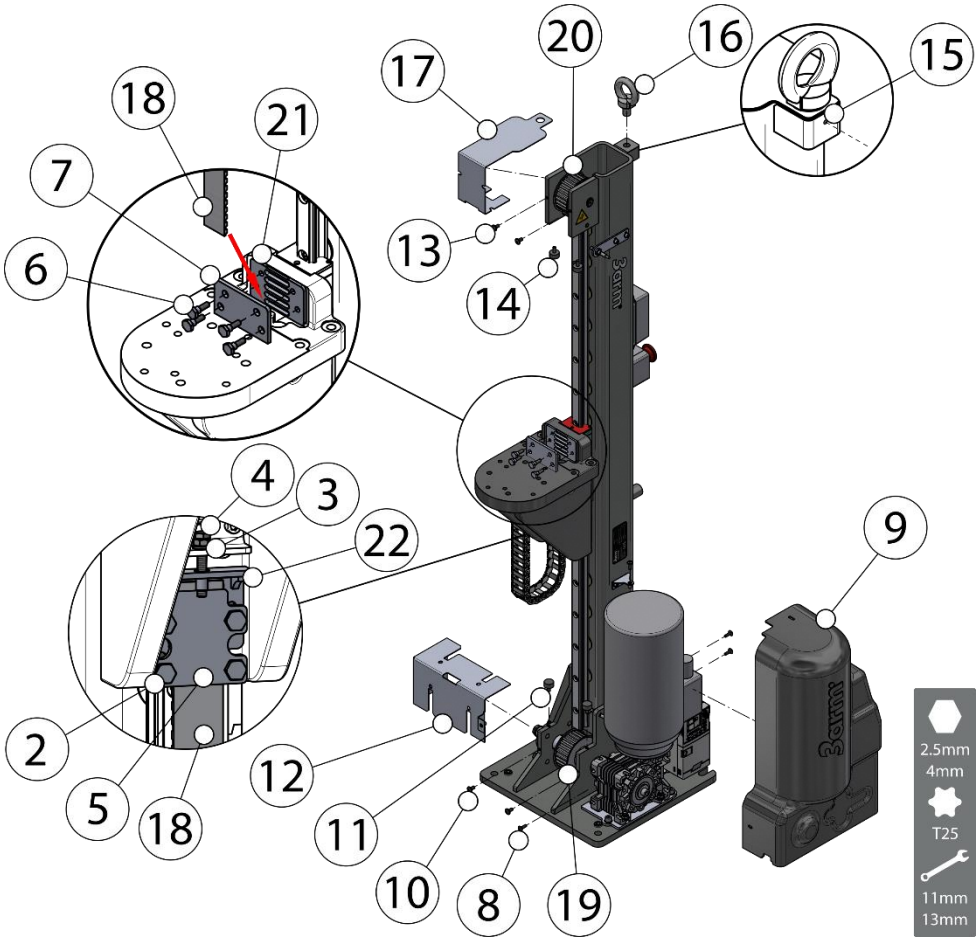
23. Using two 10 mm fixed wrenches, tighten the tensioning nut (3) while holding the bolt (4).

