ENGINEERING
TOMORROW

Technical Catalogue for Danfoss Air Ventilation

As **flexible and logical** as you want it. Make the most of **your time**



3 great reasons

to choose Danfoss Air ventilation:

- Easy installation
- Comissioning via PC tool
- Complete and professional documentation with AirCalc sizing software

air.danfoss.com

IMPROVED AIR
IMPROVED BUSINESS

Choose performance. Choose ease. Choose Air.

Danfoss Air is the system of choice when planning new build and for installing in existing dwellings, and it is not merely a ventilation system or a heat recovery unit. It is a complete energy efficient solution from one supplier: Danfoss.

With security, support and service from just one experienced supplier, you are allowed the freedom to focus on creating value for your customers instead of worrying about system integration or whether wholesalers have the necessary products in stock.

Danfoss provides competent feedback and value-adding help through every phase of the project and helps tailor the complete Air system to the individual project along with complete documentation, set-up software, and support by experienced technicians.

The Danfoss Air system comprises five main areas, which cover every aspect of installation, day-to-day operation, and after-sales service and maintenance:

- Air Units
- Air Dial
- Air Ducts & Air Flex
- Air Heaters
- AirCalc sizing tool

All in all, Danfoss aims to be your system of choice applying to both traditional and flex systems and all phases of your project. And with more than 2.500 European installers already on our side, we look forward to welcoming you on team Danfoss Air as well!

Danfoss Air Units are certified for use in passive houses by the Passivhaus Institute in Darmstadt, Germany and certified in accordance with Deutsches Institut für Bautechnik's • DIBT/LÜ-A 20 standard. Danfoss Air Flex pipes are Indoor Climate certified in accordance with the Danish Technological Institute.



Just add a pc and a utility knife ...

1. Air Units
The heart of the Danfoss Air System, the unit is available in four different models suited for either wall or attic installation.

2. Air Dial
The Control Unit provides easy, user-friendly, intuitive, and wireless access to controlling all aspects of operation. The elegant design ensures that the unit will blend in anywhere.

3. Air Ducts & Air Flex
In order to optimize ease of installation and performance, Danfoss provides a wide range of ducts, pipes, fittings, etc. All you need is included in the package.

4. Air Heaters
The Danfoss Air System can be expanded with a Heating Surface heated by e.g. electricity, district heating, heat pump, or geothermal pre heating/pre cooling.

5. AirCalc sizing tool
Each system is individually tailored with focus on sound and performance using the AirCalc sizing tool, hence guaranteeing an optimum solution.

Content

Page 2-3	»	Introducing Danfoss Air	Page 22	»	Flex pipes and components
Page 4-5	»	Specification and installation	Page 42	»	Heaters
Page 6-7	»	Installer and customer benefits	Page 45	»	Filters and accessories
Page 8	»	Expansion possibilities	Page 49	»	Application drawings
Page 9	**»**	**Technical catalogue**	Page 51	»	Certificates
Page 10	»	Danfoss Air a^2 and a^3			
Page 16	»	Danfoss Air w^1 and w^2			

Danfoss Air was created to be in sync with you and your customers' demands and to help save time and money in e.g. the project phase. As a full-service provider, Danfoss can assist you with tenders, BE 10 data and provide support from dedicated experts.

With a dedicated contact person, you will have just one entrance into the entire organization, and access to a trusted expert who can and will use his internal network to gather the optimum solutions and data for you.

So let's discuss your specific project and locate genuine savings. Our experience tells us that a joint project based approach brings about measurable advantages for you – and we encourage you strongly to take us up on that.

AS SPECIFIC AS YOU WANT IT

AIRCALC + PC TOOL = YOUR FAVOURITE TOOLS

Save 30 minutes on every installation by using the pre-setting suggestions given by the AirCalc software. Connect your computer directly to the Danfoss unit, and let PC tool guide you through all areas of the system set-up directly from your laptop. It shows you exactly how the valves must be set up, and thus ensures fast initial regulation / adjustment. Finally our PC tool also enables you to hand over a precise, consistent and professional regulation report.

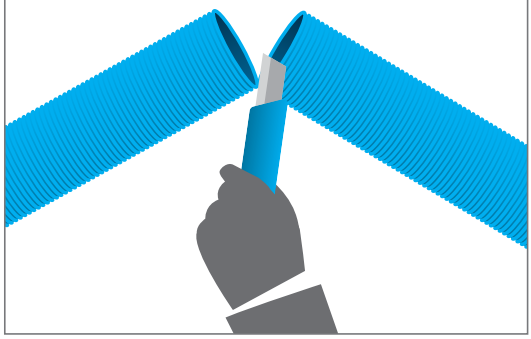
You get:

- Better documentation
- Auto generated parts list for fail prevention
- Auto generated professional report for quality control
- Easy access for operational control

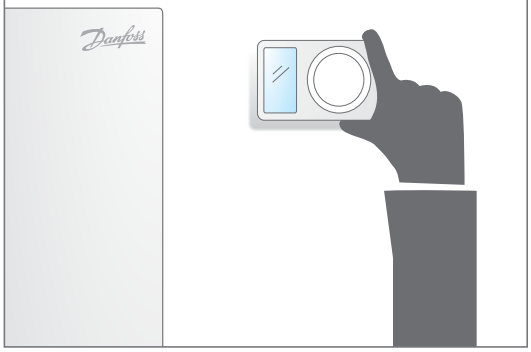
Being able to document your work will not only ensure happy customers on the current project. It will save you time and give you a reputation for quality in the long run as well.



