

# BREATHER VENTS

In every used building humidity occurs which can also penetrate into the roof space after construction of the vapour barrier. For this reason so-called cold roofs must be ventilated in order to avoid damage to the building.

Moisture which penetrates into the roof construction with a defective waterproofing can also almost no longer escape. This results with wood structures in mould formation. With unventilated flat roofs, so-called warm roofs, it can result with bituminous waterproofing in the formation of bubbles on the roof surface, which then results in further consequential damage.

## Flavent® breather vents for roof space supply and exhaust ventilation

### Area of application

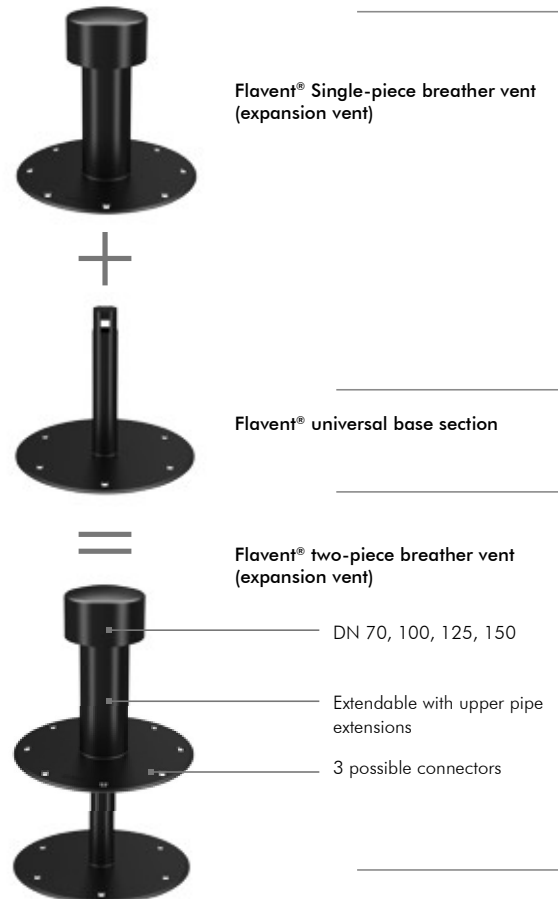
- Breather vents for air circulation above the insulation layer, with a ventilated roof construction according to DIN 4108
- Expansion vent for removing moisture trapped in the flat roof construction to avoid formation of bubbles
- As a renovation vent
- For drying out roofs

### Product features and benefits

- Optimum air circulation according to DIN 4108
- No cracking of the roof surface
- Penetrating moisture and condensate are removed
- Insulation performance remains intact
- Particularly high security against rain penetration
- Versatile in use and thus short time in storage
- Perfect connector to bitumen and plastic roof membranes
- Quick installation

### Material and properties

- Hard PVC, black
- Weather, frost and UV-resistant
- Fire rating B2 (no direct flame contact)
- Temperature resistance -40°/+80°C
- Flow temperature max. +40°C (for short periods max. +80°C)



### USE AS RENOVATION VENT

For the renovation of old or damaged roof vents. Advantages:

- Old vent can remain in the roof surface; demolition of the old roof is not necessary
- Time saving through simple imposition of the new vent
- Connections from inside are not damaged by the removal of the old vent



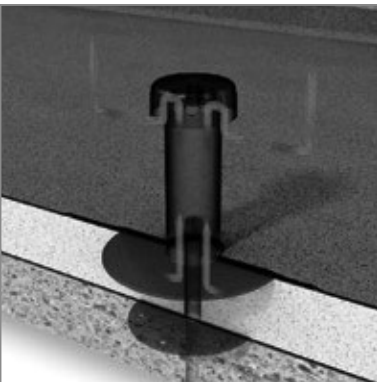
### USE AS ROOF DRYING VENT

For the drying of dampened thermal insulation through the use of water suction. Advantages:

- A cost-intensive demolition of the old roof is not necessary
- Drying in stages of the dampened insulation
- Economical structure of a new waterproofing with complementary insulation while keeping the old dried-out insulation



Installation example:  
Flavent® single-piece breather  
vent for ventilated roof with  
PVC roof membrane.



