

Stedox® Support / Support Short Operating Instructions



Read this instruction before using or mounting Stedox® wall support!



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Annex 1: Spare Parts Catalogue Stedox Support

1. Stedox®

Stedox® is a Finnish company, that develops and sells products targeted at the construction sector. Stedox® Support (hereinafter "mounting support") is used to mount, install and position prefabricated wall elements as well as concrete- and wooden pillars.

2. General

This operating instruction contains important information on how Stedox® Support safely can be mounted and used. It is therefore crucial that the instructions are read prior to use of the mounting support. The operating instructions are always to be held at hand on the construction site. Stedox®-products are intended to be used by qualified professionals.

Stedox® reserves the right to make technical changes. So work can be performed safely with current legislation, regulations and other safety guidelines. As a contractor you are to ensure that the building and its construction is stable throughout the construction phase. This also includes the erection, dismantling and handling of the mounting supports. The building in its entirety is to be inspected after both erection and dismantling of the mounting supports.

3. Safety and operating instructions

3.1 Symbols

This symbol is used in conjunction with the instructions to place special attention to matters essential from a safety point of view:



Always obey the safety instructions to avoid personal injuries and property damage.

3.2 Risk assessment

As a contractor you are always to undertake a risk assessment, that covers the risks associated with the work to be performed. Always work in accordance with the instructions produced from the risk assessment.

3.3 Mounting instructions

As a contractor you are always responsible for making the necessary documentation available, regarding the use of the mounting supports. Appropriate documentation is this operating instruction and for the job suitable drawings and instructions.



Always use at least two mounting supports per element!



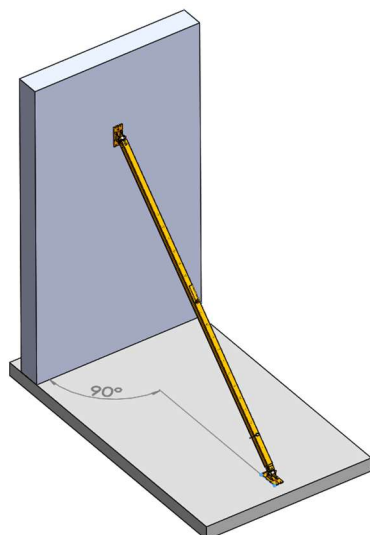
The mounting supports attachment point to the element is to be placed above the center of gravity of the element! For high elements where this is not possible, it is crucial to support them in other ways so the element cannot under any circumstance topple over.



The locking pin must be in place before the mounting support is to be loaded! The mounting support may not be used without a locking pin!



Always mount the mounting support perpendicular to the supported element!



3.4 Use

The mounting supports are intended for professional use. They may only be used by professionals under the supervision of qualified persons. The operating instructions are to be seen as a part of the mounting support. Additions, exceptions and deviations in the use of the mounting supports is a potential risk. E.g. the use of other supports and methods. Such procedures must always be planned accordingly appropriately. Notwithstanding, you as a contractor are responsible for the necessary supplementary planning and documentation that may be needed.



As a construction engineer you must always ensure that permissible forces are not exceeded, and where and how the mounting supports can be securely fastened.

3.5 Information on the construction site

As a contractor you are to ensure the operating instructions are always available on the construction site. Personnel are to be informed about the contents of the instructions and where they are stored, before mounting or using the mounting supports.

3.6 Illustrations

The operating instructions depicts parts of a construction under assembly and are henceforth not complete from an occupational safety point of view. You must always follow given safety instructions even if they are not depicted herein.

3.7 Checking the mounting support

Check the mounting support before each use. Stedox® Support may not be modified or changed in any way. A broken or damaged mounting support may not be used.

Checkpoints:

- Permanent deformations, e.g.:
 - o Stretched holes
 - o Dents
 - o The straightness of tubes and footplates
- Condition of the threads
- Missing or loose parts
- Locking pin, undamaged and straight
- Tubes move without resistance
- Stop- and maxload decals

