

KOOLAIR

series

PE-45

Polystyrene
plenum boxes

ISO 9001

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Certification

Sistema de Gestión



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Polystyrene plenum box



Description

Pyramidal plenum box of expanded polystyrene (high thermal and acoustic capacity thickness 20 mm).
Special for application with plate diffusers of 595x595 or larger.
Transmission coefficient of 0.031 W/mk.

Applications

The PE-45 polystyrene plenum box is ideal for mounting of swirl, square and perforated-plate diffusers (see the S40.2, S40.3 and S50 catalogues for selection).

Because these units are lightweight and have a trapezoidal shape, they are easily mounted in HVAC systems.
Its dimensions and size make storage easy.

Material

Expanded polystyrene for isolation to UNE EN 13163.
Class E EN 13501-1 fire-resistant material, with a density of 45 mg/m² and grey colour. The PE-45 plenum box complies with the regulations of Basic Safety (SI) Document in the case of fire, provided that the surface area is not larger than 5% of the ceiling of the area under consideration.



Attachments

To floor slab by central hanging rod (not included) and to diffuser plate by central screw. Plenum box with 3 connection options to duct of 160, 200 and 250 mm and lateral or top connection. The components are supplied loose for on-site installation. Each plenum box has one or two connection kits according to material ordered:

