

# POWERFAN

FREE FALL DEVICE

## INSTALLATION SPECIFICATIONS

### FORCES INVOLVED

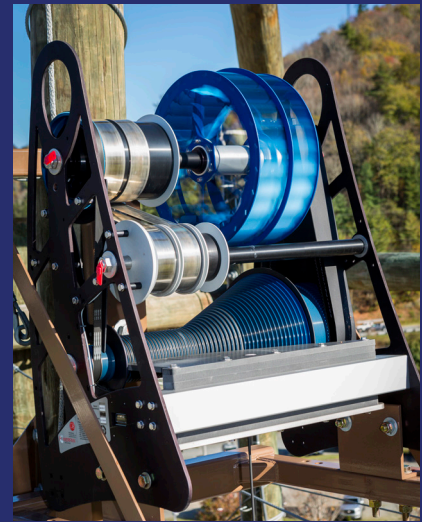
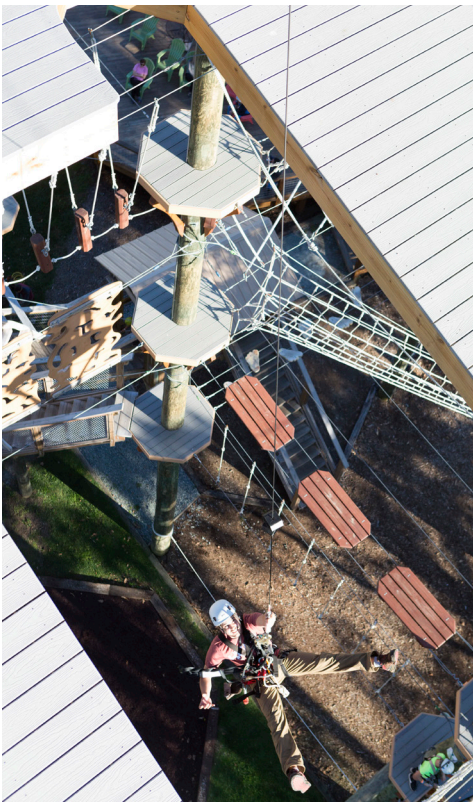
#### ▶ PF 13m

During normal use the maximum force applied to the supporting structure is the force generated by the weight of the device including any connecting hardware, plus a force of **1.68 kN**. This force of 1.68 kN is calculated based on the heaviest allowable participant 264 lbs (120 kg).\*

#### ▶ PF 20m & PF 30m

During normal use the maximum force applied to the supporting structure is the force generated by the weight of the device including any connecting hardware, plus a force of **1.97 kN**. This force of 1.97 kN is calculated based on the heaviest allowable participant 264 lbs (120 kg).\*

**\*Note:** There is the possibility, however remote, that some external circumstance could cause the Powerfan to "block". For example, a tree branch falling into the fan. In such a case the forces on the Powerfan would be limited to a maximum of **6 kN** by the use of a shock absorbing lanyard (supplied with the Powerfan).



### PF 13 SPECS

- Weight: 39 kg (85.98 lbs)
- Width: 56.8 cm (22 3/8 in)
- Depth: 44 cm (17 3/8 in)
- Height: 83 cm (32 5/8 in)

### PF 20 & PF 30 SPECS

- Weight: 70 kg (154.32 lbs)
- Width: 78 cm (30 7/8 in)
- Depth: 60.5 cm (23 7/8 in)
- Height: 78.4 cm (30 7/8 in)

# POWERFAN

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## ATTACHMENT

It is very important that the device be correctly positioned relative to the stepping-off platform, the supporting structure, and the ground:

- The Powerfan must be positioned so that the bottom guide plate is level, and not at an angle.
- The Powerfan must face the correct direction relative to the stepping-off platform, with the shafts of the device parallel to the front edge of the stepping-off platform and the rope uncoiling behind the shaft (viewed from the stepping-off platform).
- The Powerfan must be positioned so that the vertical distance from the stepping-off platform to the underside of the bottom guide plate is at least 8ft 2in (2.5m).
- The horizontal distance between the Drope and the stepping-off platform should be 3ft 4in (1.05m).
- The Powerfan must be positioned so that there are no structures or obstructions within 9ft 9in (3m) of the descent path of the participant.

### Rigid Attachment

The device can be mounted on top of a rigid structure, such as a pair of steel beams. The holes in the side plates of the Powerfan are sized for **16mm bolts**.

### Dynamic Attachment

The Powerfan can be suspended below a structure that can be either rigid or dynamic, such as wire rope. There are two oval holes at the top of each side plate for a suspended attachment.

It is particularly important when suspending the Powerfan, for example from wire rope, that the spacing of the attachment points is not be able to be changed. This would introduce a compressive force (if the attachment points move closer together) or a force pulling on the side plates (if they move apart). It may therefore be necessary to use a spacer bar in between the Powerfan and the attachment points if, for example, the attachment points on a pair of trees cannot be spaced at the correct distance.



## PF 13 ATTACHMENT DIMENSIONS

- Top of fan to top of oval hole: 54 mm (12 3/16 in)

- Top of side plate to top of oval hole: 35 mm (1 5/16 in)

- Height of oval hole:  $\pm$  129 mm (5 1/16 in)

- Width of oval hole:  $\pm$  79 mm (3 1/8 in)

- Thickness of side plate: 8 mm (5/16 in)

## PF 20 & PF 30 ATTACHMENT DIMENSIONS

- Top of side plate to top of oval hole: 40 mm (1 1/2 in)

- Height of oval hole:  $\pm$  163 mm (6 7/16 in)

- Width of oval hole:  $\pm$  115 mm (4 1/2 in)

- Thickness of side plate: 8 mm (5/16 in)