1 Cut and mount the Air Flex pipes



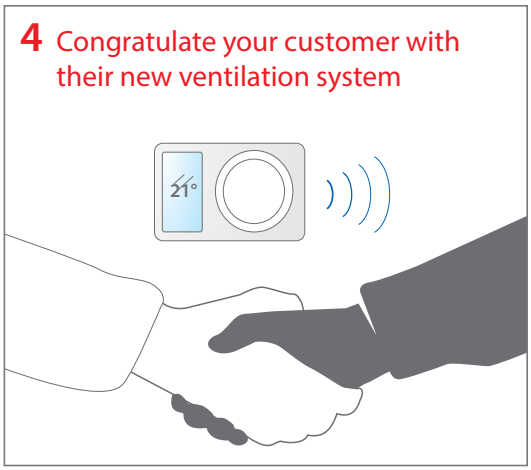
2 Mount unit, ccm and air dial



3 Run the set-up wizard



4 Congratulate your customer with their new ventilation system



SIMPLE TO MOUNT
SIMPLE TO SET UP

Time is money, so you will surely appreciate the fact that the delivery and initial adjustment have never been easier. Dimensioning and documentation are also included when you choose a Danfoss Air System.

Danfoss' Air Flex ducts make it possible to install efficient ventilation in all types of homes, not least two-storey houses and those with vaulted ceilings that were once difficult and expensive to ventilate. The new, flexible plastic ducts are easy to embed in floors and wall space, which ensures effective ventilation in renovated and new buildings.

Initial adjustment is done faster and more accurate with a safe and easy accessible measuring point in front of the unit – saving you 60 minutes of work on every job.

Forget about using tools once the ducts are mounted and the Air Unit is connected. Simply connect the communication module to the Air Unit with a plug. Once the communication module is connected, the Air system will automatically take you through the process of setting up the complete system solution. And that's it!

WIRELESS FLEXIBILITY MAKES YOU LOOK GOOD

All Danfoss Air units come with a wireless remote control device as standard – which gives your customers unrivalled ease of use in one robust and elegant control device.

The control unit can be placed almost anywhere for easy access and complete control, and the unit can be moved to wherever the customer wants it.

The wireless unit is not only a convenience for the customer. With no wall drilling and no wiring you are in charge of delivering a perfect solution to a happy customer. And just imagine the time and money you will save when installing the unit on a renovation project:

Today:		**Tomorrow:**	
Grooving 5 meters of cables:	20 min.	~~Grooving 5 meters of cables:~~	
Vacuuming:	5 min.	~~Grooving 5 meters of cables:~~	
Wall repair:	20 min.	~~Wall repair:~~	
Paint job:	5 min.	~~Wall repair:~~	
Total:	50 min.	Total:	0 min.

The bottom-line is:
The solution looks good, works great, and in the eyes of the customer, you are the hero.



A UNIT IS JUST A UNIT OR IS IT?

The Danfoss Air system consumes very little energy and through the use of heat recovery the approximate annual savings are 5.000–6.000 kWh.

Furthermore, Danfoss Air has perfect insulation with the market's lowest U-value, which e.g. reduces heat loss from an attic with 170 kWh/year – for the entire life span of the system!

Danfoss Air a-models for mount in attics have U-values of 0,7 W/m²K
Danfoss Air w-models for mount on walls have U-values of 0,97 W/m²K

+ Better isolation provides safety against unintended condensation
+ Defrosting begins later





WHAT ARE THE BENEFITS TO YOUR CUSTOMERS?

The Air system comes with numerous valuable advantages for you to pass directly on to your customer. Feel free to take the credit – this has always been the intention.

- **Improved well-being (allergy friendly)**
  No condensation and harmful mold
- **Improved indoor climate**
  Without opening windows
- **Increase in building resale value**
  No running costs means no running costs
- **Energy efficient solution**
  A perfect solution in times that calls for sustainable solutions
- **Minimum installation hassle**
  As flexible and logical as you want it – in all phases
- **Free AirCalc sizing software**
  Secures optimum calculation and documentation of the system

EXPANSION POSSIBILITIES

Add a geothermal pre heater

Provides cool air on hot days and prevents the heat exchanger from frosting.

- Reduces heating costs by pre heating supply air
- Helps to prevent the heat exchanger from freezing

Add an electric pre heater

Prevent defrosting and ensure a perfect balance of air between supply air and exhaust air.

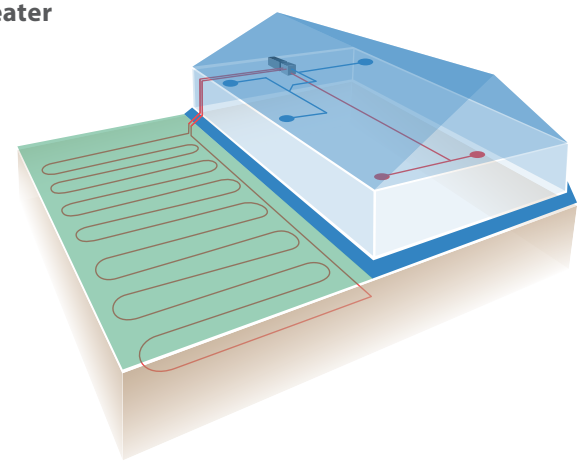
- *Especially suited for cold climates*
- Operated by a micro controller and a solid state relay
- Optimum operation
- Minimal power usage

Add an after heater

Ensures supply air at or slightly above room temperature.