Plenum box kit that includes connection neck and piecework for bridge mounting

Volume control damper kit

Identification

PE-45 Polystyrene plenum box

160 Spigot diameter 160 kit

200 Spigot diameter 200 kit

250 Spigot diameter 250 kit

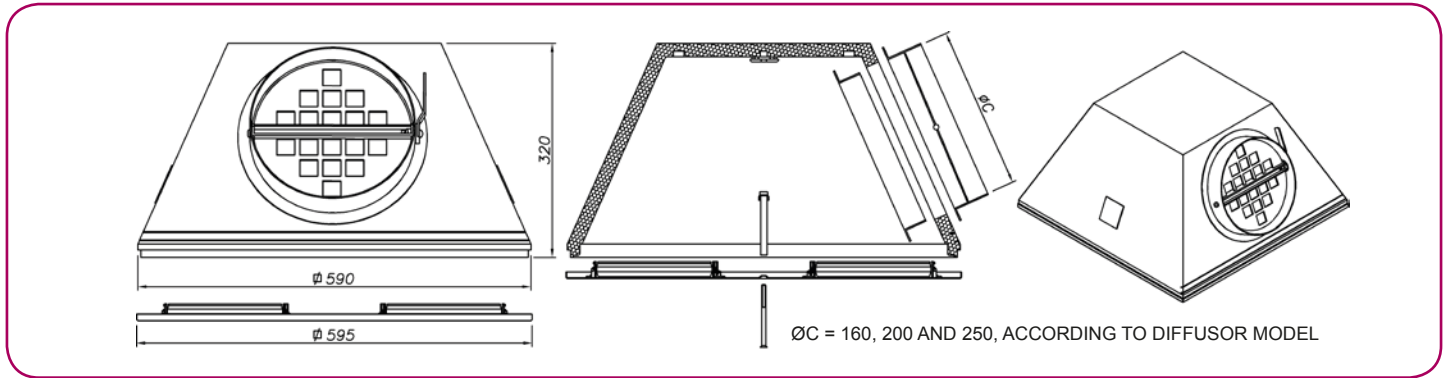
- Without accessories

CR Volume control damper kit

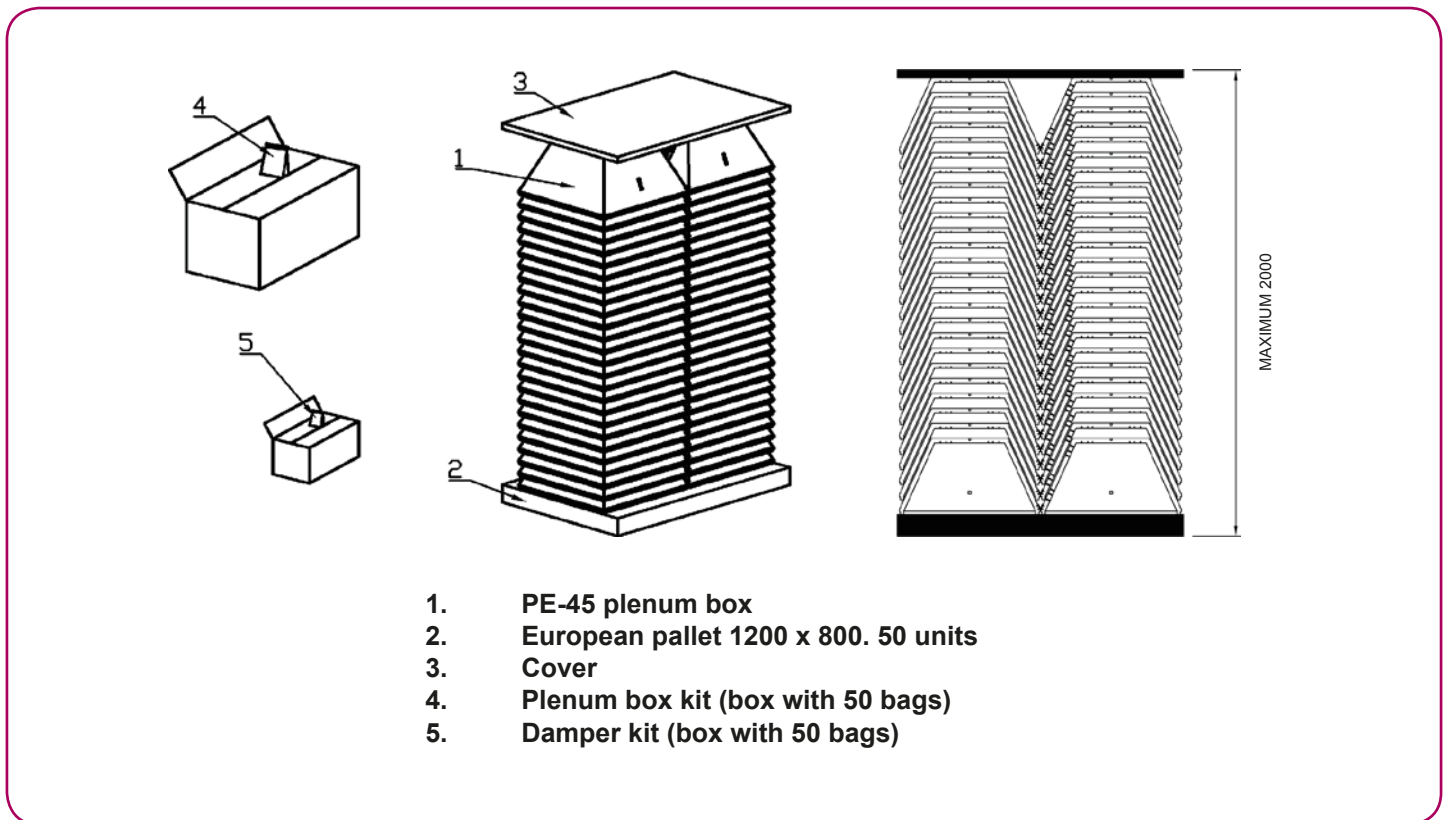
PE-45 200 CR

Polystyrene plenum box PE-45 with spigot diameter 200 kit and volume control damper kit.

Dimensions



Packing



Diffusers coding

For diffusers with plate of 595 x 595 mm.

Circular diffusers: Technical data in catalogue Series 40.1.



43-SF-Q

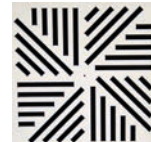
Adjustable blades swirl diffusers: Technical data in catalogue Series 40.2.



