

Technical performance and principles of system design

Health and Safety

Overview

This section is a practical and safe guide to the manual lifting and handling of Gyproc products and systems. The pictures and advice given in this section should be taken as guidance in addition to the projects own health and safety requirements and industry best practices.

Introduction

Gyproc recognises the importance of Health and Safety at work. Working with a consultancy firm, international experts in lifting and handling, we have developed a series of 'Safe Systems of Work' for manual handling and lifting of our products.

The simple guidance in this section suggests appropriate methods for handling the full range of products available from Gyproc.

Legislation and Regulations

The details and guidance contained in this book and associated literature produced by Gyproc relate to applicable international legislative, regulatory requirements and standards current at the date of publication of this document. It is the responsibility of the user to ensure that these remain current prior to use.

Health and Safety

The products and systems included in this document have been developed for use in residential, commercial, educational, healthcare, hospitality, leisure and industrial buildings. Simple guidance on how to install these products and systems is given at the start of each relevant section. More detailed health and safety guidance is given in the Gyproc Technical and Safety Datasheets available to download from www.gyproc.ae

It is important to follow good site practice at all times and to ensure that appropriate safety precautions are taken, including the use of appropriate Personal Protective Equipment (PPE) and task suitable clothing when working with Gyproc products.

The following general notes on 'Safe Systems of Work' are offered for guidance.

Personal protection equipment (PPE)

- Always wear Personal Protective Equipment (PPE) as directed on site.
- Hard hat, high visibility vest and safety shoes are required at all times.
- Wear gloves and change them if they get wet.
- Always wear cut / puncture proof gloves when handling, carrying, cutting or fixing metal.
- Wear safety glasses and product recommended face mask when mixing powder products or applying to ceilings and when sanding.
- Wear safety glasses when snipping metal pieces.

- Do not continue to work if safety glasses become fogged due to condensation. Stop work and clean the glasses until the lenses are clear and de-fogged.

Installation

- Gyproc drylining systems are not designed to support body weight. Fixers must use a fit for purpose and properly inspected work platform.
- When cutting boards, power and hand tools should be used with care and in accordance with the manufacturers' recommendations. Appropriate PPE must be used.
- Keep sanding and other dust generation to a minimum. Maintain adequate ventilation and / or wear suitable protection.
- Power tools must be inspected prior to use and only operated by competent people who have been instructed and trained to use them safely.

Storage

- Store plasterboards, specialist boards, plasterboard accessories, metal sections and ceiling products in dry and covered conditions with adequate ventilation to disperse condensation.
- Gyproc plasterboards, Glasroc specialist boards and palletised materials should always be stored flat.
- Protect ready-mixed materials from freezing conditions, high temperatures and direct sunlight.
- Practice good housekeeping and stock rotation.
- Don't attempt to separate boards using the forks of a fork-lift truck.
- Don't use hoists or cranes without safety retaining ropes or slings.
- When handling insulation or cutting board products containing glass-fibre, wear suitable protection including appropriate face mask and gloves. Wear goggles when working overhead.

Manual lifting and handling

Plan Ahead Before You Lift

- Know what you are lifting and how you need to lift it.
- Assess the weight of the object before lifting.
- Only handle what you feel you can manage safely and comfortably.
- Determine whether or not it's safe for one person to lift the object on his / her own.
- Make sure the work area is flat, dry and clear of any debris.

Check Your Pathway

- Make sure the lift pathway is clear.
- Remove any tripping hazards or debris.
- Check for any wet or slick surfaces.

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When Lifting

- Turn your complete body moving your feet instead of twisting.
- Let your back find its natural curvature.
- Never lose control of the load.
- Whenever possible, use lift assists, forklift, dolly, cart, hand truck or hoist.
- Make sure you are trained before using the equipment.
- When lifting awkward or heavy loads, utilise a two-person lift.
- Make sure you lift at the same time and keep the load levelled.
- Always wear proper required PPE including safety shoes and gloves.

Manual Lifting Do's and Don'ts

DO's

- Know or test the object weight.
- Use ergonomic lift assists when possible.
- Plan the lift and clear your path.
- Get help for heavy or awkward loads.
- Keep the object in the power zone[^].
- Use a wide stance for balance.
- Use your legs to lift.
- Pivot your feet to avoid twisting.