- Prevents draught near the supply air valves aka "comfort mode"
- Available in an electric version and as central heating version

Geothermal heater



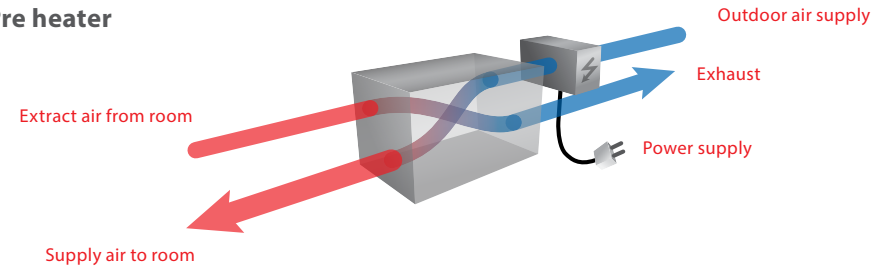
Pre heater benefits

- Reduces and raises the temperature of the outside air entering the house
- Energy efficient way of cooling with environmental care
- Integrated condensation drain
- Integrated settings in the Air Dial
- Taking advantages of indirect solar heating in the ground
- Energy efficient frost protection of the heat exchanger

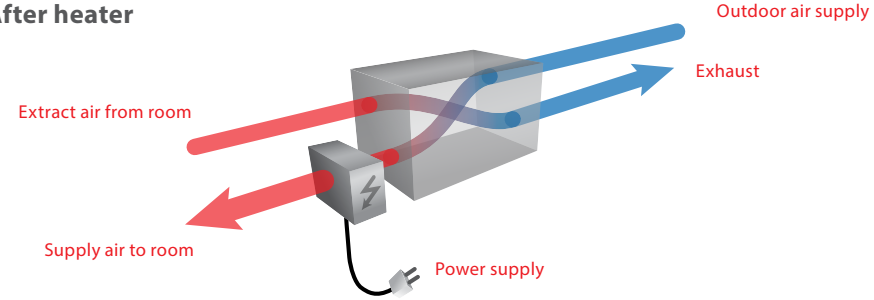
After heater benefits

- All heating options provide plug-and-play installation
- Air Dial remote control will auto-detect any optional devices added
- Heating surfaces can be controlled from the Air Dial remote control
- Heating surfaces have integrated frost or overheating protection
- All heating surfaces are supplied as "ready-to-use" from the Danfoss factory

Pre heater



After heater





TECHNICAL CATALOGUE >

The Danfoss Air system was developed with professionals in mind and with a clear mission: To create a system that minimizes time spent on dimensioning, installation and set-up through intuitive processes and superior support, while enabling professionals to pass on advantages straight to the customer.

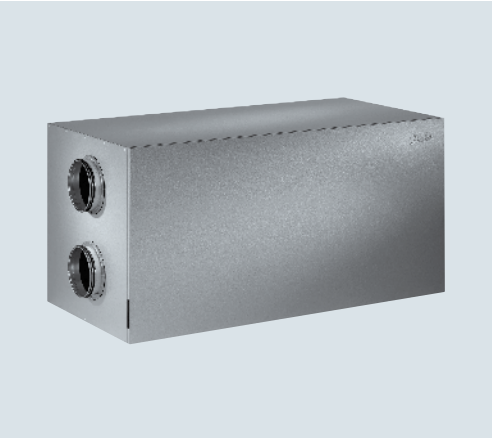
On the following pages you can get acquainted with the members of the Airline "family" and see for yourself how a convenient, intelligent ventilation and heat recovery system will create value for you and your customers.

DANFOSS AIR a²

Description:

Ventilation unit for floor mounting, e.g. in the attic.

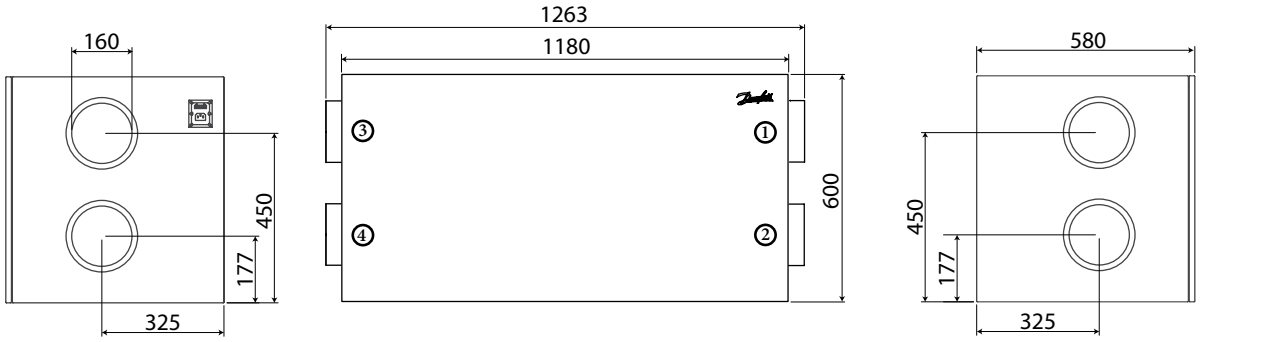
Air volume	0-300 m³/h at 100 Pa ext. pressure
Air volume, nominal	220 m³/h
Width	1180 mm
Height	600 mm
Depth	580 mm
Weight	50 kg
Air connector	Ø 160, 4
Electrical connection	230 V, 50 Hz
Connection to condensation pipe	Ø19 soft plastic (for 3/4" pipe)



