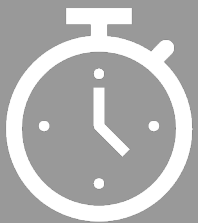


## ZA 102.02 Zehnder Comfosystems Air Distribution Overview



**40 minutes**

Estimated duration to  
complete this  
Learning Segment




# Zehnder Academy Learning Path

This segment is part of the training for:

Zehnder America Certified  
Comfosystems   
**SPECIFIER**

Zehnder America Certified  
Comfosystems   
**INSTALLER**

Zehnder America Authorized  
Comfosystems   
**TECHNICIAN**

Zehnder America Authorized  
Comfosystems   
**DEALER**

Zehnder America Authorized  
Comfosystems   
**DISTRIBUTOR**

**Knowledge Level:**  
**Introductory**

**Recommended prerequisites:**

- ZA 101 (all)
- ZA 102.01

## LEARNING OBJECTIVE(S)



By the end of this course, participants will be able to...

1. Describe Zehnder's exterior "intake and exhaust" components
2. Describe the Zehnder ComfoWell modular manifold system
3. Describe Zehnder America's interior duct options
4. Describe Zehnder America's register boxes, valves and grilles

## A Complete System

Zehnder not only supplies high-performance H/ERVs...

The Zehnder Comfosystems product line also includes a complete Air Distribution system engineered to match the performance standards of ComfoAir H/ERVs.



## A Complete System

The Zehnder Air Distribution system includes everything needed for a high quality, professional installation, from the exterior grilles to manifolds, ducts and room registers.



9/11/25



"Equipping professionals for best-in-class ventilation"

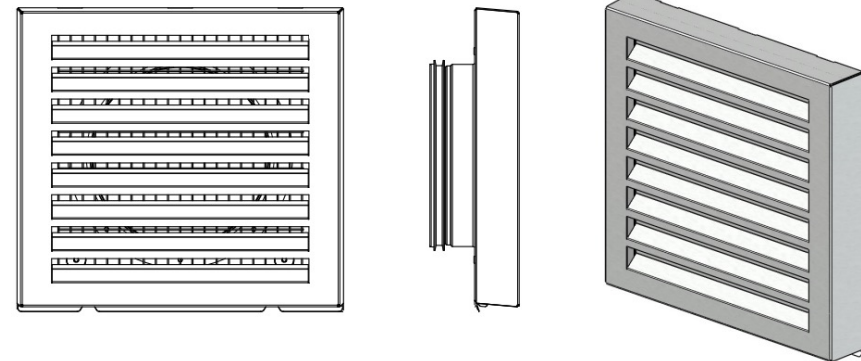


# Learning Objective 1

Describe Zehnder's exterior "intake and exhaust" components

## Exterior Grilles

- For intake and exhaust
- Stainless steel
- Louvered cover (removable for cleaning)
- Wire mesh vermin guard
- Gasketed duct connector:
  - 125mm (ComfoPipe or 5" duct)
  - 150mm (6" duct)
  - 160mm (ComfoPipe)
  - 200mm (ComfoPipe or 8" duct)



## ComfoPipe “Compact”

- Lightweight, expanded polypropylene (EPP), rigid foam duct system
- For connecting to exterior grilles, primarily, but may be used for interior duct runs
- Thermal insulation (R-2.46) with closed-cell, vapor-tight surface
- Avoids cold weather condensation
- Close-fitting connections and trimming guidelines simplify installation and help ensure airtight performance



## ComfoPipe “Compact”

- Pipe: 1m long (male/female ends)
- Bend: 45° (male/female ends)
- Directional Coupler: fits over cut end of ComfoPipe to reproduce male end (sometimes used to connect ComfoPipe to H/ERV)
- Coupler: bi-directional; joins two cut pieces of ComfoPipe



ComfoPipe Compact Pipe



ComfoPipe Compact Bend



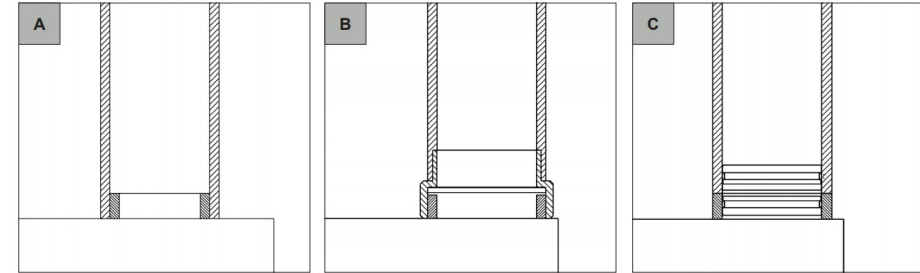
ComfoPipe Compact  
Directional Coupler



ComfoPipe Compact Coupler

## ComfoPipe Connections to ComfoAir H/ERVs

- See ComfoPipe Installation Guide
- 3 methods of connection:
  - A. Direct connection of ComfoPipe to unit
  - B. Connection using ComfoPipe Directional Coupler
  - C. Connection using metal nipple or metal reducer
- Matrix provided to match H/ERV model, ComfoPipe diameter, and connection method



i	DN125	DN160	DN200
CA 160	A	-	-
CA 200	C 9394-00	-	-
CA 350	-	C 9395-00	-
CA 550	-	-	C 9638-00

i	DN125	DN160	DN200
CAQ350 TR	-	B C 9395-00	-
CAQ450 TR	-	B C 9395-00	-
CAQ350 ST	-	B C 9395-00	-
CAQ450 ST	-	-	A C 9638-00
CAQ600 ST	-	-	A C 9638-00

# Learning Objective 2

Describe the Zehnder ComfoWell modular manifold system

## ComfoWell

Modular air distribution system  
with options for...

