Personal Fire Escape Requirements

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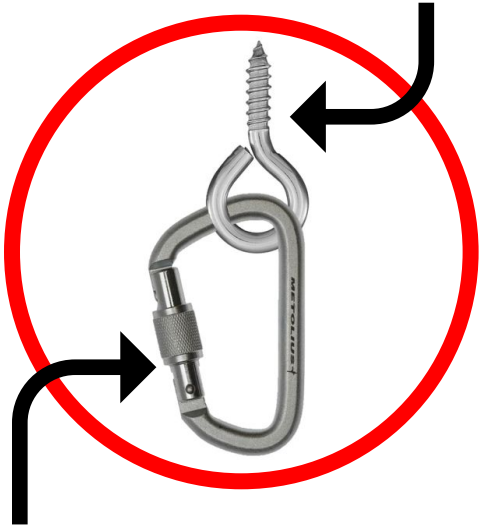
The Fire Escape System

Adjustable belt

Pre-installed hook



Clasp

There’s a fire!!

But wait, I have a fire escape system!

Requirement 1:

Clear markings by the pre-installed hook and on the fire escape system box.

I have to bring the system to the nearest window!

Requirement 2:

The system must be portable and lightweight.

But how do I use this??

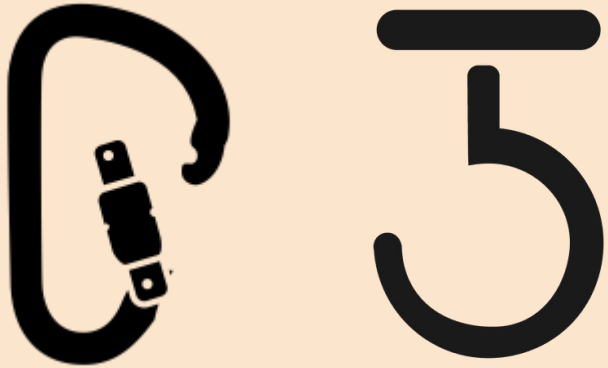
Requirement 3:

Short, clear instructions.

I have to hook this to something sturdy

Requirement 4:

Pre-installed hook by the window and easy-to-use but sturdy clasp.



Now I have to tie myself.
Will I even fit?

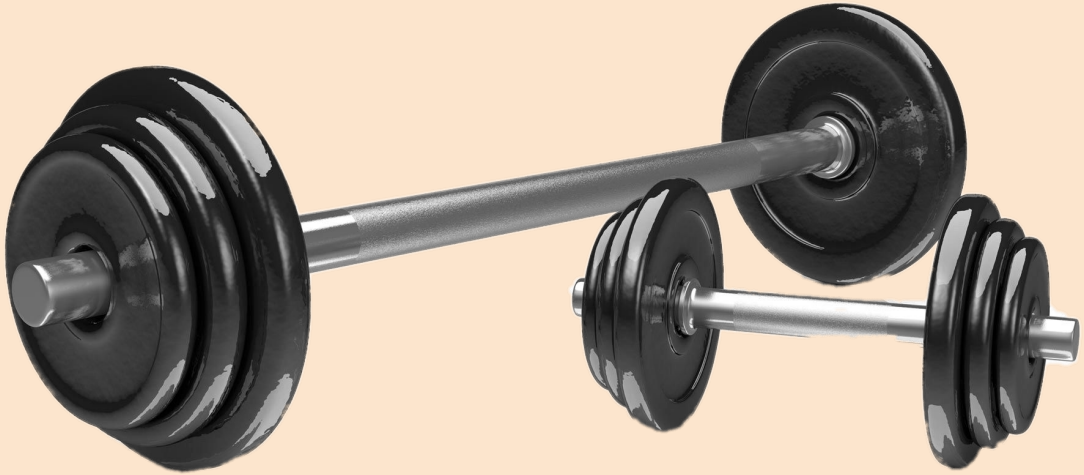
Requirement 5:

Adjustable to different body sizes.

Can it withstand my weight though?

Requirement 6:

Can handle different weights (~ 250 lbs)



I have to get outside the window!

Requirement 7:

Cable must be flexible enough to be dragged and dropped outside the window.

But what if I end up in a free fall?

Requirement 8:

Cable spools out at a constant and tolerable speed. (3 ft/s)

There’s an AC sticking out below me!

Requirement 9:

Must be slow enough to let the user avoid obstructions or not have major injuries in the case of hitting the obstruction.

Time to jump!
But I live on the 5th floor...

Requirement 10:

Cable will have enough length to reach the bottom of the building. (5 stories / 70 ft)

I’m going down! But wait, the fire spread to my window!!

Requirement 11:

Fire-proof system (box, hook, cable)

I’m alive!

But that could’ve been better

Additional considerations

- Reusable
- Able to be used on windows that don’t have a pre-installed hook
- Manual brake in case of emergency
- Cheap

Requirements

1) Clear markings by the pre-installed hook and on the fire escape system box
2) The system must be portable and lightweight
3) Short, clear instructions
4) Pre-installed hook by the window & easy-to-use but sturdy clasp
5) Adjustable to different body sizes
6) Can handle different weights
7) Cable must be flexible enough to be dragged and dropped outside the window
8) Cable spools out at a constant and tolerable speed
9) Must be slow enough to let the user avoid obstructions or not have major injuries in the case of hitting the obstruction
10) Cable will have enough length to reach the bottom of the building
11) Fire proof system (box, hook, cable)