Ordering:

Code.....089F0231

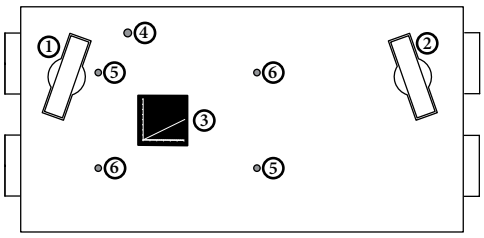
Dimensions



① Outdoor air ② Exhaust air ③ Extract air ④ Supply air

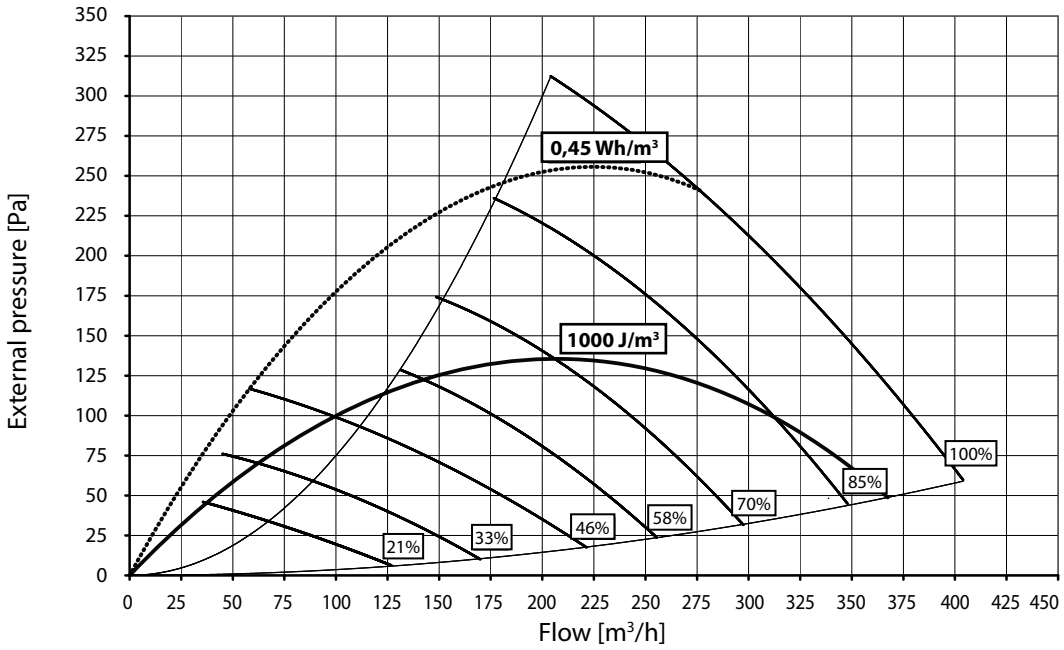
Weight of unit: 52 kg

Front view (without front panel)



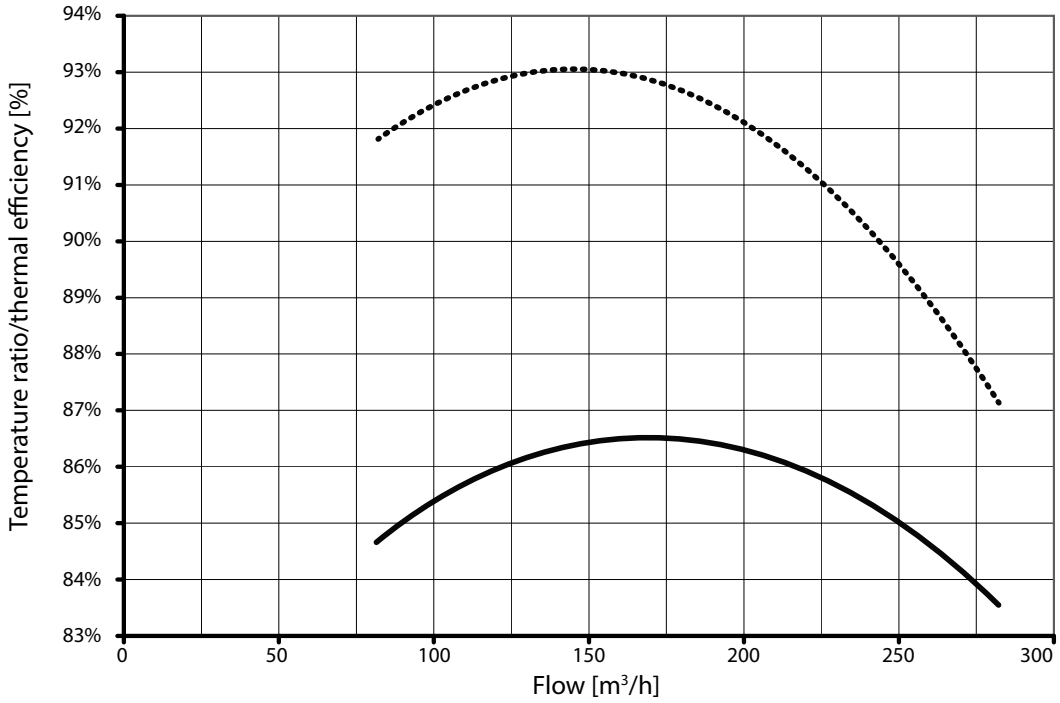
① Filter, extract air
② Filter, supply air
③ Flow chart (for balancing)
④ Filter reset button
⑤ Differential pressure for extract air
⑥ Differential pressure for supply air

