



RACKSTORAGE
SPECIALIST SUPPLIER OF STORAGE SOLUTIONS

Installation and Operating Instructions for Pull Out Racking System



Pull Out Racking

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1 General

Be sure to read the information in these instructions before setting up your Pull-out Racking System. Please follow these instructions meticulously during setup and in the future use of the Pull-out Racking System.

Store the documents so they are accessible to all operating personnel.

Pull-out Racks are manufactured in accordance with applicable health and safety guidelines.

1.1 Function

The rack allows you to store and remove Inventory through the manually extendable / electrically drive out (optional) shelf, to work safely and save considerable time and space.

1.2 Applications

The storage of materials in compliance with the load capacities only which have been specified on the drawings and shelf.

For the safe loading and unloading of Inventory we recommend using an overhead crane device.

Please keep in mind that you need extended space in front of the Pull – out shelf to ensure a safe operation manually.

1.3 Tools required for installation

Description

- 1 M6 Hex Head :- 10mm A/F Spanner
- 2 M12 Hex Head :- 19mm A/F Spanner
- 3 M16 Hex Head :- 24mm A/F Spanner
- 4 M12 Socket Button :- 10mm Hex Allen Key
- 5 M6 Socket Button :- 5mm Hex Allen Key
- 6 Posi Screw Head :- Posi Screw Driver
- 7 Masonry hand held drill machine with 12mm Dia x 250mm Lg Approx and 16mm Dia x 300mm Lg Approx Dia drill bits.
- 8 Torque wrench with M12 and M16 hex head fittings
- 9 Overhead Crane or ForkLift
- 10 Lifting straps
- 11 Double /Platform Ladder
- 12 Chalk Line / Chalk
- 13 Tape Measure
- 14 Hand Hammer

2 Assembly Instructions

These apply to Assembly Instructions for rack types 1,2, 3 and 4.

2.1 Setup requirements

We recommend at least 2 persons to assemble / erect the Pull-out Racking System.

2.2 Floor

The load-bearing capacity of the floor must be taken into account (e.g. concrete floor or material suitable for the drilling and insertion of heavy-duty anchors.). It is the customers responsibility to check the load bearing.

2.3 Evenness of floor

Floors must be even. Evenness according to the minimum requirement:

Up to 1m = 4mm

Up to 4m = 10mm

Up to 10m = 12mm

Up to 15m = 15mm

2.4 Tolerances

The base structures may not deviate from the vertical by more than 2mm per 1 m base structure height.

2.5 Determine the installation site.

Mark a line on the floor where the front of the racking is to be located and the start point for the starter bay.

2.6 Assemble

Assemble the starter bay (1st bay) with the front of the side frames (starting from the left hand end use 'Left Hand Upright' and the 'Intermediate Upright') on the mark. [See figure 1](#)

Do not fully tighten bolts until the rack is lined and levelled and drilled/bolted to the ground. [See figure 2](#)

- a) Bolt in place the top fixed shelf.
- b) Bolt the diagonal bracings across the rear of the side frames, then bolt the temporary spacer bars across the front and rear at the bottom.

2.7 Bolt List.

Top Shelf to Uprights..... M12 x 30 Hex Set + Washer + Nyloc Nut

Diagonal BracingsM12 x 45 Hex Set + Washer + Nyloc Nut

2.8 Line and level the bay.

Adjust the levelling bolts in the side frame bases (putting 2mm of shim under each base) until the bay is level in all directions, (including vertical).

Then pack under the foot plates with additional shims adjusting as and where necessary.

Check and adjust the diagonal lengths inside the rack until dimensions are equal and the rack is Square.

Check again the rack is level, adjust as necessary and re-check the diagonals for squareness. **See figure 3**

When the bay is square and level, drill through base plates and fix M12 anchor bolts in position. Check levels and squareness when tightening up the bolts with torque wrench. (see Anchoring – section 4)

Starting with the fixed top shelf, tighten all the bolts, periodically checking the bay is level and square.

Repeat procedure for add on bay using 'Intermediate' uprights until the final 'Right Hand' upright at the end of the rack.