- Manifold
- Acoustical attenuation
- Enhanced filtration

5 sizes...

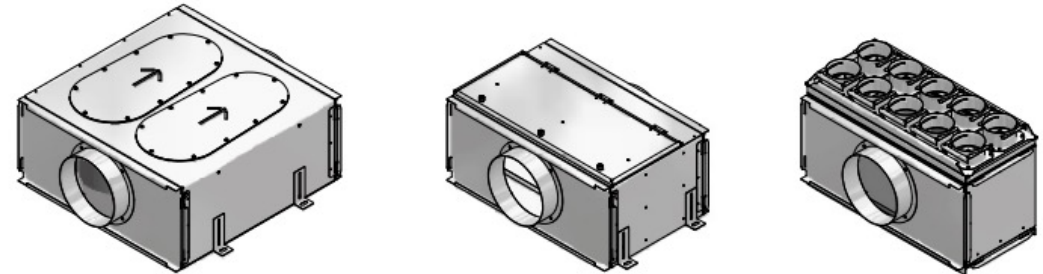
- CW 220 (4 tubes)
- CW 320 (6 tubes)
- CW 420 (8 tubes)
- CW 520 (10 tubes)
- CW 625 (12 tubes)



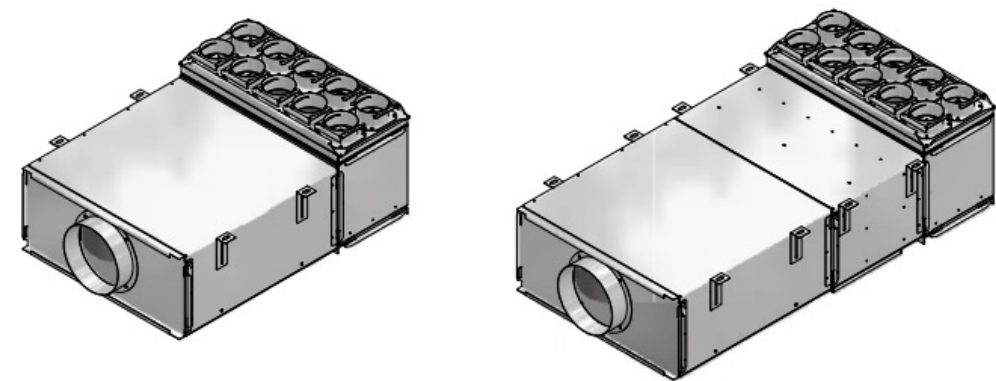
## ComfoWell

- ComfoWell components can be combined in modular fashion using the slide clamps
- End Plates are used to connect to a large duct
- Manifold Plates (“mounting” plates) are used to connect to multiple ComfoTube or ComfoFlex ducts

