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zehnder®

Ventilation tube

Zehnder ComfoTube

Benefits

- Fast installation
- Smooth inside
- Easy to clean
- Air tight
- Easy handling
- Robust tube (ring stiffness greater than 1.16 psi)
- 100% pure material
- Low weight
- Corrosion-resistant



Article numbers

* on request

Product	Article number	Reference number
ComfoTube 75, 20 m roll	990 328 001	9271
ComfoTube 75, 50 m roll	990 328 007	9272

Description of ComfoTube-75

Flexible, corrugated exterior, smooth interior, robust air distribution pipe, gastight to DIN EN 60529. The ComfoTube-75 can be simply concreted in place, laid directly in the ground, or in riser shafts and false ceilings.

Specifications:	Material:	Pure HDPE
	Minimum bending radius:	1D
	Allowable operating temperature:	-13 F to 140°F

Do not store tubes outside without protective film!

Technical specifications

Data	
Outside diameter ["]	3.0
Inside diameter ["]	2.5
Weight per running length [lb/ft]	0.23
Running length per roll [ft]	162.5
Weight per roll [lb]	37.5
Roll height [ft]	1.05
Roll diameter [ft]	4.33

Ventilation tube

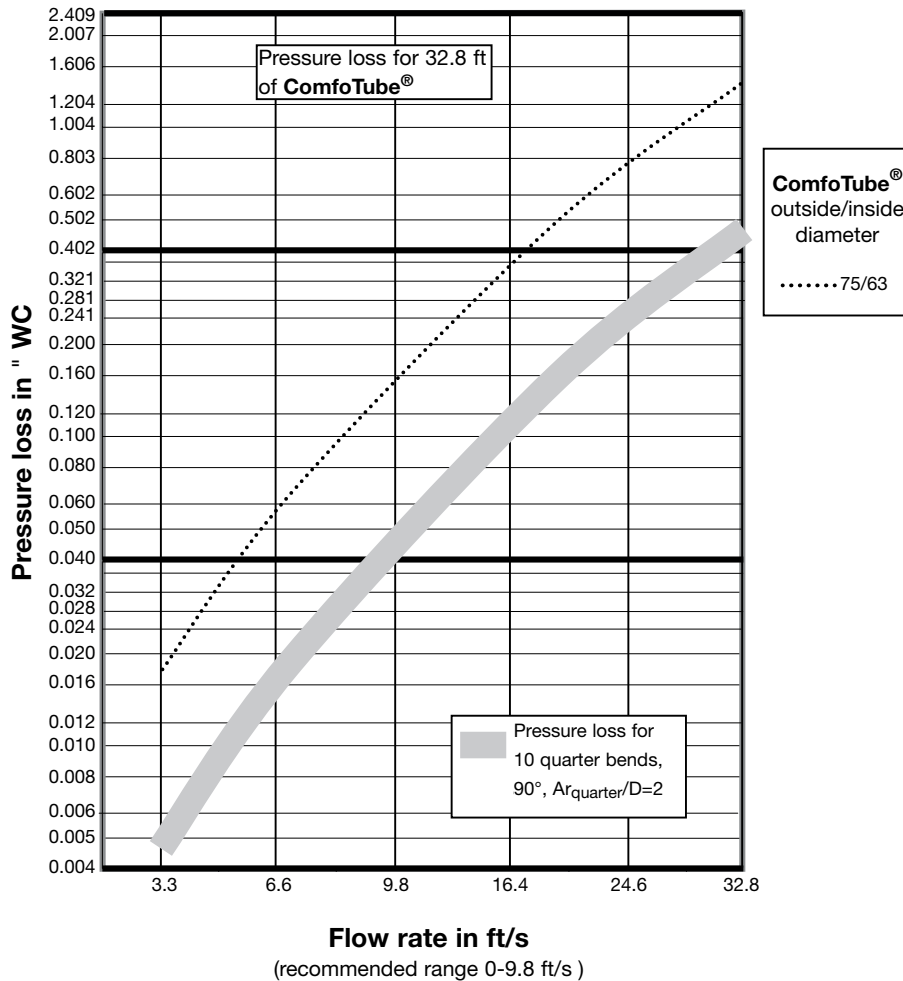
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Volumetric flow in ComfoTube in cfm

ComfoTube	3'
Inside diameter [ft]	2.5
Air velocity: 1.6 ft/s	3.0
Air velocity: 3.3 ft/s	6.0
Air velocity: 4.9 ft/s	9.0
Air velocity: 6.6 ft/s	12.0
Air velocity: 8.2 ft/s	15.0
Air velocity: 9.8 ft/s	19.0
Air velocity: 13.1 ft/s	25.0
Air velocity: 16.4 ft/s	31.0

Pressure loss diagram

Guide values for pressure loss in 32.8 ft of ComfoTube®



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ComfoTube sound attenuation

Octave range [Hz]	125	250	500	1000	2000	4000
Attenuation of 3.3 ft of ComfoTube 75 [dB]	0.4	0.6	0.4	0.2	0.3	0.1

Heat and temperature losses of ComfoTube 75 (3") in concrete layer

Assumptions:

- Mean temperature below the cellar ceiling or in the ground: 50°F
- Thermal conductivity of the insulating hose: 0.56 $\frac{\text{Btu}}{\text{ft}\cdot\text{K}}$

* The temperature loss per feet tube is twice as high at half the air flow.

Heat loss can be reduced if the tubes are wrapped in a foil. Because the ComfoTube are double walled, the foil can prevent the concrete coming into direct contact with the grooves in the inner tube wall. It can be reduced further by placing the tube in the ComfoTube-Isol thermal insulating hose. If ComfoTube tubes with larger diameters and greater volumetric air flows are used, the air temperature falls less quickly than with smaller diameters.

ComfoTube nominal size	75 (3")	
Nominal air volume	cfm	18
Air velocity	ft/s	8.9

Tube wrapped in foil		
Heat loss of 3.28 ft of tube (Δt 21.6°R)	Btu	46
Temperature loss of 3.28 ft of tube at nominal air volume (Δt 21.6°R)	°R	2.3°R

Tube wrapped in 0.5" thick insulating hose		
Heat loss of 3.28 ft of tube (Δt 21.6°R)	W	22
Temperature loss of 3.28 ft of tube at nominal air volume (Δt 21.6°R)	°R	1.20

Buoyancy of ComfoTube in concrete

If the tubes are installed with an insulating hose the buoyancy is increased due to the extra volume.

ComfoTube nominal size	75	
Buoyancy in concrete	lbf /ft	59
Buoyancy in concrete with 0.5" insulating hose	lbf /ft	110

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ComfoTube accessories

Tube diameter	Click sleeve	Reference No.	Dust cap/contents	Reference No.	O-ring seal/contents	Reference No.
75	990 328 107	9273	990 328 262	9275	990 328 362	9274

Click sleeves

PE-MD click sleeves for simple ComfoTube connections.
The joint is sealed using two O-rings and shrink tape.



O-rings

O-ring seals suitable for click sleeves, housings, connection and joining plates.



Dust caps

Dust caps for dust-tight ComfoTube sealing during the construction phase.



ZA-CSY-FLYERTS010, V1211, en_us, subject to changes