3 Installing Shelves

3.1 Installing 100% shelves (Type 3 Rack)

Do not remove the banding straps from the shelves until they are positioned in the tracks

To install the shelf, the latch and front stop bolts must be removed.

Attach the first shelf to the hall crane and put in position immediately in front of the open rack.

Critical – front stop bolts must be reinstalled before lowering the shelf.

Carefully lower using the flanged wheels into the Guides and push rearwards. Slide the shelf into the rails. Tip the shelf up to gain access to fix in place the front bolt stops, then fix the latch in place. Check the operation of the shelf and that it runs freely. Repeat procedure for all shelves.

See figure 4

3.2 Installing 63% shelves (Type 1 and 2 Rack)

To install the shelf the latch and front stop bolts must be removed.

Attach the first shelf to the hall crane and put in position immediately in front of the open rack.

Critical – front stop bolts must be reinstalled before lowering the shelf.

Carefully lower using the flanged wheels into the Guides and push rearwards. Slide the shelf into the rails. Tip the shelf up to gain access to fix in place the front bolt stops, (* note) then fix the latch in place. Check the operation of the shelf and that it runs freely. Repeat procedure for all shelves.

See figure 5

***Note – Important - Allen Key stop bolt with laser cut washer. Washer must be in place when fixing back in under head of bolt.**

4 Anchoring

Note – before anchoring be sure all shelves roll freely and racking is square and level

Check level:

Use the spirit level and check the side and roof sections, as necessary, correct using shims.

Check that all of the shelves move freely.

Check all of the bolts.

See figure 6

Anchor:

Attach the racking to the floor with the heavy-duty anchors to the ground. Tighten the bolts to the corresponding torque. Note – See torque requirements / data sheets previously supplied.

Attachment to ground:

The perforations in the foot plates of the side frame serve as a drilling template for the heavy-duty anchor bolts. See figure 6

Sequence of operations:

- Drill the hole
 - Clean the hole
 - Use the hand hammer to drive the heavy-duty anchor bolts into the hole. Thereby, the washers must be flush with the upper surface of the foot plates.
 - Tighten to the required torque.
- If the torque required cannot be applied, the anchor bolt must be replaced.

Drill through the foot plate holes to the correct depth (never less than 75mm in the concrete).

Insert the anchor bolts, check shelves roll freely before tightening the anchor bolts.

5 Installing Roller Shutter door (Types 1,2,3 and 4 Racks).

Find the appropriate pair of guides for the rack. The end which has the hole 45mm from the end is the top. See figure 7

Fix the guides to the rack uprights using M6 x 50 Socket head screws with a 25mm O/Dia washer and M6 nyloc nut on the rear.

Line the tracks with the inside face of the rack upright and the top of the guide level with the top of the rack roof panel, tighten screws to fix in place.

Two people are required for the following procedure.

The appropriate Galvanized sheet roof panels are dropped in over each bay from the top.

Lift the curtain roll and feed the bottom rail into the guides. The convex side of the shutter lath should be on the outside face of the rack. **See figure 7**

Before the curtain is fully down slide the 'T' springs onto the top of the curtain. Carefully slide the curtain to the closed position.

Fit the Head Box into position, the pegs locating into the guides. Remove the canopy from the box by un-screwing the self tapping screws.

Attach the 'T' Springs to the barrel. **See figure 7**

Warning ! Great care to taken in the next stage.

Two people hold the barrel firmly and remove the retaining clips from both ends of the barrel. It is important to hold the barrel very tightly as it will spring abruptly once the clips are removed. Keeping hold of the bottom rail of the curtain to roll around the barrel slowly.

Re-fix the canopy top and fix the stops and handles supplied.

Pull the shutter down to the floor and turn the lock. If it does not locate into the pre-drilled holes in the guides they may have to be slightly elongated with a 13mm drill.

6 Fitting side and roof Cladding (Type 1,2,3 and 4 Racks)

Do not fix the side covers on Type 4 rack until the shelves are fitted and the electrical installation is complete. Fix the pressed powder coated Intermediate covers in place using M12 x 45 Lg Socket Button screws (M12 x 100 Lg for type 4 rack) complete with an external M12 (38mm O/Diameter) washer.