Standalone

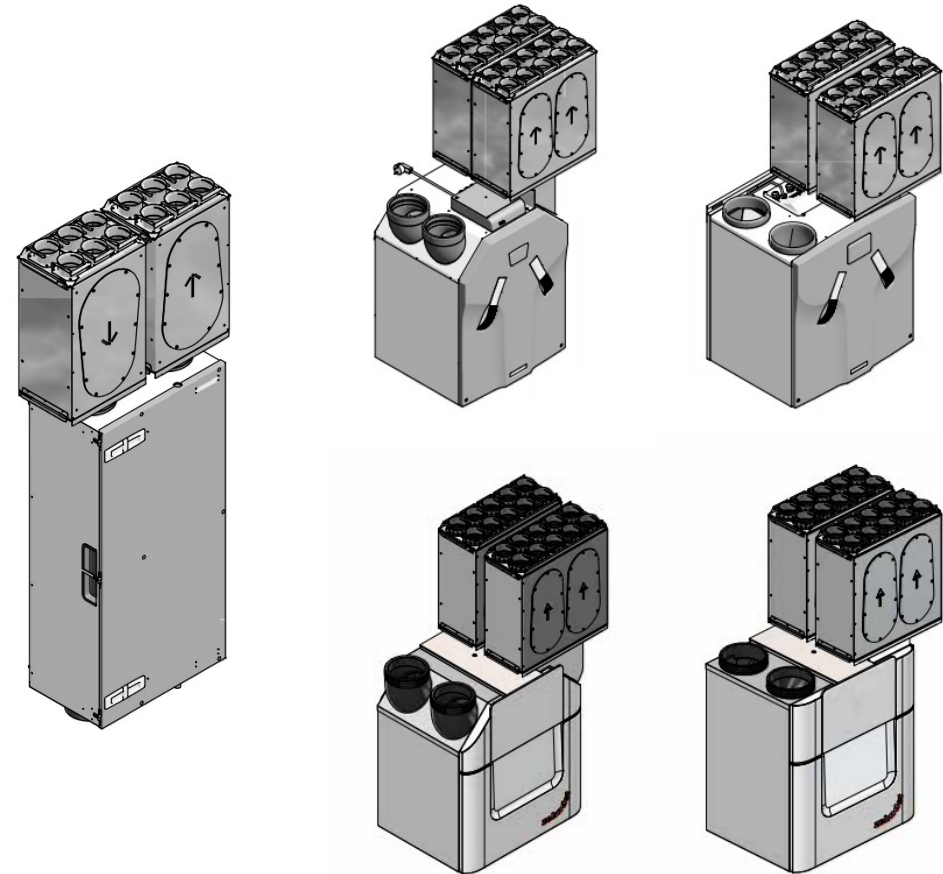


Combined



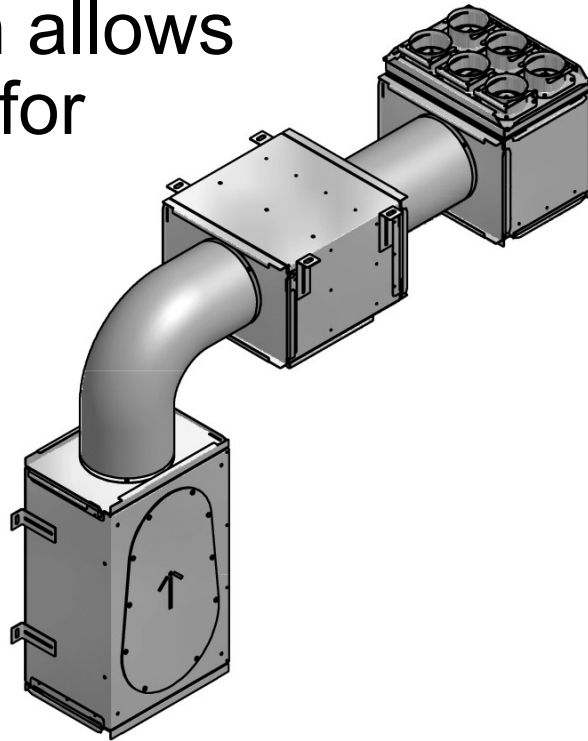
## ComfoWell

- ComfoWell assemblies can be mounted directly to the appropriately-sized H/ERV unit using ComfoWell Mounting Kits
- (ComfoWell assemblies can also be mounted away from the unit and connected with a large duct)



## ComfoWell

- The modular approach allows flexibility for creative solutions



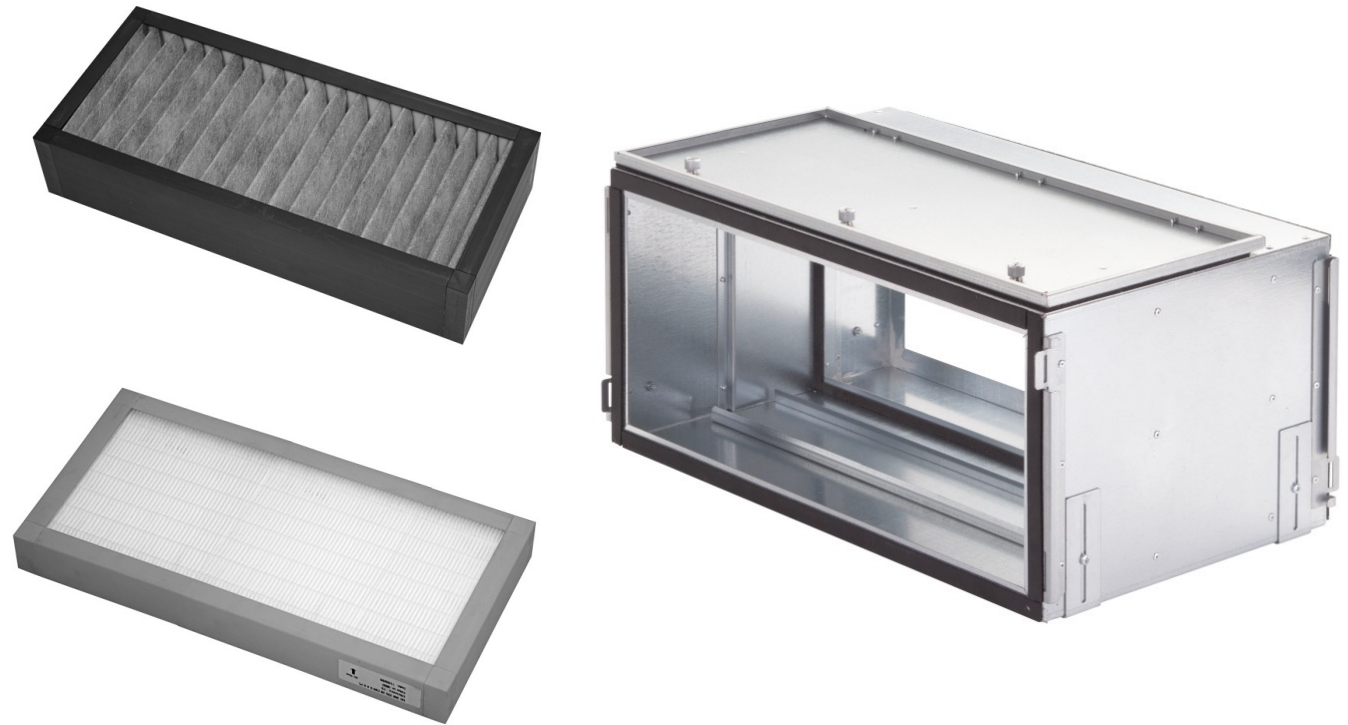
## ComfoWell Silencer (or “Attenuator”)

