

PolyFlow collective ventilation duct

Description

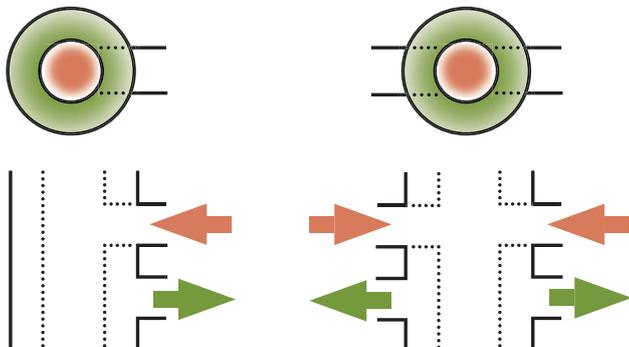
The PolyFlow system is an innovative ventilation duct with a concentric pipe structure, typically designed for apartment buildings. The outer pipe supplies fresh outside air, while the inner pipe regulates the removal of polluted indoor air. This ensures efficient and separate air flow within a single compact system.

Application

Up to two flats per floor can be connected to the ventilation duct (Ø160 mm), each with its own ventilation unit (HRV). The connections can be placed opposite each other at an angle of 90° to 180°. The system supports installation up to a height of twelve floors.

Air flow

Fresh air is supplied via the outer pipe from the roof, while polluted air is discharged to the roof via the inner pipe. This central air management contributes to an energy-efficient and maintenance-friendly ventilation solution for apartment buildings.



Living units on top of each other

Living units on top of and next to each other

Technical data

The PolyFlow system is available in six set diameters, depending on the ventilation flow required. The air ducts are manufactured to suit the height of the individual floors. Clear marking of the individual intermediate sections is very convenient for the installer in the course of the installation.

| Diameter (mm) | Max. flow (m ³ /h) |
|---------------|-------------------------------|
| Ø 220 - 340 | 550 |
| Ø 250 - 380 | 825 |
| Ø 300 - 450 | 1200 |
| Ø 340 - 510 | 1375 |
| Ø 380 - 550 | 1650 |
| Ø 420 - 620 | 2000 |

The PolyFlow system ensures both high indoor air quality and long-term system reliability. Key features include:

Material:

Entirely constructed from corrosion-resistant stainless steel (RVS 304), offering durability and minimal maintenance.

Air supply end extraction:

Fresh air is supplied and stale air extracted via the rooftop, with a minimum separation distance between the two openings (exact distance determined by project requirements and applicable regulations).

Roof termination:

Equipped with a storm collar and rain cap for weather protection. Alternative solutions available upon request.

Installation flexibility:

Fitted with sliding sleeves to allow for adjustment during assembly.

Maintenance:

Includes an inspection hatch with condensate drainage (6/4"), with a separate siphon to be provided.

Fire safety:

A combined fire and smoke damper (type SC60-COSMO) is installed between the ventilation unit and the PolyFlow system, also serving as a non-return valve.



Fire damper



Smoke damper



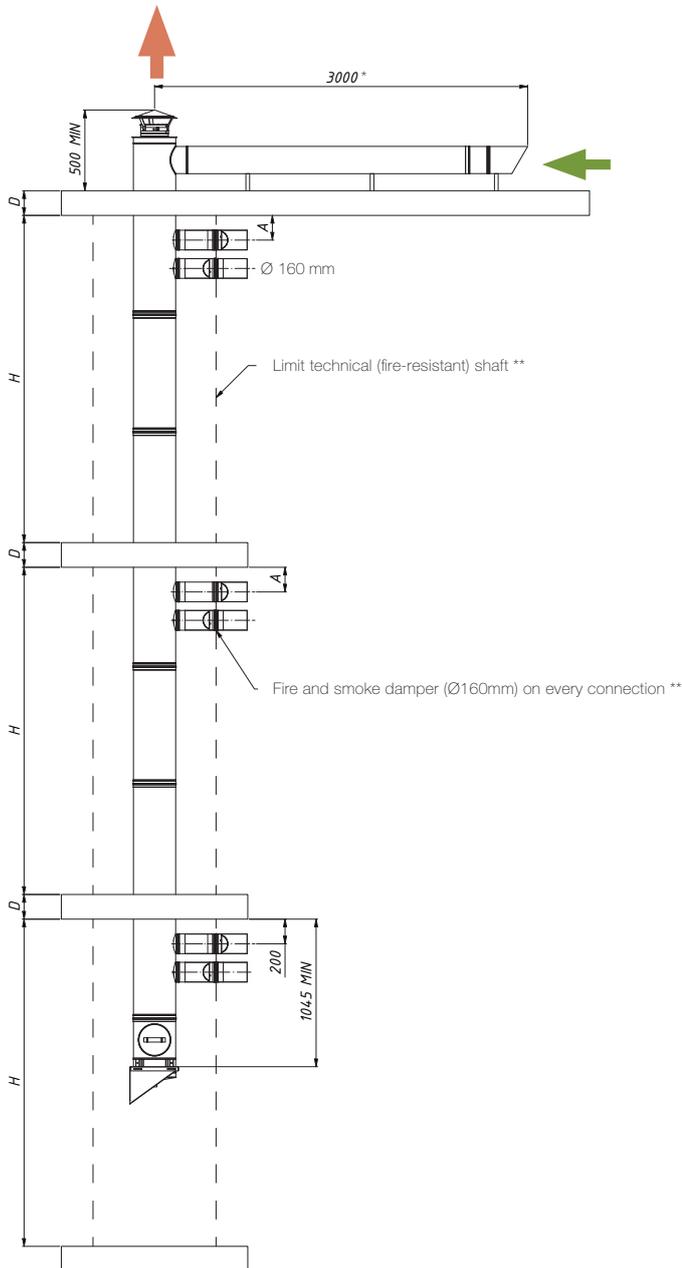
Inspection hatch incl. condensate drainage