Repeat the procedure for Rear end panels and End panels .

See figure 8

7 Type 4 Rack - Installation of Electrical System

Assembly of type 4 racking is the same as type 1,2,3. All electrical assembly work is completed prior to factory installation.

Connect male and female plug and go points.

Wiring into the transformers to be completed by certified electrician.

See figure 9 and 10

8 General Commissioning

Commissioning must only be carried out when the racks are correctly assembled and the installation conditions applied.

A specialist** must carry out the pre-commissioning check.

The rack must only be operated by trained or instructed personnel. The operating company organizes the instruction.

** Note: A specialist is a person who is “informed about a topic” (practice-oriented in a topic, clearly defined subject). This is a person who is sufficiently competent in a topic (knowledge and proficiency), in order to be able to make appropriate decisions, factually or professionally, correctly and professionally. The person does not require a full overview of the complete associated specialist topic.

8.1 Identification

Type of identification is by way of name plate including serial number: [See figure 11](#)

8.2 Conversions, Modifications

Conversions and modifications on the Pull – Out racking must be agreed and approved by Rack Storage (UK) Limited otherwise the warranty and liability becomes invalid.

9 Operating instructions

9.1 Store Inventory from the Front in order to gain access to the shelves.

Use the handle to pull out the shelf to be loaded until the interlock automatically engages. This prevents inadvertent rolling back.

Use the hall crane to put the Inventory to be stored in position above the shelf and slowly lower. When placing inventory, make sure that the Inventory is stored in the centre (refer to the safety booklet).

When lowering, make sure that the Inventory is stored in the centre of the shelf or in a unified distributed load (UDL). UDL is clearly marked on the shelf.

Remove the slinging from inventory.

After loading, unlock the shelf and manually push in the shelf to the stop release button, shelf will automatically lock.

9.2 Store Inventory from the front using electric drive (optional)

To gain access to the shelves, press button with arrow until fully out. Releasing pressure will stop the shelf from moving. Continue with pressure, releasing the button when the shelf has reached the stop (the button is a dead stop button).

Make sure that no persons loiter in the danger zone (movement area of the shelf).

Use the hall crane to put the Inventory to be stored in position above the shelf and slowly lower.

When lowering, make sure that the Inventory is stored in the centre of the shelf or in a unified distributed load (UDL). UDL is clearly marked on the shelf.

Remove the slings from the inventory loaded.

After loading inventory, move the shelf in using the buttons (as above).

10 Safety Instructions

Observe the operating instructions.

Only one shelf at a time must be moved out per bay.

The specified load for a level, unified distributed load, must not be exceeded.

Suitable space must be provided for extending the shelf, unloading and loading.

The rack must only be operated above reaching height using a stepladder or platform ladder.

When operating the crane, observe your company regulations.

If there is an imminent hazard condition during operation, e.g. the anchoring is damaged by a forklift truck (or other), the rack must be immediately decommissioned.

Only use electrically-operated shelves when in a fully serviceable condition.

Malfunctions that impair the safety of persons or racking system must be immediately rectified by specialists.

Manipulation or modifications of the electrical installation is a risk to the safety of persons and, therefore, is forbidden.

No modifications must be carried out on the racking system.

Connection of the electrical installation must only be carried out by trained / certified specialists, in accordance with the applicable regulations.

Connection tasks must only be carried out when there is no power applied.

11 Hazard Warnings

When operating the racking system, no other persons must loiter in the work area. In particular, there is a risk of crushing in the area of the flanged wheels.

After each movement of the shelf, make sure the stop button is activated.

When using a crane, observe the corresponding hazard warnings.

Danger to life through electric shock or burns if the mains cable is defective or incorrect connection!

Danger to life! Never carry out maintenance tasks on the Rack when power is connected.

12 Electrical Data

Voltage: 120 V

Rating: 0,6 kW

Control voltage: 24V / 50 Hz

13 Faults and Malfunction correction

Malfunctions may be corrected only by an expert. Always correct faults while the shelf or rollout rack is without load.

Speak to your distribution supplier for guidance.