- CW-S
- Available in all 5 sizes
- Tear drop baffles reduce vibration while optimizing air speed through the silencer
- Interior is padded with soft foam and a hygienic fabric cover
- Reduces fan noise transmission from the unit
- Reduces “cross-talk” between tubes at the manifold plate



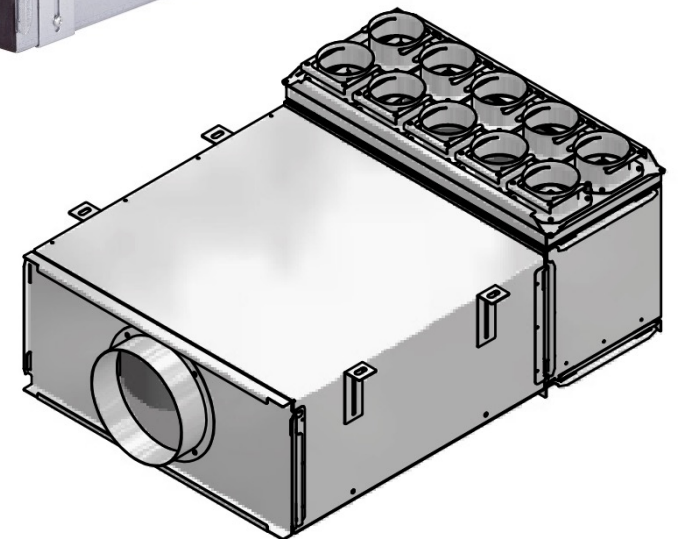
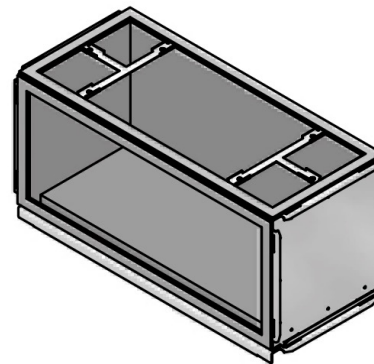
## ComfoWell Filter Casing

- CW-F
- Available in all 5 sizes
- Access hatch for filter maintenance
- Can be installed with F9 (MERV 15) or Activated Carbon filters



## ComfoWell Distribution Casing

- CW-D
- Available in all 5 sizes
- (European literature simply calls this a “manifold box”)
- No sound attenuation
- Removable side/end plate allows for either a straight or 90° orientation of manifold plate