24. Secure the clamp plate by tightening the screws (2) (13 mm fixed wrench) to 8Nm.

25. Check the belt tension [See CHECK BELT TENSION].

26. Perform a lift/lower cycle and verify that the tension is correct. If not, re-tension [See TENSIONING THE BELT].

27. Mark the screws (2) with a marker to detect if the screws lose tension.



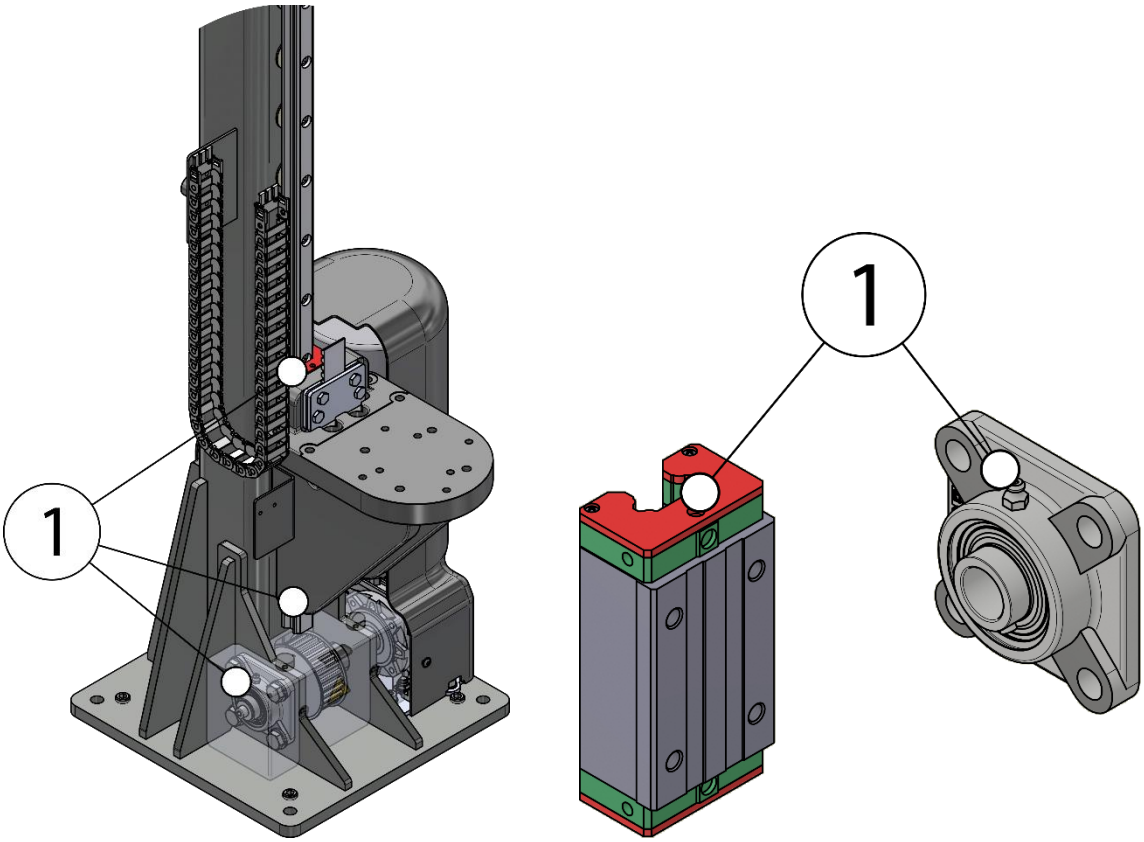
8.2 LINEAR GUIDE SYSTEMS (Rails, Carriages, …)

Like any other bearing, linear guides need a sufficient supply of lubricant. Both oil and grease can be used for lubrication. Lubricants reduce wear, protect against contamination, reduce corrosion and their properties extend service life. Dirt can accumulate on unprotected rails. This dirt should be removed periodically.

Check the surface of the rails weekly to ensure regular periodic cleaning.

Grease the carriages and the reducer shaft bearing every 50 km of travel, or every year, whichever comes first.

