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Round Take-Off By-Pass Damper

Model RTB

The Round Take-Off By-Pass Damper, Model RTB, combines a barometric by-pass damper into a round take-off fitting for easy installation and mounting to any duct or plenum. The combination saves space and allows a by-pass to be added into many short spaces between the supply and return plenums.

The RTB features a mounting flange with an adhesive seal to seal tight against any duct surface to eliminate any air leakage and meet all duct leakage standards.

To simply install, cut a round hole the diameter of the RTB. Peel off the paper strip on the back of the flange and center and place over the opening of the round hole. The adhesive backing will hold the by-pass in place and if metal duct is used, sheet metal screws can be used to secure the RTB to the duct.

The RTB must be sized to handle the amount of CFM that maintains a constant volume of air through the HVAC System. To determine this size required use ZONEFIRST's By-Pass Calculator or Design Guide.

To determine the amount of by-pass required, use the formula below:

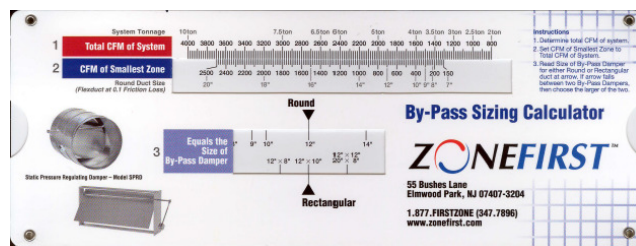
$$\text{Total/Max System CFM} - \text{Smallest Zone CFM} = \text{By-Pass CFM}$$

To use the formula above, determine the total or maximum CFM of the HVAC System. For example, using the industry standard 400CFM per ton, a 3 Ton HVAC System supplies 1,200CFM. Look at the total of the ducts to each zone and determine the smallest zone by the least amount of CFM for each zone. Subtract this number from the total to determine how much by-pass is needed. Size the RTB according to the how much by-pass is needed.

Model	Size	By-Pass CFM
RTB08	8"	400 CFM
RTB10	10"	750 CFM
RTB12	12"	1,000CFM
RTB14	14"	1,600 CFM



Use the ZONEFIRST By-Pass Calculator to easily determine the size of the by-pass damper.



To get your own calculator, send an e-mail to: info@zonefirst.com with your name, company and mailing address.