Dimensional drawings and connections

Dimensions technical shaft:

| Diameter PolyFlow (mm) | Technical shaft recommended dimensions (mm) | Technical shaft minimum dimensions (mm) |
|------------------------|---------------------------------------------|-----------------------------------------|
| Ø 220 - 340 | 440 x 440 | 390 x 390 |
| Ø 250 - 380 | 480 x 480 | 430 x 430 |
| Ø 300 - 450 | 550 x 550 | 500 x 500 |
| Ø 340 - 510 | 610 x 610 | 560 x 560 |
| Ø 380 - 550 | 650 x 650 | 600 x 600 |
| Ø 420 - 620 | 720 x 720 | 670 x 670 |

Example of set-up: Other sizes are measured by Vasco on the building site.



- Discharge of dirty inside air
- Incoming outside air

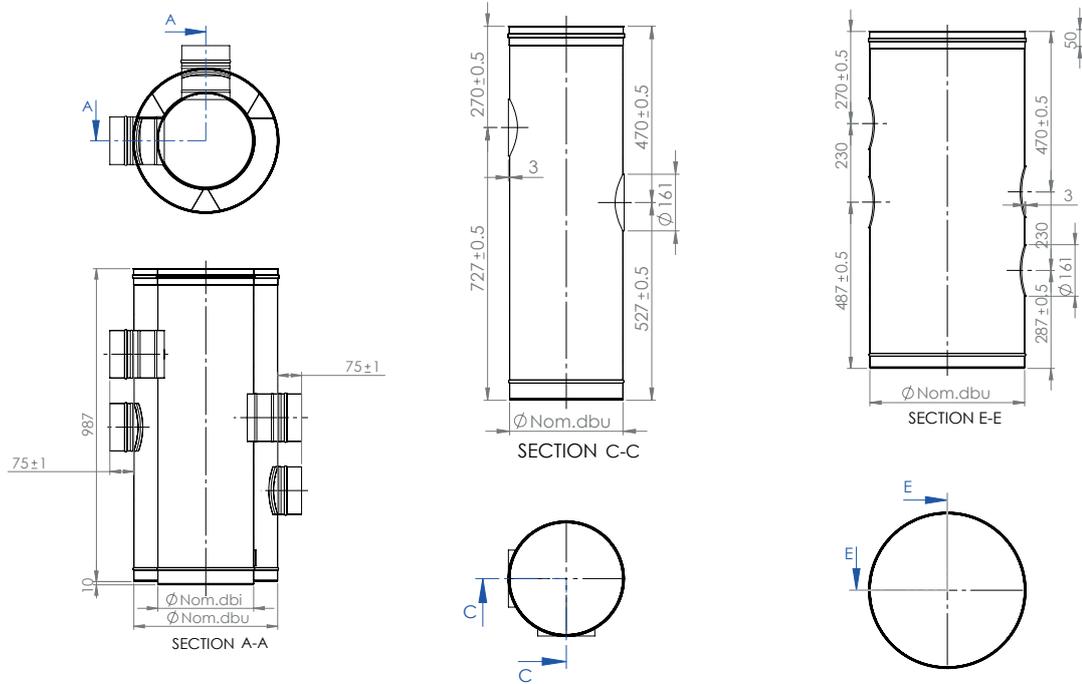
* Example of the roof-top section with 3m horizontal distance between intake and exhaust

** Fire-resistant finish around the drilled hole (by the fire damper) in the technical shaft

Dimensions in mm

Detail ventilation connection in case of 2 ventilation units at 90°

For PolyFlow system \varnothing 220-340, \varnothing 250-380 and \varnothing 300-450.



For PolyFlow system \varnothing 340-510, \varnothing 380-550 and \varnothing 420-620

