

How to Calculate a Project

Destratification

The calculations for destratification are driven by the cubic feet, or volume, of air within the area.

Calculate Volume (all in feet or fractions of feet):

$$\text{Length} \times \text{Width} \times \text{Average Ceiling Height} = \text{Volume in cubic feet}$$

Next, determine which fan to use. ZOO Fans are currently manufactured in two (2) sizes:

- H30: **670 CFM** – applications up to 30'
- H60: **1200 CFM** – applications up to 65'

Volume of the space in cubic feet \div **60** (minutes in an hour) \div **CFM** (of the fan selected) =
The number of fans selected that are required to achieve one (1) air turn in one (1) hour

$$\text{Volume} \div 60 \div \text{CFM} = \text{The number of fans to install}$$

FOR EXAMPLE, a big box store with a 22.5' ceiling that's 250' wide and 175' deep has the following volume:

$$175' \times 250' \times 22.5' = 984,375 \text{ ft}^3$$

Using the H30 at 670 CFM:

$$984,375 \div 60 \div 670 = 24.5$$

Rounded up, the requirement is for 25-H30 Fans. When you go to lay them out on the blueprints if you find that specifying 24 or 26 fans makes more sense, then go that route—it will work, too.

Key Information: Every ZOO Fan is variable-speed controllable and can be angled easily, if need be, to direct the flow. This allows for ease of installation and control across a broad range of applications. Simply by adjusting the speed of the fan, the two sizes and models shown above effectively cover ceiling heights from 10' to 65'. For most jobs, use the H30 for ceiling heights up to 30' and the H60 for anything higher than 30'.

Other Considerations: There are some instances where you may consider the H60 for lower ceiling heights. For example, with a ceiling height of 28' in a warehouse - not constantly occupied - a racking system and overhead truck doors, you would select the H60 to have the option of delivering a higher volume of air at floor level. You would also select the H60 for applications where you want to use the fans for spot cooling (see "Spot Cooling").



In a more constantly occupied space where your ceiling height is 30' or less, and higher air speeds might cause discomfort for the occupants, it's preferable to use the H30. Examples would be a grocery store or an auto dealer. This would create less draft and still destratify the space effectively. If your particular application is "on the margin," call us up and tell us about the job—we'd be happy to help.



Contact your Rotunda area Sales Manager
or your Field Service Engineer

1-800-ROTUNDA www.OneRotunda.com