1. Grease carriages and the motor pulley shaft bearing through the grease fitting (1).



8.3 MAINTENANCE SCHEDULE

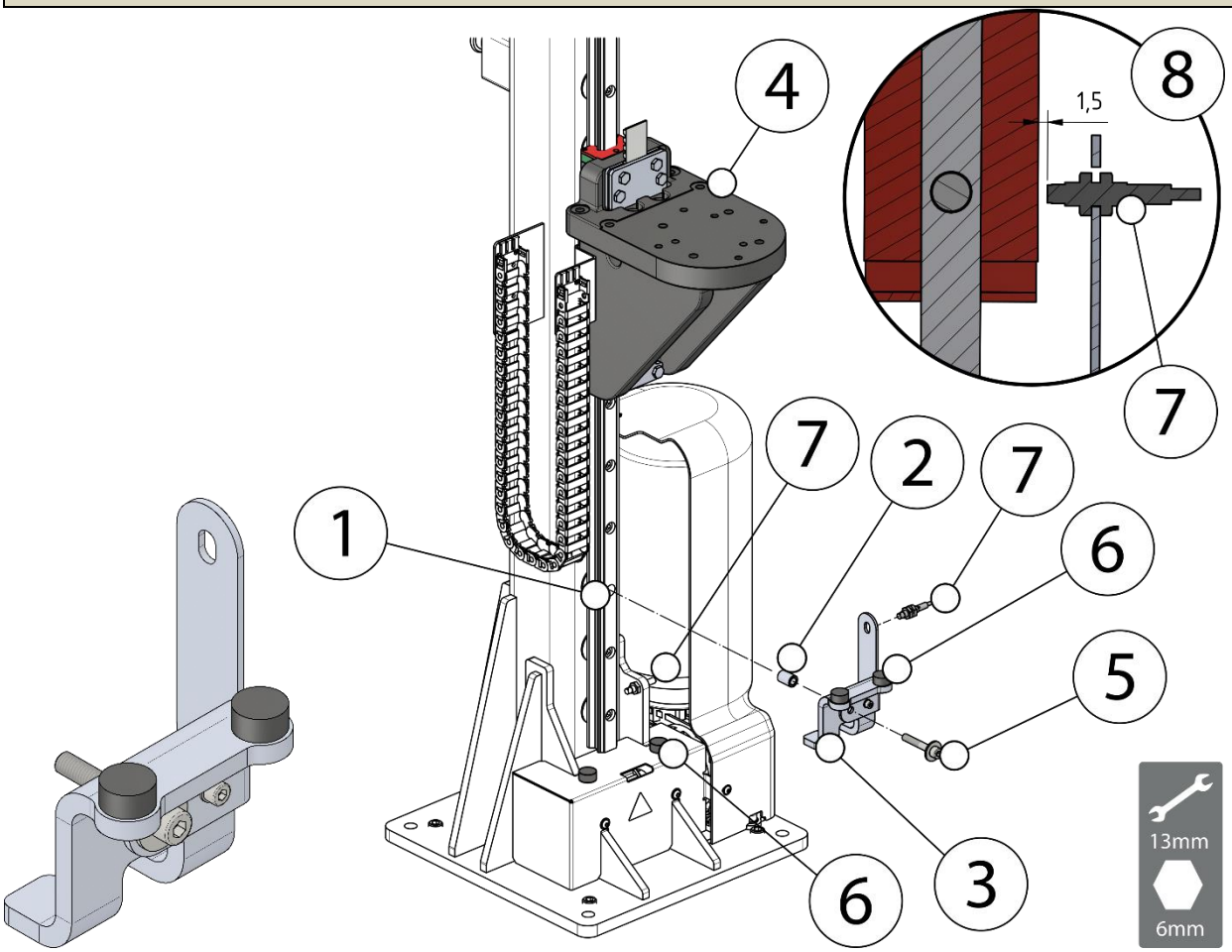
ELEMENT DESCRIPTION	ACTION	PERIOD
Carriage grease and lubrication	Add about 5 cm^3 of universal lithium grease to each carriage.	Every 50 km or every year, whichever comes first
Belt condition	Inspect the belt holding the carriage, especially at its anchorage points. Check its condition along the travel path, ensuring there are no signs of deterioration, cracks or excessive wear. If the belt is in poor condition, contact your 3Arm® distributor for replacement.	Before each use
Belt tensioning	[See TENSIONING THE BELT] check the tension first [See CHECK BELT TENSION].	Every 30 km or every 6 months, whichever comes first
Belt replacement	It is recommended to replace the belt as preventive maintenance [See REPLACING THE BELT].	Every 70 km or every 3 years, whichever comes first
Belt clamps	Check for cracks and check the tightening torque of the fixing screws (8Nm).	Periodically
Pulleys	Check general condition, wear and rust on the teeth.	Periodically
Screws and fastening elements	Check their tightness and functionality.	Periodically
Variator	Perform an up/down cycle and check in the display of the variator, with the reference amperage value being 3.0A (±10%).	Periodically
General cleaning	When dirt is found, clean it with a mild household product. Do not use other cleaning agents, as they may cause damage.	Periodically
General check of the electrical circuit and its connections	Carry out a general check of the entire electrical installation to detect any anomalies. Keep wiring and equipment in optimal condition.	Periodically

9 ACCESSORIES

9.1 TRAVEL LIMITER

The electric column has an optional accessory to limit vertical travel, so that the lift cannot reach heights where a possible collision could damage an external element to the column.
It can be installed both at the bottom and the top. To install it:

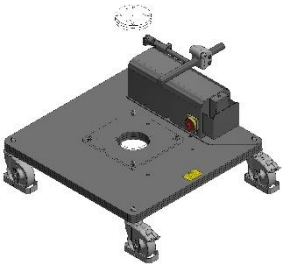
1. Remove a screw (1) from the guide where you want to install the limiter (80 mm intervals).
2. Place the sleeve (2) in the guide (1), position the limiter (3) with the stops facing the carriage (4) and tighten the screw (5) (6 mm Allen wrench) at 20Nm.
3. Remove the rubber stops (6) from the column and install them on the limiter (3).
4. Lower the carriage (4) until it approaches the limiter (3).
5. Remove the sensor (7) (13 mm Fixed wrench) from the bracket and install it on the limiter (3), adjusting it (8) to 1.5 mm from the carriage (4).
6. Test the operation [See OPERATION] at slow speed ( ) making small approaches.
7. Verify that the sensor detects the carriage and stops the movement before coming into contact with the rubber stops. If not, readjust the sensor position and check again.

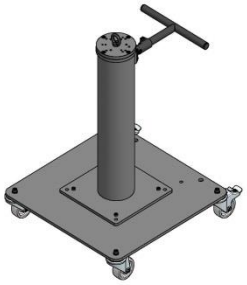


9.2 3ARM ACCESSORIES

Attention Not all accessories shown below are compatible. Please refer to the compatibility table [See COMPATIBILITY 3ARM ACCESSORIES].

CARRIAGE





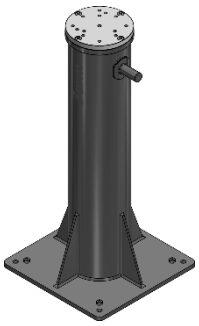
For moving the work unit.

It has 4 swivel wheels.

DESCRIPTION	DIMENSIONS	
Carriage 700	700x700 mm	27 9/16” x 27 9/16”
Carriage 800	800x800 mm	31 1/2” x 31 1/2”
Carriage 900	900x900 mm	35 7/16” x 35 7/16”
Electric carriage	900x900 mm	35 7/16” x 35 7/16”
Electric carriage	800x800 mm	31 1/2” x 31 1/2”

FIXED COLUMN

For fixing to the floor with 4 metal studs.



DESCRIPTION/DIMENSIONS	
Column 62 mm	2 ½ “
Column 112 mm	4 3/8”
Column 162 mm	6 3/8”
Column 275 mm	10 7/8”
Column 375 mm	14 ¾”
Column 450 mm	17 ¾”
Column 635 mm	25”
Column 740 mm	29 1/8”
Column 850 mm	33 ½”
Column 1100 mm	43 ¼”
Column 1350 mm	53 1/8”
Column 1600 mm	63”

LIFT/PR LIFT

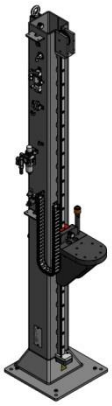
It consists of a telescopic column and a pneumatic cylinder with anti-rotation.

DESCRIPTION	VERTICAL TRAVEL
300	300 mm – 11 7/8”
Lift 500	500 mm – 19 7/8”
Lift 750	750 mm – 29 17/32”
Lift 300 PR	300 mm – 11 7/8”
Lift 550 PR	550 mm – 21 5/8”
Lift 750 PR	750 mm – 29 17/32”

D63/D100 COLUMN

Pneumatic lift. The vertical position can be locked at any point, it features a pneumatic cylinder. It can be fixed to the ground, on a carriage, or on a floor rail for movement in 2 axes.

DESCRIPTION	VERTICAL TRAVEL
Column 1500 D63	940 mm – 37”
Column 2000 D63	1440 mm – 56 11/16”
Column 2500 D63	1940 mm – 76 3/8”
Column 1500 D100	999 mm – 39 7/16”
Column 2000 D100	1455 mm – 57 5/16”
Column 2500 D100	1999 mm – 78 11/16”



EXTENSION

(1)

Extension that allows increasing the working area of your arm. It can be installed on other accessories, such as columns, lifts, beams, etc.