14 Maintenance

Perform inspection each year

Check all wheels are rotating

Check running tracks are clean

Check post wheel bolts are not loose

Check the latch plunger engages to keep the latch up when operated

Generally, check the rack frame bolts and holding down bolts are not loose

Check rack frame uprights have not been damaged, ie. by forklift

On 100% shelves, check the rear axle on the inner shelf is not loose

All threads and welded joints to be checked on a 3 to 6 month interval, depending on access cycles

Damaged parts must be reported to Rack Storage (UK) Limited immediately

Repairs on Pull – Out shelves not permitted for safety reasons

15 Customer service

Repairs on the rack are not permitted for safety reasons. For repairs and customer service contact:

E-Mail: sales@plastixs.com

Phone: 888-792-2223 / 508-842-1606

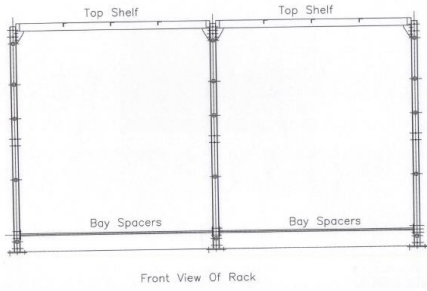
16 Warranty

The warranty period covers 12 months.

17 Liability

We do not assume any liability for damages caused by disregarding these instructions.

Figure 1 – Front View of Rack



Diagnol measurement of baseline

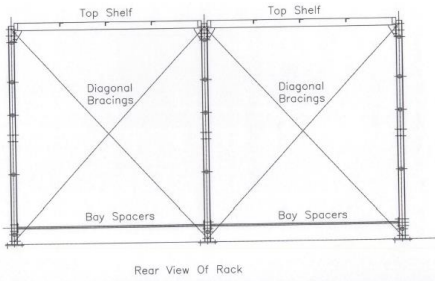


Baseline on chalk line



Bay temporary bracing

Figure 2 – Rear View of Rack



Check Level



Check Level

Figure 3



Frame upright



Check Level



Reinforcement Plate for 100% pull-out tracks. One plate inside of the channel, behind the track and post wheel

Figure 4



Stop bolt with laser cut washer.
Critical – must be in position
before lowering shelf

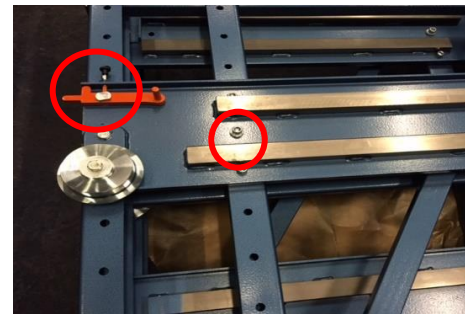
Figure 5



Locked setting

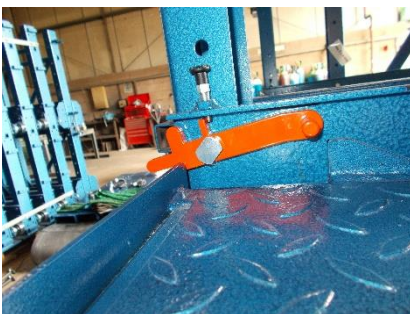


Loctite after setting



Latch

Stop Bolt

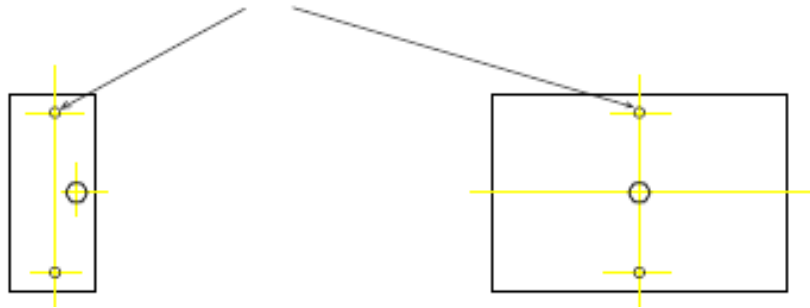


Unlocked setting

Figure 6

Side Frame Foot Print

Thru Anchor Bolt Holes, 4 No. Per Side Frame
 M12 (Drill 12mm) for Racks Type 1,2 & 3
 M16 (Drill 16mm) for Racks Type 4