Installation example:  
Flavent® two-piece breather  
vent for unventilated roof with  
bitumen roof membrane.



#### Connector diameters

- DN 70, 100, 125, 150

#### Possible connectors

- Hard PVC flange
- Bitumen skirt
- Screw connector (only in 100mm, 125mm diameters)



#### Standards

- DIN 4108

#### Add-on products

- Vent lower section
- Upper pipe extensions
- Tangit PVC adhesive

#### Product codes

See table page 26

#### Technical instructions

- Use of expansion vents: With the installation of two-piece expansion vents, care must be taken that the lower section is filled with a fibre insulation in order that condensation water on the supporting shell of the roof deck is prevented
- Use of roof space supply and exhaust vent: A uniform rafter space ventilation should be aimed for, so vent cross-section and numbers of room space breather vents should be adjusted to the circumstances on site.
- With all imposed structures a vapour barrier should be specified

Please note also the instructions in the laying instruction.

# ROOM AND SOIL VENTILATION

The tried and tested Flavent® living space breather vents are technical air flow optimised solutions for motorised and static supply and exhaust ventilation of flat roofs. They convey unpleasant stuffy air and

moisture, e.g. from bathroom and kitchen, to the exterior and thus provide a pleasant room climate. For controlled living space ventilation Klöber vent pipes are also excellent.

## Flavent® breather and soil vents

Our tried and tested products for optimum living space supply and exhaust ventilation with flat roofs.

### Area of application

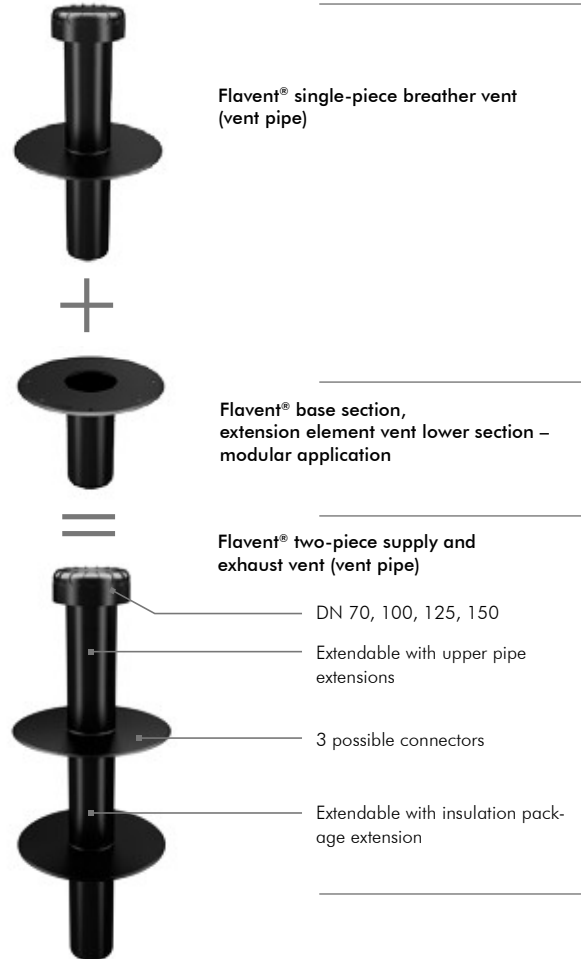
- Ventilation of bathrooms and toilets without a window to the outside (DIN 18017)
- Soiled water supply and exhaust ventilation (DIN1986)
- Ventilation for steam extraction hoods in kitchens
- Controlled living space ventilation

### Product features and benefits

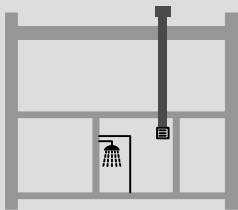
- Optimum ventilation properties as living space supply and exhaust vents and sewage pipe vents
- Perfect connector to bitumen and plastic roof membranes
- Particularly high security against rain penetration
- Construction for variable insulation thicknesses – optionally extendable by means of insulation package extension
- Quick installation through individual flange connectors