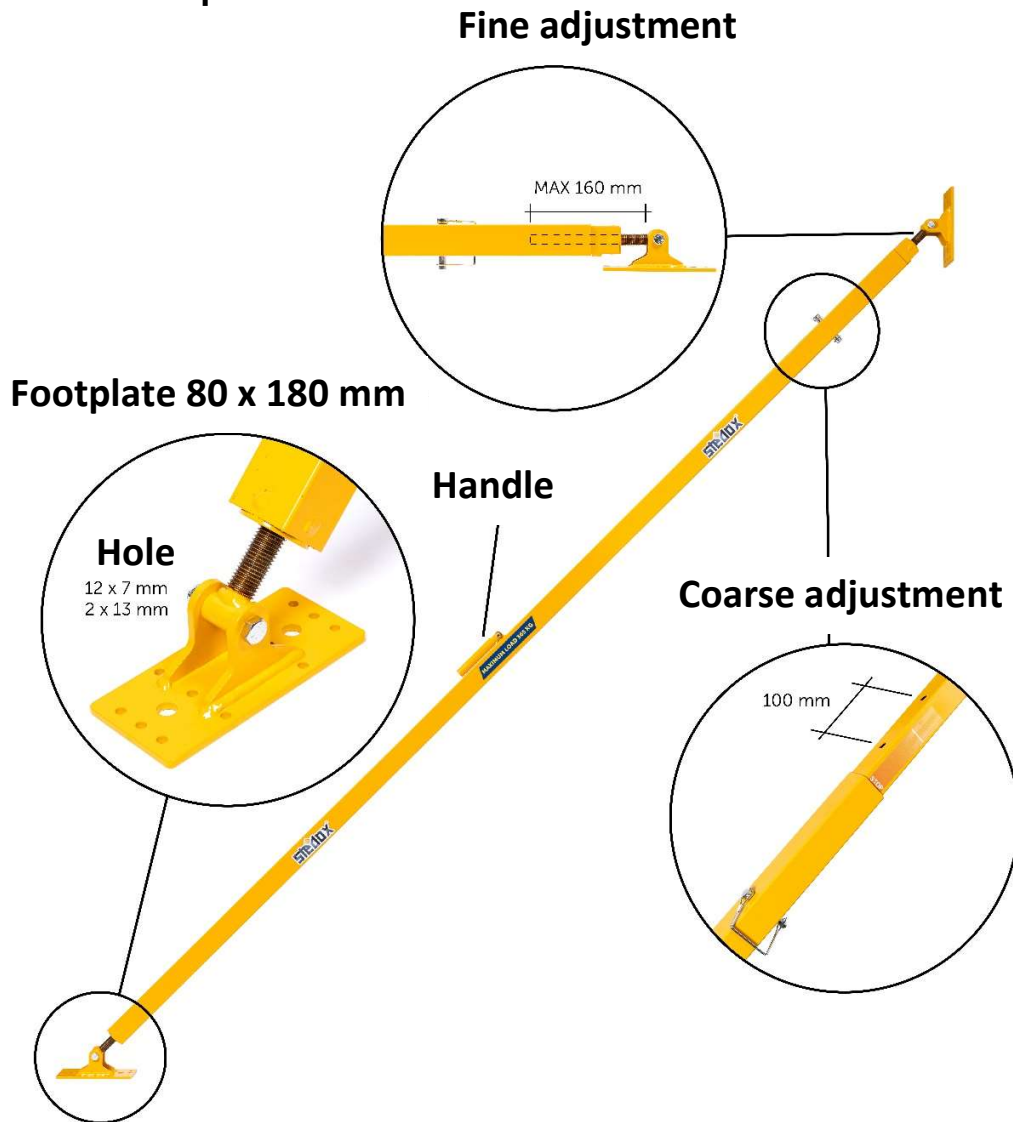
If required, consult the spare parts catalogue annexed to this operating instruction. Contact customer service if you need support, spares or advice.

If the product is damaged or broken, stop using it immediately. Repair, replace or dispose of it immediately before resuming work.

3.8 Use of other products

The use of other manufacturers products is always associated with a certain risk. The risk assessment is to evaluate each case individually. The situation may require several and/or separate instructions to be compiled.