DFRO



DFRA



DFRQ

Fixed blades swirl diffusers: Technical data in catalogue Series 40.3.



DFRE-Q



DFRE-GR-Q
up to model 400



DAFC-Q



DAFT
up to model 500



DFRT
up to model 500

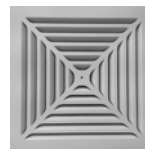


HDPR-Q

Square and perforated plate: Technical data in catalogue Series 50.



50-FR-4
up to model 375



52-FR-4-Stamp
up to model 525

Mounting instruction

1. On the side of the plenum box with the premarked mouth diameters (photo 1) and using a cutting tool (knife, cutter, etc.). Machine the mouth inlet to the selected diameter 160, 200, or 250 (photo 2).



2. Insert the two plastic parts that hold the bridge (photo 3). Mounted in front of each other, on two opposing sides of the plenum box. Turn upside down the plenum box, in order to work at the plenum bottom.



3. On the inside of the plenum box, position the metal bridge in the two plastic parts that were mounted in step 2 (photo 4).



Mounting instruction

4. Insert the plastic stub into the hole that is left between the plastic parts, step 2, and the metal bridge (photo 5) and position the plastic bracket (photo 6 and 7) to prevent the stub from coming out. Perform this operation at both ends of the bridge (photo 8).

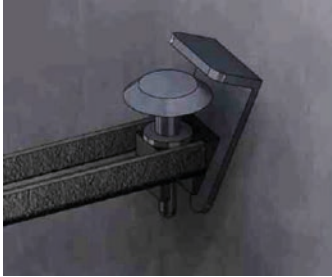


PHOTO 7



PHOTO 8

5. Insert the plastic part with the selected mouth diameter and the male thread into the interior of the plenum box and thread it to the plastic part with the mouth diameter selected and the female thread (photo 9). Screw one onto the other until they exert pressure on the plenum box (photo 10).



PHOTO 9



PHOTO 10

6. The neck of the mouth has two holes: one is striated and the other is not. Insert the damper stub into the non-striated hole (photo 11, detail 1) and insert the plastic lever and the stub holding it into the striated hole (photo 12). Once the damper is positioned, check that it opens and closes correctly by turning the lever (photo 13).



PHOTO 11 AND DETAIL 1



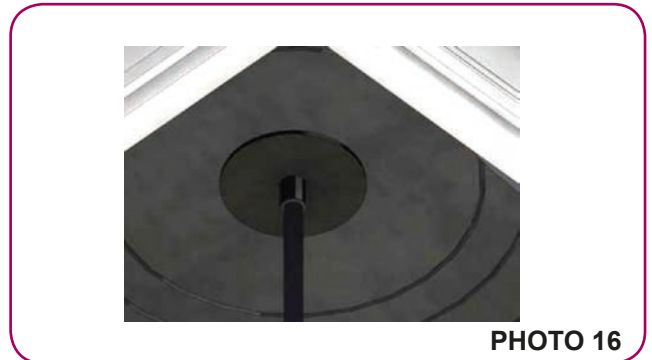
PHOTO 12

Mounting instruction

7. Insert the M8 threaded rod holding it to the ceiling into the hole at the top of the plenum box (photo 14).



8. On the inside of the plenum box, screw the flat-base nut and set to the height that the plenum box should have (photo 15 and 16). Stronger tightening will move the plenum box higher.



9. Insert the M6 x 120 screw into the middle of the plate of the rotational part and screw onto the plenum box bridge (photo 17, detail 2). Place the plastic stopper in the screw head with the same colour as the plate. Once completed (photo 18), mount the duct in the mouth and set the damper to the desired flow rate.



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KOOLAIR

KOOLAIR, S.L.

Calle Urano, 26

Poligono industrial nº 2 – La Fuensanta

28936 Móstoles - Madrid - (España)

Tel: +34 91 645 00 33

Fax: +34 91 645 69 62

e-mail: info@koolair.com

www.koolair.com