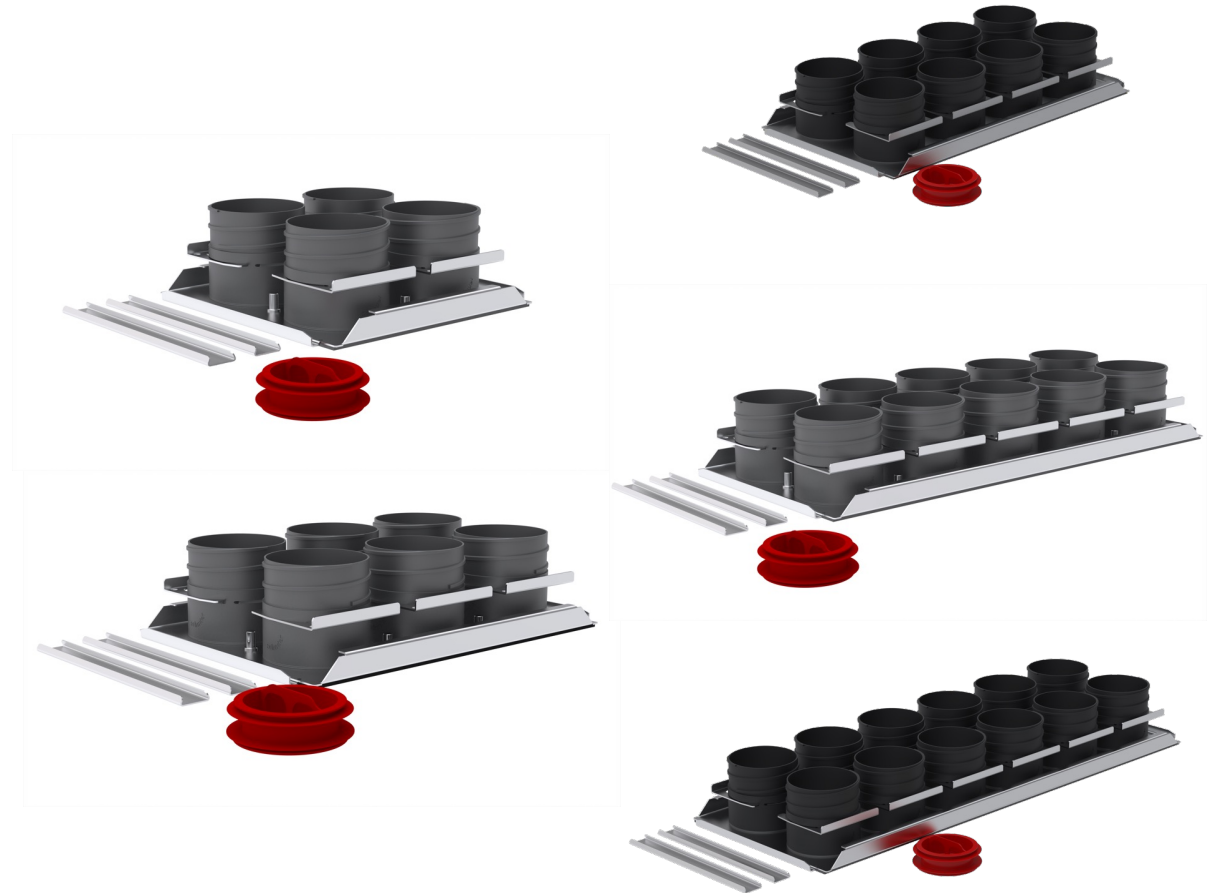
## ComfoWell End Plates

- CW-P
- Available in all 5 sizes
- Available in a limited number of duct connector sizes for each ComfoWell box size
- Include double-edge rubber gasket for air-tight connection to ducts



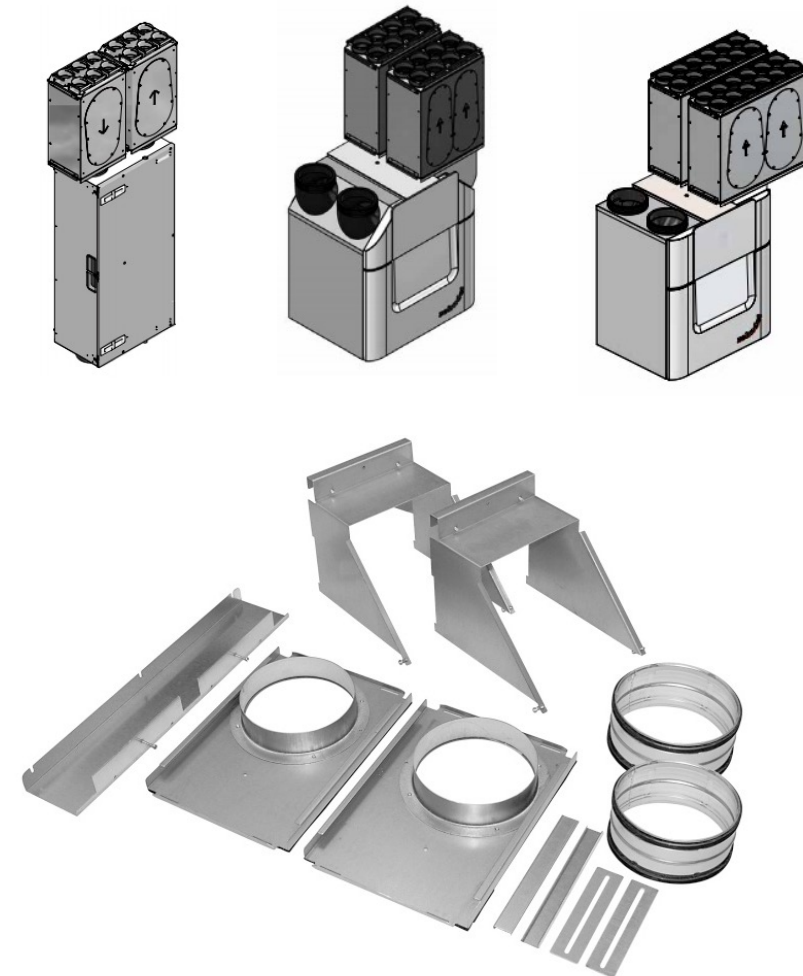
## ComfoWell Manifold Plates (“Mounting Plates”)

- CW-M
- Available in all 5 sizes
- North American “twist connect” feature (black plastic connector) allows connection of both ComfoTube and ComfoFlex 3” duct
- Clips included for ComfoTube
- Red plug included for unused port



## ComfoWell Mounting Kit

- CW-K
- Available for certain combinations of silencer sizes and H/ERV models
- Everything included to make a stable, airtight connection of the silencers to the H/ERV...
  - Brackets
  - Offset End Plates
  - Gasketed connectors



