

#### The Evacuator® minimum and basic installation/mounting requirements (the Evacuator® Unit/Bowden Cables/supporting Brackets):

1. The mounting structure where the Evacuator<sup>®</sup> (including casing) is going to be mounted on must at least be in compliance with the Eurocode 3: Design for steel structures/constructions, Class 3, Safety factor 1.65.

#### This means:

# INDOOR FLOOR-installation with INDOOR casing,

#### Floor mounting:

Max. descent load 564 Kg x Safety factor 1.65 = 564 x 1.65 = 930.60 Kg without failure and without defects. **Conclusion:** An Indoor floor-installation the mounting structure (including installation materials, nuts/bots/additional brackets) must at least be able to withstand a minimum force of 930.60 Kg without failure and without defects.

# INDOOR WALL-installation with INDOOR casing,

#### Wall mounting (Free from ground level/floor):

Total weight of the Evacuator<sup>®</sup> + weight of the casing = Approx. 140 Kg + Max. descent load 564 Kg x Safety factor  $1.65 = 140 + 564 \times 1.65 = 1161.60$  Kg without failure and without defects.

**Conclusion:** An Indoor wall-installation the mounting structure (including installation materials, nuts/bots/additional brackets) must at least be able to withstand a minimum force of 1161.60 Kg without failure and without defects.

# OUTDOOR FLOOR-installation with OUTDOOR casing,

# Floor mounting:

Max. descent load 564 Kg x Safety factor 1.65 = 564 x 1.65 = 930.60 Kg without failure and without defects. **Conclusion:** An outdoor floor-mounting the mounting structure (including installation materials, nuts/bots/additional brackets) must at least be able to withstand a minimum force of 930.60 Kg without failure and without defects.

# OUTDOOR WALL-installation with OUTDOOR casing,

# Wall mounting (free from ground level/floor):

Total weight of the Evacuator<sup>®</sup> + weight of the casing = Approx. 200 Kg + Max. descent load 564 Kg x Safety factor  $1.65 = 200 + 564 \times 1.65 = 1260.60$  Kg without failure and without defects.

**Conclusion**: An outdoor wall-mounting the mounting structure (including installation materials, nuts/bots/additional brackets) must at least be able to withstand a minimum force of 1260.60 Kg without failure and without defects.

The substructure(s) that is (are) supporting the Bowden cable(s) must be able to withstand at least a minimum load of 930.60 Kg per Bowden cable without failure and without permanent deformation.
In case the substructure is supporting 2 Bowden cables at the same time, with a max descent load of 282 kg on each Bowden cable, than the substructure must be able to withstand at least a minimum load of 1861.2 Kg: Calculation: 2 Bowden cables X 282 kg/Bowden cable x 2 (pulley effect) = 1128 Kg X 1.65 (safety factor) = 1861.2 Kg.

Depending on the design and position of the substructure(s) a safety factor of 1.5 can be sufficient, this must be verified by a structural engineer and approved by Evacuator worldwide BV or an official partner of Evacuator Worldwide BV.

All substructures that are supporting the Bowden cables must have a minimum radius of 5 mm.

- 3. The length and routing of the Bowden cables is depending per type of installation and must be determined by a Evacuator® Worldwide BV official authorized installation person/partner/company.
- 4. Indoor Installation: All vital installation components/parts must at least be corrosion resistant up to level C4 and must be fire/flame and heat resistant.



- 5. Outdoor installation: All vital installation components/parts must at least be corrosion resistant up to level C5 and must be fire/flame and heat resistant.
- 6. Transportation and lifting: For transportation and lifting of the Evacuator<sup>®</sup> units you must use the official lifting points at all times, the official lifting-points are displayed on each unit, the lifting-symbols are shown on this picture.

These are the minimum and basic installation/mounting requirements, for all other type of installations first contact an official installation partner that is officially authorized by Evacuator Worldwide BV. Official partners are mentioned on our official company website www.evacuator.com or contact info@evacuator.com















#### The Evacuator® Minimum Inspection and Maintenance Requirements In Case of Industrial Use/Installation:

- 1. At least once per year a visual inspection (law PUWER/LOLER) on the Evacuator® descent device
- (and all other Evacuator® installation components) must be done by Suitably Qualified and Experienced Persons (SQEP).
- 2. The Evacuator<sup>®</sup> must be visually checked on: For example, but not limited to: damages/corrosion/incorrect installation/all other correct installation specifications/correct condition of the additional safety equipment/correct condition of all seals and correct condition of all instruction materials.
- 3. All bolts and nuts/connectors on the interface between the Evacuator® device and the nacelle structure beam must be checked at least once per year.
- 4. At least once per year the Evacuator® must be checked on potential internal damages. This must be checked by performing the rotation/friction test, the inner axle must be rotated at least 5 times with less than 15Nm, the torque wrench must not apply at 15Nm.
- 5. Only use an official and original Evacuator® inspection tool and calibrated torque wrench with 12 mm adaptor for the annual friction/rotation test.
- 6. All textile components/parts and the VpCI (Vapor phase Corrosion inhibitor) must be exchanged in case of expired lifespan. (Vapor phase Corrosion inhibitor, type VpCI-111 emitter NSN 6850-01-408-9025, www.cortecvci.com)
- Once a year, apply a transparent layer of a corrosion protective substance called High Temp Wax Dry to all steel components of the Evacuator device, including the steel installation components, interface and the inside and outside surfaces of the storage box. This provides additional protection against corrosion. Refer to the specifications of the substance at Evacuator WorldWide BV.
  - 2. Use an ultraviolet flashlight to verify that all components are properly covered with the corrosion protective substance. The correctly covered parts will emit a bright light, while the parts that are not adequately covered will not.
  - 3. Apply the protective layers using a hand-pressure canister that can be refilled with the corrosion protective substance. Only use gas-filled pressure cans with the same substance in case the environment temprature is below 15 degrees celcius.
- 8. If the original Evacuator-OEM-Indicators are used to demonstrate that a specific Evacuator component has not been touched, used, changed, damaged, or opened in the past 12 months since its last inspection interval, it confirms that the component is in perfect condition and can be safely used for the next 12 months.

# Example of Yearly Inspection:

The following are the minimum requirements for the annual inspection of the Evacuator descent system and its installation components, including interfaces between the Evacuator system and the installation structure, the installation structure itself, and any additional personal protective equipment (PPE) after 12 months from the original installation date of the Evacuator system:

# First Year:

- 1. Perform a visual inspection of all visual components to ensure they are in perfect and safe condition.
- 2. Inspect all indicators to verify that they indicate and prove that no components have been touched, used, changed, damaged, or opened during the 12 months since the last inspection interval.

# Second Year:

1. Conduct all inspection procedures as described in points 1, 2, 3, 4, 5, 6, 7 and 8 of this manual.

This inspection process can be repeated throughout the entire service life or lifespan of the Evacuator system.





Friction/rotation testing tool

Calibrated torque wrench with 12 mm adaptor

VpCI, Vapor phase Corrosion inhibitor