### Material and properties

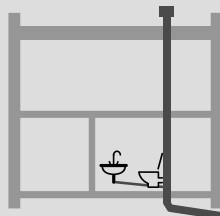
- Hard PVC, black
- Weather, frost and UV-resistant
- Fire rating B2 (no direct flame contact)
- Temperature resistance -40°/+80°C
- Flow temperature +40°C (for short periods max. +80°C)



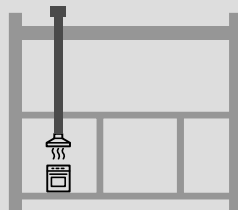
## VENTILATION SITUATIONS



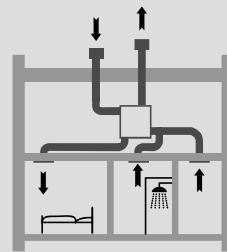
Ventilation of bathrooms and toilets without a window to the outside (DIN 18017)



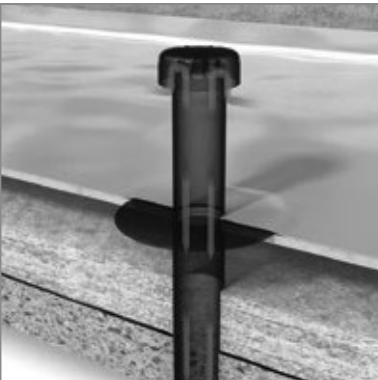
Soiled water ventilation (DIN1986)



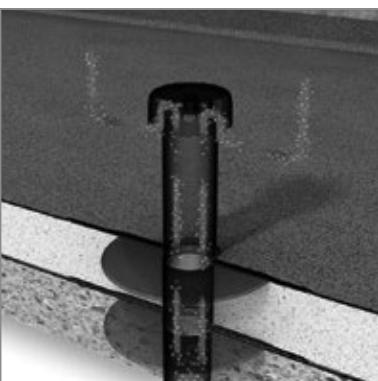
Ventilation for steam extraction hoods in kitchens



Controlled living space ventilation



Installation example:  
Flavent® single-piece breather/  
soil vent for ventilated roof  
with PVC roof membrane.



Installation example:  
Flavent® two-piece breather/  
soil vent for unventilated roof  
with bitumen roof membrane.



#### Connector diameters

- DN 70, 100, 125, 150
- Special diameter in DN100 for pipes with cut-off sleeve

#### Possible connectors

- Hard PVC flange
- Bitumen skirt
- Screw connector (only in DN 100, DN 125)



#### Standards

- DIN EN 12056 part 3
- DIN 1986 part 100
- DIN EN 1253
- DIN 18195
- DIN 18017

#### Add-on products

- Vent lower sections
- Upper pipe extensions
- Insulation package pipe extensions
- Tangit PVC adhesive

#### Product codes

See table page 27

#### Technical instructions

- Whether single-piece or two-piece with height increase element for bitumen roofs or with screw ring system for plastic roofs, the living space breather vents in the usual nominal widths (DN 70, DN100, DN 125, DN 150) obtain high ventilation performance.

#### Processing

















- Ventilation pipes must be taken up at least 15cm above the roof surface, in areas with much snow appropriately more.
- Connectors between roof penetration and ventilation pipe may be constructed flexibly with hose connectors of maximum 1m length.



Please note also the instructions in the laying instruction.