# Learning Objective 3

Describe Zehnder America's interior duct options

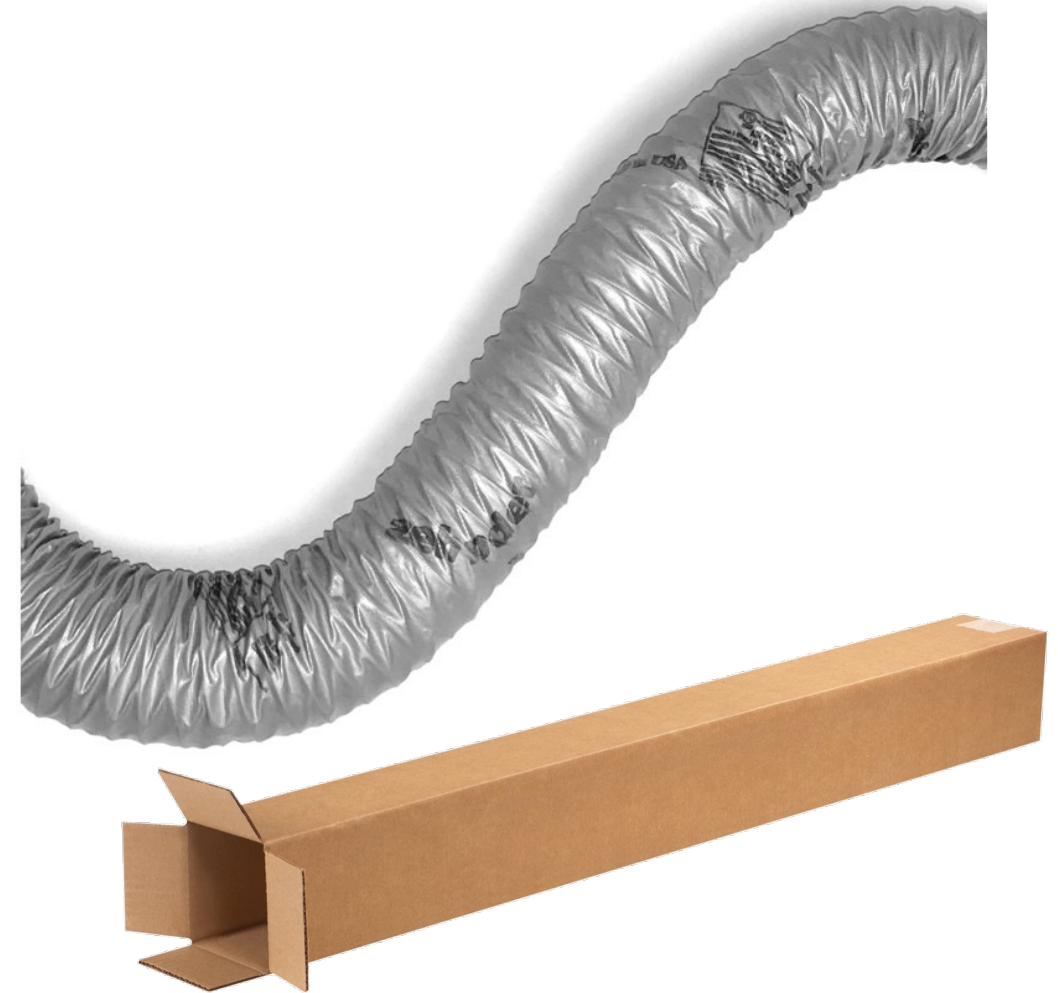
## ComfoTube 75

- 75mm OD HDPE plastic
- Available as 50m (163.5') roll
- Dual-walled (outer corrugated, inner wavy)
- O-rings and locking clips fit in outer grooves
- Coupler included on each roll
- Designed originally for cast-in-concrete applications
- Doesn't meet the flame spread requirements for UL 181



## ComfoFlex

- Manufactured in the U.S. for Zehnder with better durability and air flow vs. standard flex duct
- 3" (nominal) by 50' long (ships compressed in 4"x4"x4' box)
- PVC-coated fiberglass cloth with coated steel helical reinforcement
- UL 181 and CUL S110 listed as Class I duct
- GreenGuard Gold certified for IAQ (no/low VOC)

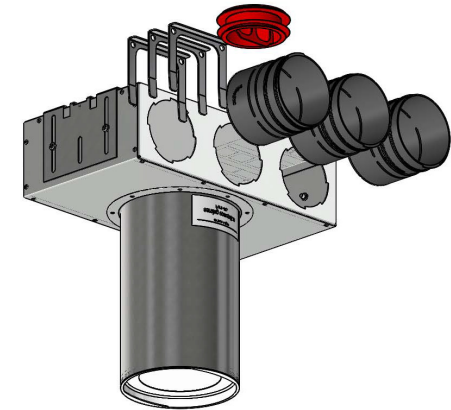


# Learning Objective 4

Describe Zehnder America's register boxes, valves and grilles

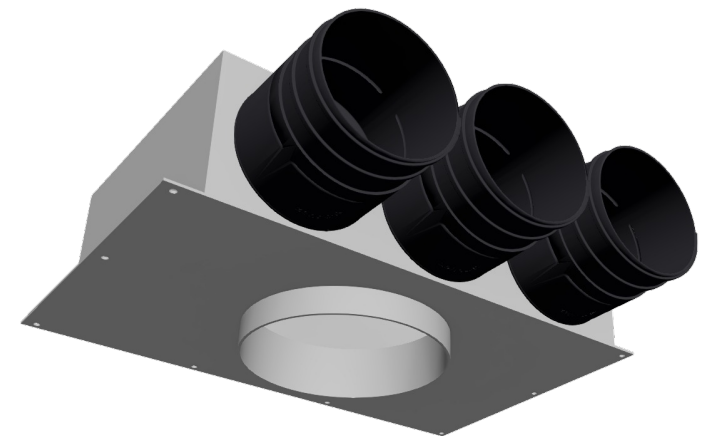
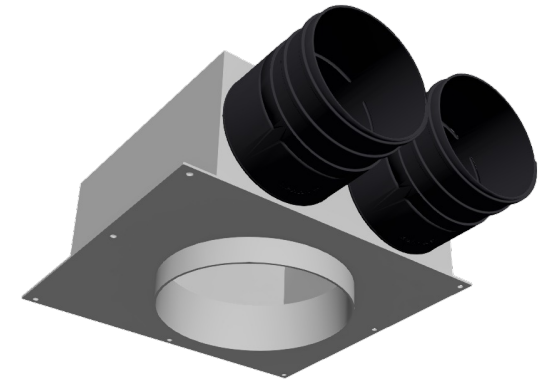
## TVA-2T, TVA-3T