[^] The power zone referenced in the text is related to the human body's strongest section. The body is strongest around the middle. The most powerful area (power zone) is between the shoulder and just above the knee.

DON'Ts

- Don't hold your breath.
- Don't bend or twist at the waist.
- Don't use a partial grip (1-2 fingers).
- Don't obstruct your vision when carrying.
- Don't jerk or lift quickly.
- Don't pinch your fingers or toes.
- Don't pull a load if you can push it.
- Don't forget to wear proper PPE.

Work methods

- Rest for 15 seconds, many times throughout the day. Some studies have shown that micro pauses (short breaks) reduce stress and can lead to an increase in productivity*.
- Rotate jobs; if one part of the job requires a lot of overhead work, switch for a while to an activity that uses different work motions.

* Musculoskeletal problems in bricklayers, carpenters and plasterers: literature review and results of site visits, Health and Safety Laboratory, Sheffield UK: Health and Safety Executive, 2001.

Handling and storage

In designing and installing systems incorporating Gyproc products, full consideration must be taken of the local legal requirements in the areas of:

- Manual Handling Regulations.
- Construction (Design and Management) Regulations.
- Control of Substances Hazardous to Health Regulations (COSHH).

Your attention is brought to the following publications which give approved guidance:

- Manual Handling Guidance on Regulations ISBN 071762823X.
- Managing Health and Safety in Construction. Construction (Design and Management) Regulations ISBN 9 80717662234.
- Designing for Health and Safety in Construction ISBN 0717608077.

Loading and unloading pallets

PPE: Hard hat, hi-vis vest, gloves and safety shoes required.

- Get as close to the object as possible.
- Use a wide stance with one foot forward and to the side of the object for good balance.
- Keep your back straight, push your buttocks out, and use your legs and hips to lower yourself down to the object.
- Slide the object as close to you as possible.
- Put the hand (same side of your body as the forward foot) on the side of the object furthest from you.
- Use this basic lifting technique for small objects when you can straddle the load and use a wide stance.
- Put the other hand on the side of the object closest to you.
- Both hands should be on opposite corners.
- Grasp the object firmly with both hands.
- Prepare for the lift, tighten your core muscles, look forward and upward, keep a straight and strong back.
- Lift slowly and follow your head and shoulders.
- Hold the load close to your body.
- Lift by extending your legs with your back straight, and breathe out as you lift.
- **Do not lift with feet in line or with load in front of the front foot.**



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Mixing of bagged products

PPE: Mask, eye protection, hard hat, hi-vis and safety shoes required.

Emptying bags into a mixer

- Always place one foot down by the side of the mixing container.
- Unlock the knees if necessary
- **Do not empty bags with feet in line.**



When mixing

- Keep the foot to the side of the mixing container.
- Unlock the knees if necessary.
- Maintain a balanced position.
- **Do not work with feet in line.**



Picking from mid-level

PPE: Hard hat, hi-vis vest, gloves and safety shoes required.

- Place one foot forward.
- Take a firm grip of the load.
- Pull the load to a point of pivot (using the legs if necessary).
- Pivot against the stack.
- Keep the load close.
- **Do not twist.**
- **Do not pick with feet in line.**



Handling buckets

PPE: Hard hat, gloves, hi-vis vest and safety shoes required.

- Always place one foot alongside the bucket before lifting, or pivot the bucket towards you before lifting.
- Take a firm grip with both hands.
- If heavy, you may need to tilt and take a grip of the base and the top of the bucket.
- Start the lift with the legs.
- Unlock the knees for low level work.



- Always turn by moving the feet.
- If taking two buckets, always carry in a balanced manner.
- Only handle what you can manage.
- **Do not carry heavy objects on one side.**
- **Do not twist.**

Handling lengths of metal

PPE: Gloves, hard hat, hi-vis vest and safety shoes required.

- Always approach the lengths of metal from one end.
- Place one foot forward.
- Unlock the knees for low level work.
- Take a firm grip.
- Lift using the legs to start the movement.
- **Do not pick from the middle of the stack.**
- Work your way to the middle. Pivot the stack and carry in a balanced manner.