Capacity



0,45 W/m³/h = passive house requirements
% = % of fan speed

Temperature ratio



extract air: t=21°C; RH=36%
fresh air: t= -3°C; RH=80%
with condensation
with 5% imbalance

extract air: t=25°C; RH<27%
fresh air: t=5°C
as acc. to EN308

Typical operation

Flow	Pext.	SFP	P1 tot.
160 m³/h	50 Pa	615 J/m³	27 W
220 m³/h	70 Pa	728 J/m³	44 W
220 m³/h	100 Pa	854 J/m³	52 W
260 m³/h	70 Pa	783 J/m³	57 W
260 m³/h	100 Pa	894 J/m³	65 W
300 m³/h	90 Pa	936 J/m³	78 W

Sound data

Flow	Pressure	Measured at:	Frequency band, sound power Lw(A) [dB(A)]								Sound pressure Lp(A) (standard* room)
m³/h	Pa		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	[dB(A)]
162	70	Supply air duct	23	34	40	36	29	25	17	18	
		Extract air duct	23	33	39	37	29	24	18	18	
		Cabinet									40
162	100	Supply air duct	25	35	43	38	31	28	18	18	
		Extract air duct	25	36	42	39	30	25	17	18	
		Cabinet									41
216	70	Supply air duct	26	36	44	39	33	30	19	18	
		Extract air duct	28	36	43	41	34	29	18	18	
		Cabinet									45
216	100	Supply air duct	26	37	44	40	34	31	19	18	
		Extract air duct	27	37	45	42	35	30	19	18	
		Cabinet									46
250	100	Supply air duct	28	39	46	42	37	33	21	18	
		Extract air duct	30	39	48	45	38	33	20	18	
		Cabinet									49

* values for sound pressure calculated for standard room with A = 10m², H = 2,4m and mean absorption 0,2

Description:

Ventilation unit for installing in non-heated rooms e.g. attic.

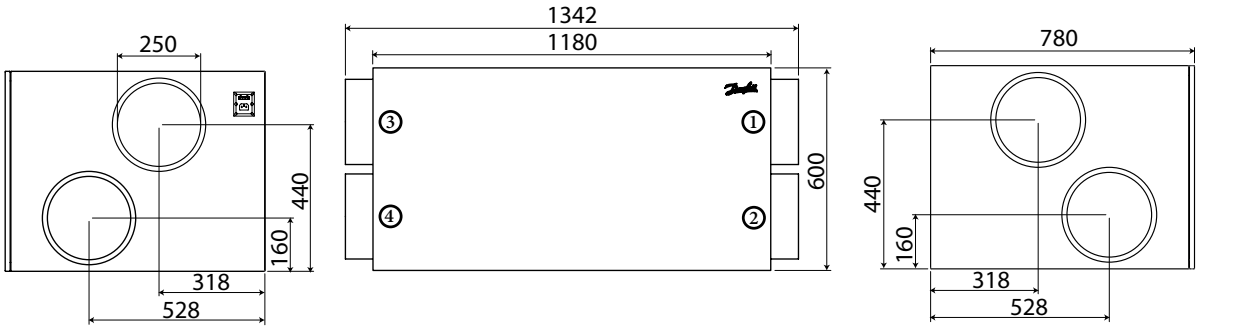
Air volume	0-500 m³/h at 100 Pa ext. pressure
Air volume, nominal	350 m³/h
Width	1180 mm
Height	600 mm
Depth	780 mm
Weight	67 kg
Air connector	Ø 250, 4
Electrical connection	230 V, 50 Hz
Connection to condensation pipe	Ø19 soft plastic (for 3/4" pipe)



Ordering:

Code..... 089F0232

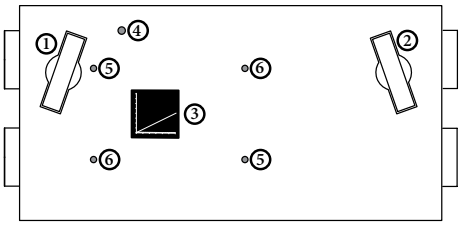
Dimensions



① Outdoor air ② Exhaust air ③ Extract air ④Supply air

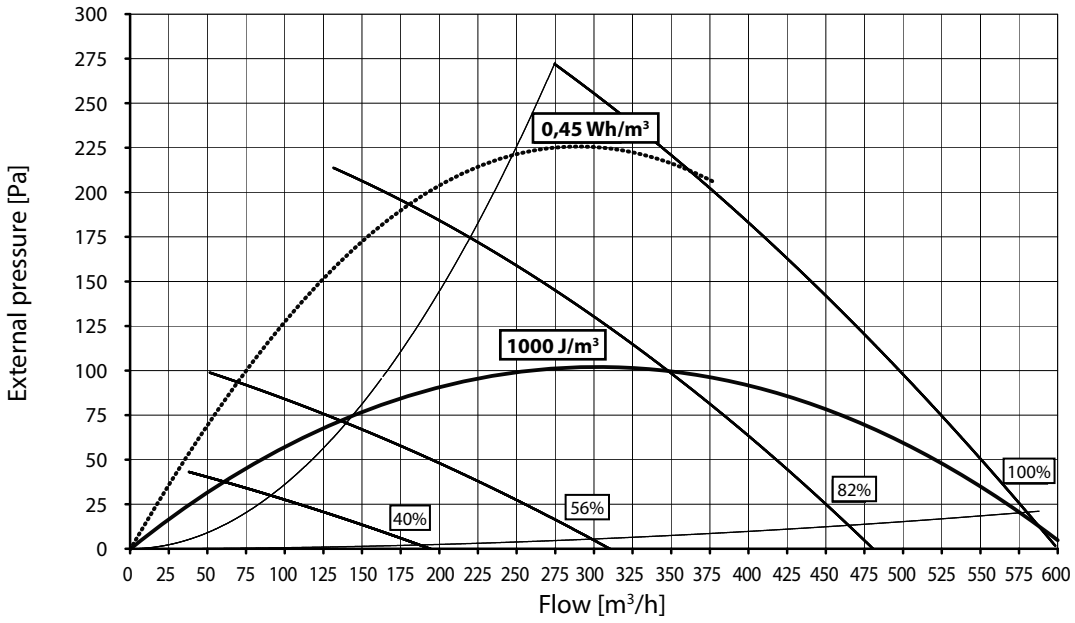
Weight of unit: 67 kg

Front view (without front panel)



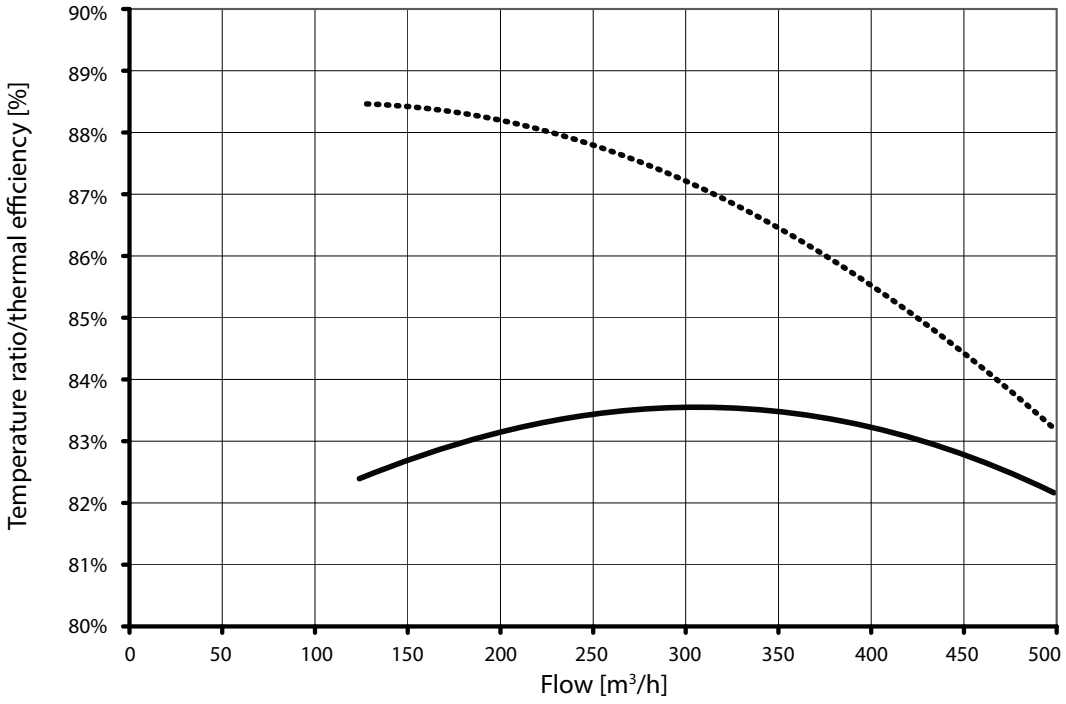
① Filter, extract air
② Filter, supply air
③ Flow chart (for balancing)
④ Filter reset button
⑤ Differential pressure for extract air
⑥ Differential pressure for supply air

Capacity



0,45 W/m³/h = passive house requirements
% = % of fan speed

Temperature ratio



..... extract air: t=21°C; RH=36%
fresh air: t=-3°C; RH=80%
with condensation with 5% imbalance
——— extract air: t=25°C; RH<27%
fresh air: t=5°C
as acc. to EN308

Typical operation

Flow	Pext.	SFP	P1 tot.
200 m³/h	70 Pa	787 J/m³	44 W
350 m³/h	70 Pa	835 J/m³	81 W
450 m³/h	70 Pa	973 J/m³	122 W
350 m³/h	100 Pa	1000 J/m³	97 W

Sound data

Flow	Pressure	Measured at:	Frequency band, sound power Lw(A) [dB(A)]								Sound pressure Lp(A) (standard* room)
m³/h	Pa		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	[dB(A)]
350	70	Supply air duct	35	45	56	49	47	44	31	16	
		Extract air duct	35	44	54	48	48	44	31	19	
		Cabinet	33	42	54	46	45	43	30	20	57
		Supply air duct	39	48	62	55	52	50	37	22	
450	100	Extract air duct	39	47	61	55	53	48	37	20	
		Cabinet	38	46	60	52	50	47	36	22	61