- Connects 1, 2 or 3 tubes
- Black “twist connectors” suitable for either ComfoTube 75 or ComfoFlex 3” ducts
- 125mm diffuser mounting port for Luna valves or Venezia grilles
- Mounting brackets originally designed for mounting to concrete
- Limited trimming of diffuser port (minimum framing cavity 4-1/4”)
- Includes dust cover, red plug and ComfoTube 75 locking clips



## RND-2T, RND-3T

- Round boot, 2-tube/3-tube
- New Zehnder America design, U.S. production beginning 2021
- Replaces TVA-2T/-3T
- For Luna valves and Venezia grilles
- Suitable for installation in 2x4 framing (diffuser mounting port is recessed)
- Built-on mounting flange (no brackets)
- Includes dust cover, red plug and ComfoTube 75 locking clips



## Luna-S

- Supply valve
- For use in TVA or RND register boxes
- Fully adjustable with 25 settings
- Locking mechanism with removable cover
- UV-stable plastic, paintable
- Efficient, quiet airflow



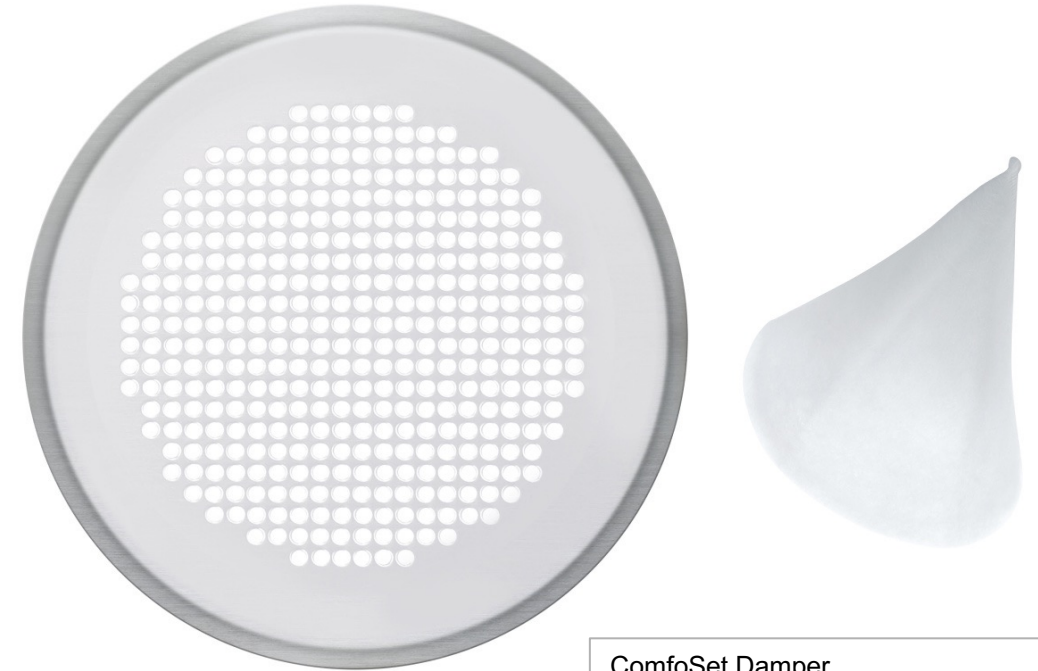
## Luna-E

- Extract valve
- For use in TVA or RND register boxes
- Fully adjustable with 25 settings in three stages (75 total)
- Locking mechanism with removable cover
- UV-stable plastic, paintable
- Gripping feature to hold mesh cone extract filters (ordered separately)