4. Technical specification



Stedox® Support

- Minimum length: 3000 mm
- Maximum length: 5000 mm
- Weight: 16 kg

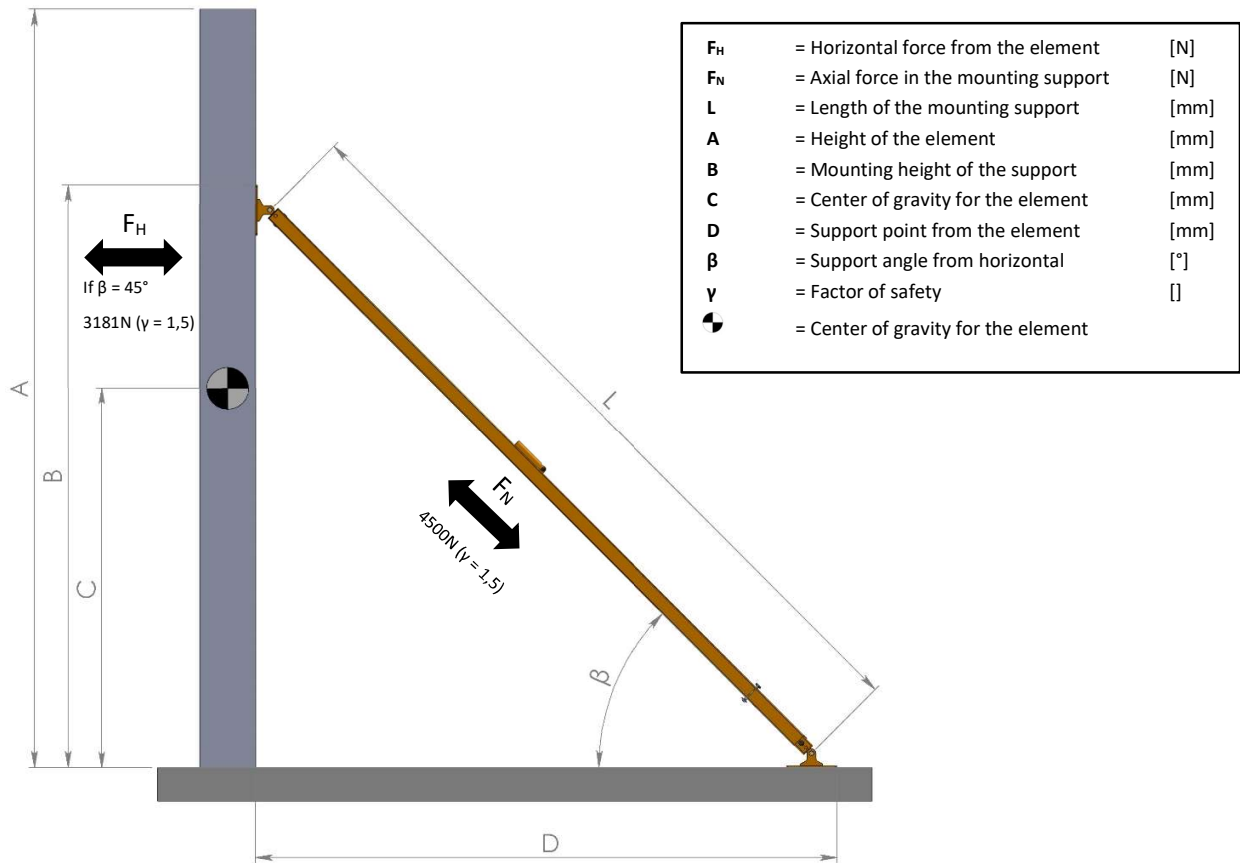
Stedox® Support Short

- Minimum length: 1900 mm
- Maximum length: 3000 mm
- Weight: 12 kg



The mounting support is always to be mounted as high as possible on the element to be supported.

5. Loading



NOTE! The force F_N can be tensile or compressive.

| Angle β [°] | $\cos(\beta)$ | With safety factor $\gamma = 1,5$ | |
|-------------------------|---------------|--------------------------------------|---|
| | | Supporting force F_H [N] | Axial force in the mounting support F_N [N] |
| 30 | 0,866 | 3897 | 4500 |
| 35 | 0,819 | 3685 | |
| 40 | 0,766 | 3447 | |
| 45 | 0,707 | 3181 | |
| 50 | 0,643 | 2892 | |
| 55 | 0,574 | 2581 | |
| 60 | 0,500 | 2250 | |
| 65 | 0,423 | 1901 | |
| 70 | 0,342 | 1539 | |
| 75 | 0,259 | 1164 | |

The mounting supports angle β from horizontal, must be: $30^\circ \leq \beta \leq 75^\circ$

The mounting supports mounting height B must be above the elements center of gravity C: $B \geq C$

Recommended that the center of gravity C is at most 2/3 of the mounting height B: $B \geq 1,5C$

The axial load of the support is always to be less than the maximum permissible force including safety factor: $F_N \leq \pm 4500 \text{ N}$

If the element is homogenous the height of its center of gravity can be calculated: $C = A / 2$

The angle from horizontal of the mounting support can be calculated from:

$$\beta = \arctan(B / D)$$

The maximum permissible force in horizontal direction is:

$$F_H = F_N \cdot \cos(\beta)$$



The loads induced on the mounting support originates from the wind load and the skewness of the element. The construction engineer is always to ascertain that permissible forces are not exceeded and where and how the mounting supports are to be fastened safely.

6. Note

When the threads in both ends bottom out, extension of the support is to be made through moving the locking pin to the next hole. Before the mounting support can be used, make sure the threads at both ends are equally extended, so the mounting supports maximum length can be achieved without damaging it. Both threads can be screwed outwards a maximum of 160mm each.



Never move the locking pin without first supporting the element by crane.

7. Service and spare parts

Only use original spare parts. Only qualified persons may maintain and service Stedox® Support. Compatible spare parts can be found from the spare parts catalogue annexed herein.

Keep the product in good condition by washing and lubricating the threads if they are dirty, rusty or the mounting support has been subjected to moisture. It is recommended that the threads are lubricated and threaded through at least twice per year.

Check the product as specified under chapter 3.7 Checking the mounting support.



Only use original spare parts!

8. Handling

To minimize weight, the wall thickness in the product is thin. It can therefore be dented if handled carelessly.



A broken or damaged product must be replaced or repaired immediately.

9. Storage

Maximum longevity is achieved by storing the product clean and protected from moisture. If the mounting support is subjected to moisture it is reasonable to store it standing so moisture can be drained.

During prolonged storage the product is to be protected from corrosion.

10. In case of an accident

In the event of an accident when using Stedox® Support, do the following in this order:

- Prevent personal injuries
- Prevent property damage
- Inform the person in charge on site