* values for sound pressure calculated for standard room with A = 10m², H = 2,4m and mean absorption 0,2

DANFOSS AIR w[1]

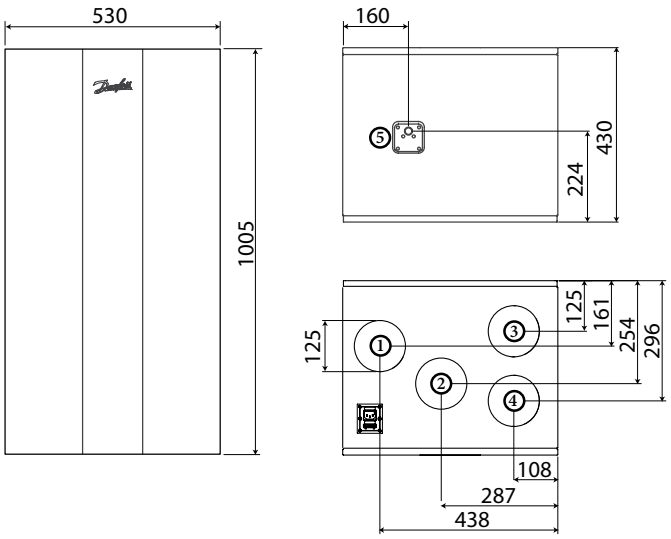
Description: Ventilation unit for wall mounting.

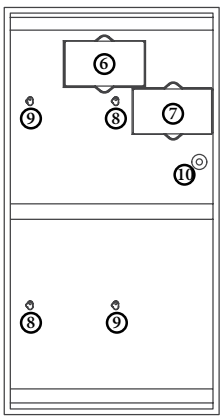
Air volume	0-180 m³/h at 100 Pa ext. pressure
Air volume, nominal	140 m³/h
Width	530 mm
Height	1042 mm
Depth	430 mm
Weight	37 kg
Air connector	Ø 125, 4
Electrical connection	230 V, 50 Hz
Connection to condensation pipe	Ø19 soft plastic (for 3/4" pipe)