OR

- Place over the shoulder.
- Work your way to the middle (point of balance).
- Unlock the knees to rest the stack against the shoulder.
- Allow the stack to pivot against the shoulder as you stand up.
- Only carry over the shoulder if you can remain upright.
- Be aware of your surroundings when carrying lengths of metal in this way.
- **Do not lean.**



If removing from racks.

PPE: Gloves, hard hat and safety shoes required.

- Place one foot forward.
- Pull metal length out of rack, turn and walk section forward.
- Drive with the legs to bring the load to one end.
- Work your way to the middle and carry in a balanced manner.
- Always communicate during the lifts and carrying.

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Handling boards

PPE: Hard hat, gloves, hi-vis vest and safety shoes required.

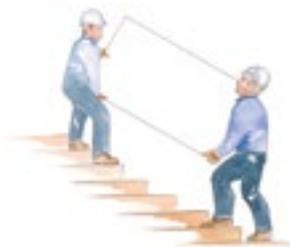
- Pull the board in towards yourself.
- Unlock the knees for low level work.
- Lift by using the legs.
- Try using handles for carrying plasterboard.
- Improve your grip to help make the lift less awkward.
- Tools are available to reduce the time you spend in overhead work, to help hold boards in place for fixing.
- Carry the board in a balanced manner (for large boards, you can support the board on the top of the chest / shoulder).
- Only lift what you feel you can manage.
- If necessary, seek assistance.
- When stacking boards, position boards sideways slightly in front of you, so you do not have to reach over your head or twist your body to lift them.
- Position panels to lean flat against a wall and do not wobble or slide.
- Push and slide panels along their edge or get assistance from a co-worker.
- Use team lifting where appropriate.
- **Do not carry heavy objects on one side.**



Carrying board up / down stairs

PPE: Hard hat, gloves, hi-vis vest and safety shoes required.

- Whether going up or down stairs, place one foot forward then, bring both feet together on each step.
- Keep the boards in a balanced manner.
- Place both feet on each step before moving off to improve control and balance throughout the lift.
- Work together and in time.
- Stop wherever necessary (if steps are in poor order, or have a deeper drop, you may need to place the load down first).
- Only lift what you feel you can manage.



Fixing walls

PPE: Eye protection, gloves, hard hat, hi-vis vest and safety shoes required.

- Operate in a balanced manner.
- Always keep one foot forward.
- Unlock the knees for low level work.
- Always work in front of the body.
- **Do not over-reach or stretch to the sides or above the head**



Lifting plasterboards into place (including ceilings) – Team Lift

PPE: Eye protection, hard hat, gloves, hi-vis vest and safety shoes required.

A well-executed team lift can help safely move loads without the risk of injury.

Know the Rules

- Before lifting, ensure that the back and legs are warmed up to improve performance and to reduce risk of injury.
- Use ergonomic lift assists whenever possible.
- Know and follow the work rules for loads that require team lifting.
- Keep the object in the power zone
- Use a wide stance for balance.
- Use your legs to lift.
- Pivot your feet to avoid twisting.



Get help

- Get help when work instructions and rules call for team lifting.
- Team members must always ask for help when load weight exceeds recommended limits (maximum 25 kg per person).

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Lifting Leader

- Determine a lifting Team Leader, preferably, the person who requested the help.
- The Team Leader should make sure that there's enough space for movements, good footing and no obstructions in the planned path of the lifting task.
- The Team Leader should pre-determine the number of steps in the lifting task required to safely move the load.
- The Team Leader should clearly communicate, before the start of the lifting task, the method and steps of the lifting task to the other team member(s).
- The Team Leader calls the signals to ensure proper coordination of the lift.
- The Team Leader should guide the team to move the load slowly and evenly without sudden movements or sudden starts and stops.

Executing the Lift

- The weight must remain levelled and evenly distributed.
- Team members should be especially careful on any incline / decline.
- Team should avoid walking backward during the lift whenever that is possible.
- An additional team member should guide the move if backward carrying cannot be avoided.

Fixing ceilings

PPE: Eye protection, hard hat, gloves and safety shoes required.

- Always work in a balanced position.
- Operate with one foot forward.
- Keep the body upright.
- Always use appropriate platforms where necessary.
- Always use inspected and fit for purpose tools.
- **Do not over-reach.**



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