Section Side Elevation

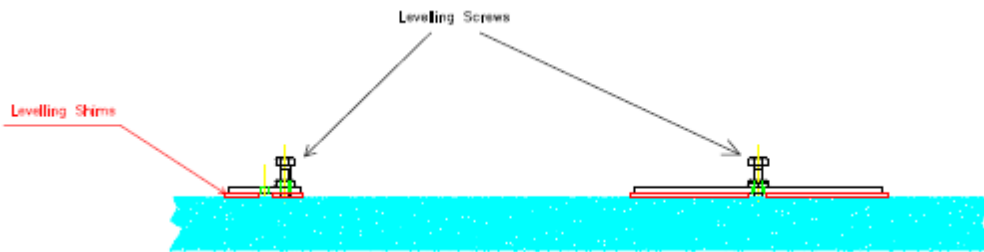


Figure 7



Bottom Measurement



Ensure guide is flush with frame



Shutter guards



Shutter top box



Roller Attachments
 Do not remove straps!



Shutter Installed

Figure 8



Top Panel and Shutter Guide



Corner Cover Panel



Panel Fixing



Corner / End Panel

Figure 9



Connection between bays



Ensure plug is firmly in place



Switch Connection



Figure 10

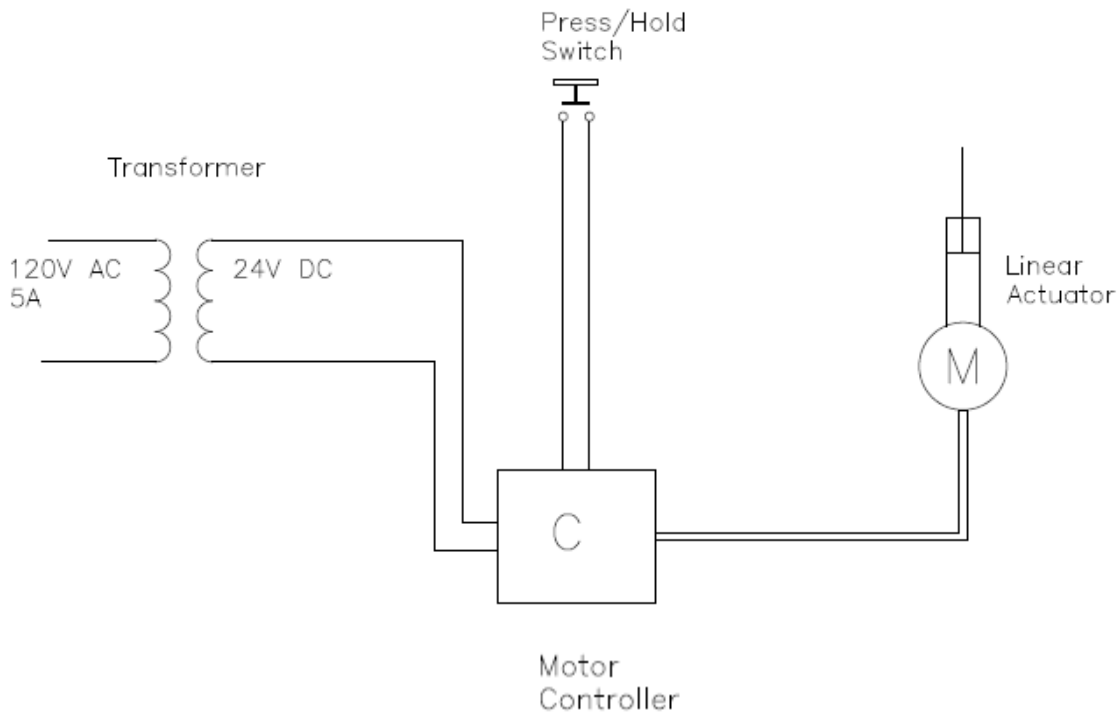


Figure 11



Example name plate

plastixs
A GLOBEUS Company