DESCRIPTION	ADDITIONAL WORKING AREA
Extension 500 (1)	500 mm – 19 11/16”
Extension 600 (1)	600 mm – 23 5/8”
Extension 1000 (2)	1000 mm- 39 3/8”

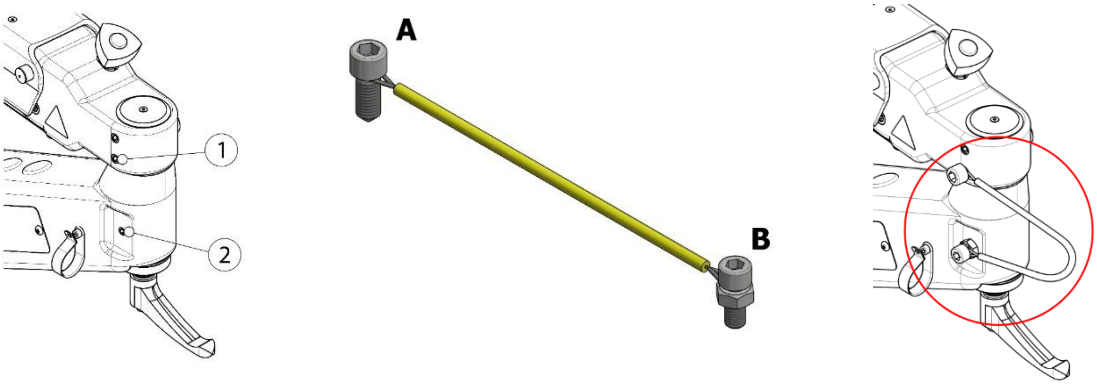
(2)

BASE ROTATION LIMITER

Support that limits the rotation of the equipment’s radial arm. Stops can be moved to adjust the rotation range.

CODE	DESCRIPTION
LG000104	Rotation limiter

ROTATION LIMITER



The rotation limiter is a reinforced and flexible steel cable that serves to limit the rotational movement of the front arm to a maximum of 1 turn, with an additional margin of 10% in each direction.

To mount it, unscrew the screws/studs (1) and (2), which come from the factory on the arm, and replace them with the screws from KIT “A” and “B”.

The screw “A” (M12) will go in position 1 and the screw “B” (M10) in position 2.

CODE	DESCRIPTION
LG100600	Anti-rotation stop set

9.2.1 COMPATIBILITY 3ARM ACCESSORIES

ACCESSORIES	ELECTRIC COLUMN
RADIAL EXTENSION	●
CARRIAGE	●
FIXED COLUMN/PR	⦸
PNEUMATIC TELESCOPIC ELEVATOR/PR	⦸
PNEUMATIC ELEVATOR D63/D100	⦸
ROTATION LIMITER	⦸
BASE ROTATION LIMITER	⦸

● = Compatible

⦸ = NOT compatible

* = consult

COMPATIBILITY

✓ The equipment has been designed for use with 3arm® products and compatible 3arm® accessories. The manufacturer assumes no liability for any damage that may arise from the use of the equipment for other purposes.

9.3 3ARM COMPATIBILITY TABLE

Accessory	SERIES – 3arm								
Electric column	S0	S1	S2	S3	S4	S6	S7	M3	M5
	●	●	●	●	●	●	●	●	●

9.4 ADDITIONAL ACCESSORIES

COMPRESSOR	
Along with the electric column, whether with or without a carriage, a compressor can be supplied. This provides an air supply for the manipulator or for the zero-gravity arm, if necessary, without the need for a compressed air installation. This way, with just an electrical supply, total autonomy for the compressed air supply is achieved.	

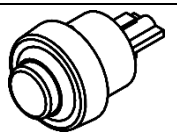
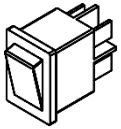
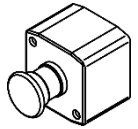
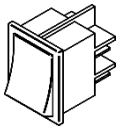
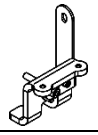
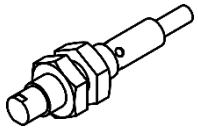
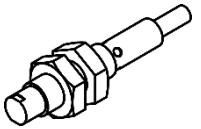
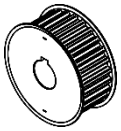
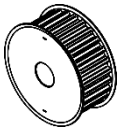
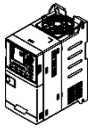
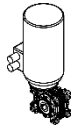
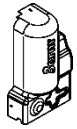
SAFETY CONSIDERATIONS - ACCESSORIES

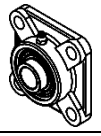
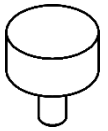
CARRIAGE: Consider possible movements of the column due to the addition of the carriage; the floor must be well-levelled to avoid equipment drift. Evaluate (End Customer) the need to lock the brakes based on the work to be carried out and the potential risks due to these movements.