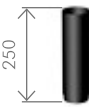


### SPLIT OF VENTILATION CROSS-SECTION

Diameters	DN 70	DN 100	DN 125	DN 150
<b>SUPPLY AIR</b>				
Pressure losses at airflow of				
15 l / sec	23 pa	7 pa	3 pa	0 pa
30 l / sec	93 pa	27 pa	13 pa	0 pa
60 l / sec	372 pa	109 pa	52 pa	1 pa
Ventilation cross-section	38 cm <sup>2</sup>	78,50 cm <sup>2</sup>	113 cm <sup>2</sup>	177 cm <sup>2</sup>
<b>EXHAUST AIR</b>				
Pressure losses at airflow of				
15 l / sec	49 pa	14 pa	7 pa	1 pa
30 l / sec	195 pa	55 pa	27 pa	4 pa
60 l / sec	781 pa	218 pa	107 pa	14 pa
Ventilation cross-section	38 cm <sup>2</sup>	78,50 cm <sup>2</sup>	113 cm <sup>2</sup>	177 cm <sup>2</sup>

# FLAVENT® BREATHER VENTS PRODUCT OVERVIEW

		DN 70	DN 100	DN 100	DN 125	DN 150
Ventilated roof	 <b>Hard PVC flange</b>	 261 ø285 KF 6000	 345,5 ø350 KF 6010	 346,7 ø350 KF 6020	 411 ø366 KF 6030	 400 ø446 KF 6140
	 <b>Bitumen skirt</b> (skirt dimensions 500 x 500mm)	 261 ø285 KF 6001	 345,5 ø350 KF 6011	 346,7 ø350 KF 6021	 411 ø366 KF 6031	 400 ø446 KF 6141
	 <b>Screw connector</b>		 345,5 ø350 KF 6012	 346,7 ø350 KF 6022	 411 ø366 KF 6032	
		length extension restricted, separate manually, bond to stub	length extension restricted, separate manually, bond to stub or bond with optional connection socket	Infinately extendable	Infinately extendable	

		DN 70	DN 100	DN 100	DN 125
Unventilated roof	 <b>Hard PVC flange Lower part DN 40</b>		 214 ø259 KF 6100		

		DN 70	DN 100	DN 100	DN 125
	<b>Upper pipe extensions</b> (can be shortened (reducible) individually)	 250 KF 6806	 340 KF 6807	 340 KF 6807	 300 KF 6808









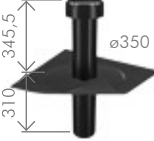

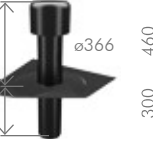





Additional remarks:







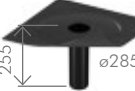



\* Modular use as rainwater outlet, extension element, vent lower part.

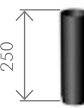







All individual components are to be bonded with Tangit (except leaf and gravel filter and connector ring).

The technical drawings of all articles can be downloaded under [www.kloeber.eu.com](http://www.kloeber.eu.com)

# FLAVENT® ROOM AND SOIL VENTILATION PRODUCT OVERVIEW

		DN 70	DN 100	DN 100	DN 125	DN 150
Ventilated roof	 <b>Hard PVC flange</b>	 KF 6040	 KF 6050	 KF 6060	 KF 6070	 KF 6080
	 <b>Bitumen skirt</b> (skirt dimensions 500 x 500mm)	 KF 6041	 KF 6051	 KF 6061	 KF 6071	 KF 6081
	 <b>Screw connector</b>		 KF 6052	 KF 6062	 KF 6072	
		length extension restricted, separate manually, bond to stub	Refurbishment vent for socket-less pipes, length extension restricted, separate manually, bond to stub or optional with connection coupling		infinitely extendable	

		DN 70	DN 100	DN 100	DN 125	DN 150
Unventilated roof	 <b>Hard PVC flange Lower part*</b>	 KF 6500	 KF 6510	no lower part necessary	 KF 6520	 KF 6570
	 <b>Bitumen skirt Lower part*</b> (skirt dimensions 500 x 500mm)	 KF 6501	 KF 6511	no lower part necessary	 KF 6521	 KF 6571

		DN 70	DN 100	DN 100	DN 125
Upper pipe extensions (can be shortened individually)	<b>Upper pipe extensions</b> (can be shortened individually)	 KF 6806	 KF 6807	 KF 6807	 KF 6808
	<b>Insulation package pipe extensions</b> (can be shortened individually)	 KF 6836	 KF 6837	 KE 8006	 KF 6838
		> 194mm	> 275mm	> 275mm	> 235mm

Extension necessary from insulation thickness...