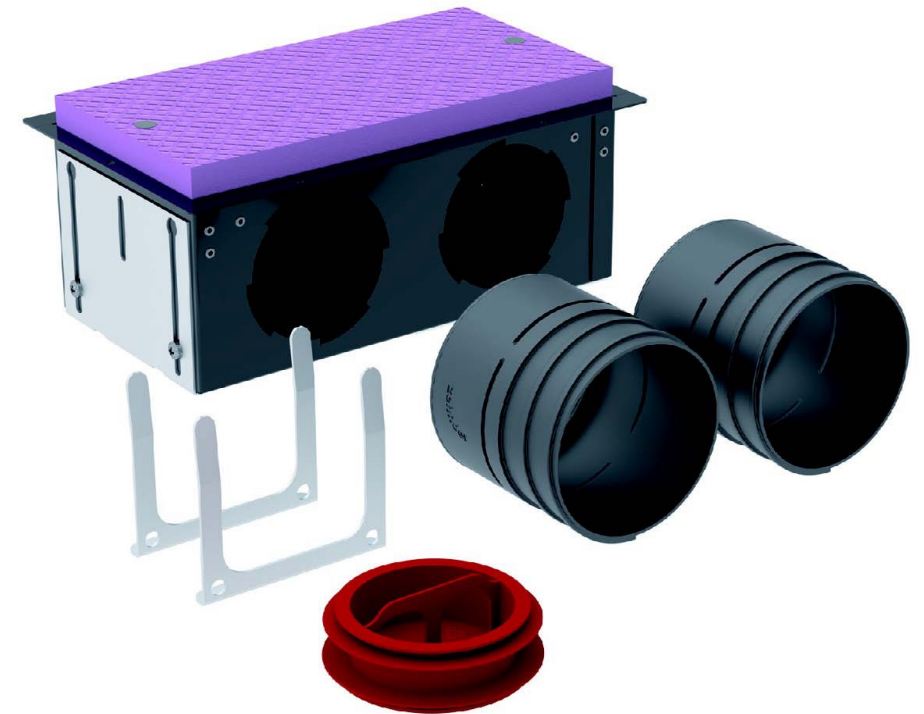
## Venezia

- Perforated round grille
- Supply or extract
- 6-1/4" diameter
- White paint finish
- For use in TVA or RND register boxes
- No adjustment (requires ComfoSet damper for adjusting flow; ordered separately)
- Mesh cone filter available for extract applications



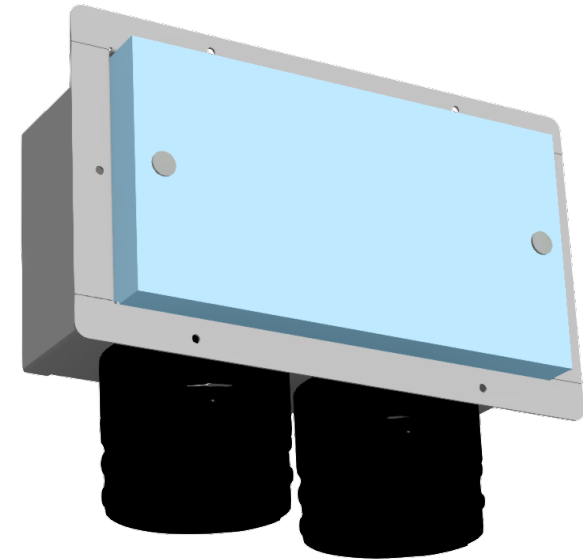
## CLD-2T

- Connects 1-2 tubes
- Black “twist connectors” suitable for either ComfoTube 75 or ComfoFlex 3” ducts
- Used with Roma grilles
- Mounting with flange or brackets
- Fits in 2x4 framed walls
- Includes dust cover, red plug and ComfoTube 75 locking clips



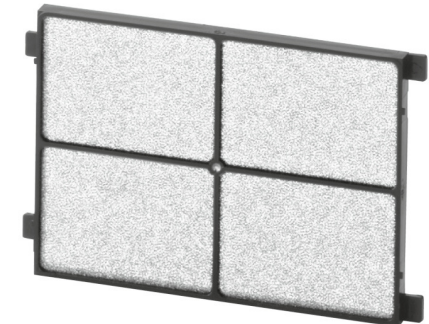
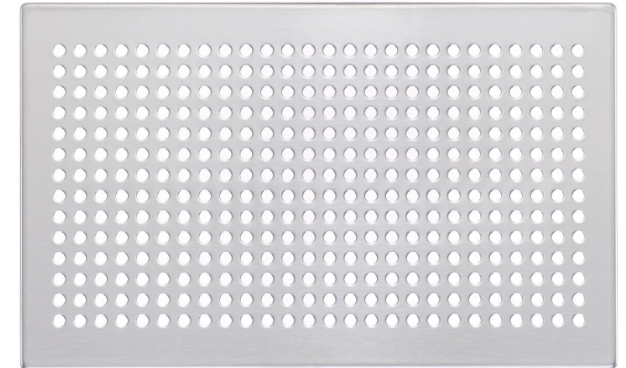
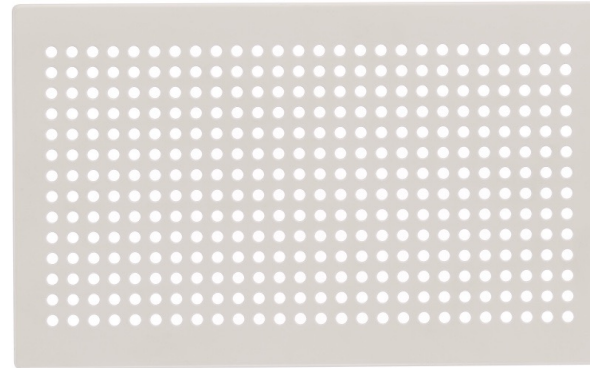
## RCT-2T

- Rectangular boot, 2-tubes
- New Zehnder America design, U.S. production beginning 2021
- Replaces CLD-2T
- For Roma grilles
- Suitable for installation in 2x4 framing
- Built-on mounting flange (no brackets)
- Includes dust cover, red plug and ComfoTube 75 locking clips



## Roma

- Perforated grille
- Supply or extract
- 10-1/4" x 6-1/4"
- White paint or stainless steel
- For use in CLD or RCT register boxes
- No adjustment (requires ComfoSet damper for adjusting flow; ordered separately)
- Mesh filter available for extract applications



## ZA 102.02 - Zehnder Comfosystems Air Distribution Overview

Thank you for taking this Learning Segment.

Please explore Zehnder Academy's other course offerings and continue to grow your professional expertise.

[ZehnderAmerica.com](https://www.ZehnderAmerica.com)