FLOOR RAIL: Consider possible movements of the column due to mounting on the rail: the floor must be well-levelled to avoid equipment drift. Evaluate (end customer) the need to lock the brakes based on the work to be carried out and the potential risks due to these movements.

CARRIAGE WITH COMPRESSOR: Consider possible movements of the column due to the addition of the carriage; the floor must be well-levelled to avoid equipment drift. Evaluate (End Customer) the need to lock the brakes based on the work to be carried out and the potential risks due to these movements. Refer to the compressor manufacturer's instruction manual supplied with your order.

10 SPARES

CODE	DESCRIPTION	PICT.	CODE	DESCRIPTION	PICT.
CE167600	COLUMN BELT 1500 (2.95 m)		**CE167700**	COLUMN BELT 2000 (3.85 m)	
CE167800	COLUMN BELT 2500 (4.95 m)		**EL010406**	UP/DOWN BOTTON	
EL010396	SPEED SWITCH		**EL115800**	EMERGENCY STOP	
EL010096	MAIN SWITCH		**CE166100**	TRAVEL LIMIT ACCESSORY	
EL115300	LOWER SENSOR		**EL115400**	UPPER SENSOR	
CE164100	LOWER TRACTION PULLEY		**CE164200**	UPPER FREE PULLEY	
CE165900	FREQUENCY VARIATOR 230V		**CL150500R**	ANTI-ROTATION STOP (M5 and S7)	
CE165600	MOTOR		**CE163700**	MOTOR COVER	

CM181100	MOTOR SHAFT BEARING		**CM181200**	RUBBER CAP	

11 PACKAGING, TRANSPORT AND DISMANTLING GUIDELINES

11.1 PACKAGING

Follow these instructions for packaging the machine for relocation or shipments for repair and maintenance.

11.1.1 Preparatory measures

The machine must be taken out of service. By installing “transportation locks,” movement during transport will be prevented, thereby avoiding potential damage to the installation. Place the carriage at the lower part of the column.

11.1.2 Choice of packaging

For long-distance transport, the production installation components must be packaged in a way that protects them from whether conditions.

11.1.3 Packaging markings

Observe the specific regulations of the country where the transport takes place. In fully enclosed packages, there should be a marking indicating the top of the package.

11.1.4 Packaging procedure

The machine components should be placed on wooden pallets. Using lashing straps, the components should be secured against possible falls. Attach all technical documentation that must accompany the machine.

11.2 TRANSPORT

The following details should be considered for transport.

- ✓ External dimensions depending on the segment (width x height x depth), approx.:
- 1500: 1650 x 790 x 455 mm
- 2000: 2150 x 790 x 455 mm
- 2500: 2650 x 790 x 455 mm

- ✓ Total weight depending on the segment: approx.:
- 1500: 116 kg
- 2000: 140 kg
- 2500: 161 kg

11.3 DISMANTLING

- ✓ The decommissioning of the machine should be carried out by duly trained and authorised personnel.
- ✓ The dismantling of the machine should be done following safety, waste disposal and recycling guidelines.
- ✓ Protect the environment. Disposal of the machine must be carried out according to current regulations and guidelines on safety, noise prevention, environmental protection and accident prevention.

CE/UKCA DECLARATION OF CONFORMITY

The manufacturer:

Company: TECNOSPIRO MACHINE TOOL, S.L.U.
Address: P.I. dels Vinyats I, s/n nau 1
City: Sant Joan de Vilatorrada
Country: Spain - EU

Declares that this product:

Designation:	Lift
Model:	Electric Column
Serial Number:	Electric column 1500: from 001-005 Electric column 2000: from 001-003 Electric column 2500: from 001-002

Complies with Machinery Directive 2006/42/EU, the Electrical Equipment Directive intended for use with certain voltage limits (Low Voltage) 2014/35/EU, the Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment 2011/65/EU and the Electromagnetic Compatibility Directive 2014/30/EU certified by the laboratory TELPRO CE, Av. Ca n'Enric, 39, 08197 Sant Cugat (Valldoreix), Barcelona. In the process of adaption to Regulation 2023/1230.

Authorised for documentation:

Mr. Ramon Jou Parrot de TECNOSPIRO MACHINE TOOL, S.L.U.

Sant Joan de Vilatorrada, Friday, October 24, 2025.

Ramon Jou Parrot, Technical Director

3arm®

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