Ordering: Code..... 089F0233

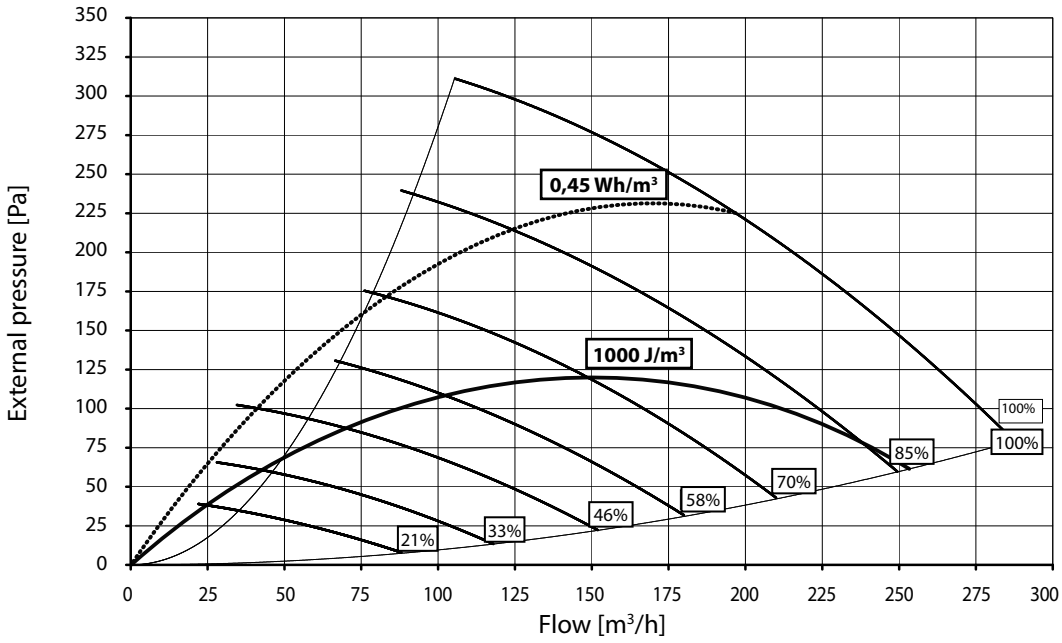
Dimensions





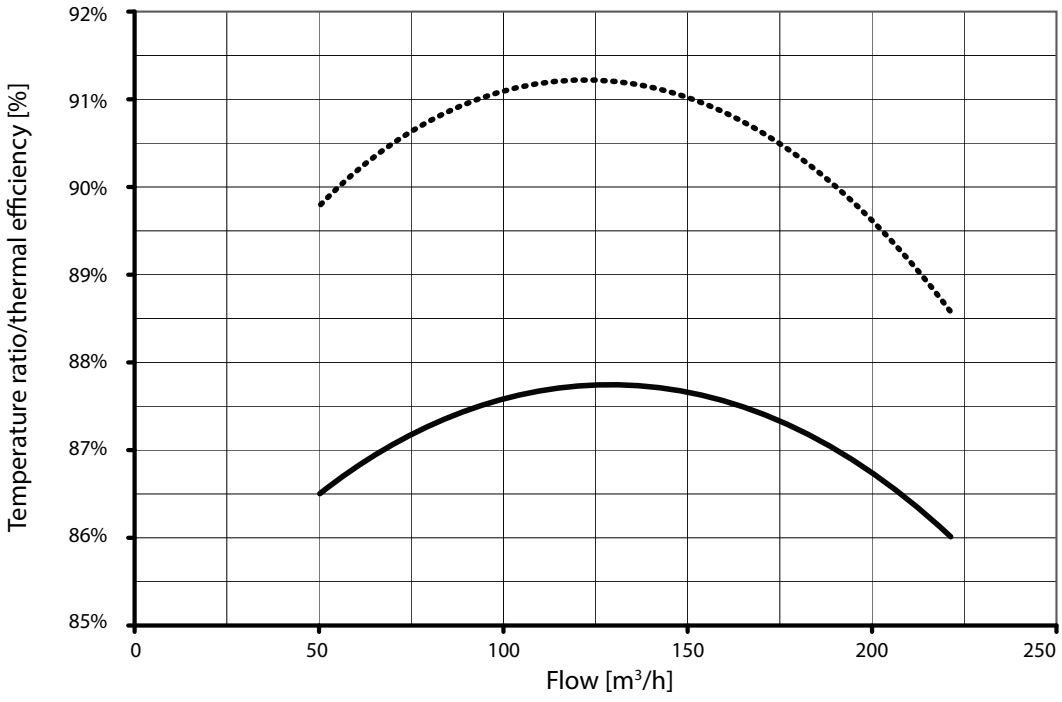
① Supply air
② Extract air
③ Exhaust air
④ Outdoor air
⑤ Condensate drain
⑥ Filter, extract air
⑦ Filter, supply air
⑧ Differential pressure for extract air
⑨ Differential pressure for supply air
⑩ Filter reset button
Weight of unit: 31 kg

Capacity



0,45 W/m³/h = passive house requirements
% = % of fan speed

Temperature ratio



..... extract air: t=25°C; RH=52%
fresh air: t=5°C
with condensation with 5% imbalance

——— extract air: t=25°C; RH<27%
fresh air: t=5°C
as acc. to EN308

Typical operation

Flow	Pext.	SFP	P1 tot.
100 m³/h	35 Pa	588 J/m³	16 W
100 m³/h	55 Pa	682 J/m³	19 W
140 m³/h	60 Pa	710 J/m³	28 W
140 m³/h	70 Pa	759 J/m³	30 W
180 m³/h	70 Pa	798 J/m³	40 W
180 m³/h	100 Pa	945 J/m³	47 W

Sound data

Flow	Pressure	Measured at:	Frequency band, sound power Lw(A) [dB(A)]								Sound pressure Lp(A) (standard* room)
m³/h	Pa		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	[dB(A)]
126	70	Supply air duct	20	30	41	42	38	30	19	18	
		Extract air duct	18	30	41	41	30	26	18	18	
		Cabinet									47
126	100	Supply air duct	22	32	46	45	39	32	21	18	
		Extract air duct	22	33	43	42	32	27	19	18	
		Cabinet									50
162	70	Supply air duct	23	31	43	46	41	33	22	18	
		Extract air duct	26	31	42	43	33	29	21	18	
		Cabinet									53
162	100	Supply air duct	28	33	44	48	43	35	23	18	
		Extract air duct	29	34	44	51	37	31	23	18	
		Cabinet									55
216	70	Supply air duct	28	33	44	54	46	37	28	18	
		Extract air duct	27	33	43	52	39	33	27	18	
		Cabinet									57
216	100	Supply air duct	28	35	45	55	46	38	29	18	
		Extract air duct	32	34	44	52	40	34	28	18	
		Cabinet									56

* values for sound pressure calculated for standard room with A = 10m², H = 2,4m and mean absorption 0,2

DANFOSS AIR w²

Description:

Ventilation unit for wall mounting.

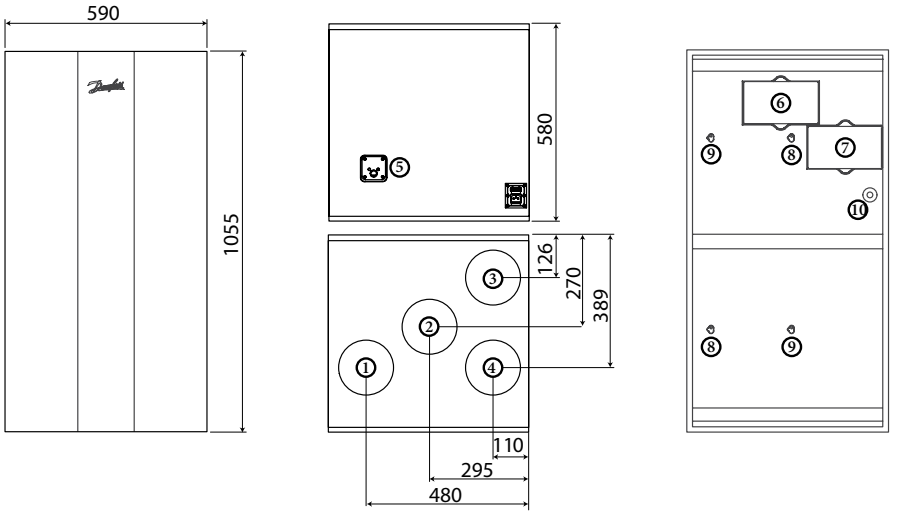
Air volume	0-300 m³/h at 100 Pa ext. pressure
Air volume, nominal	220 m³/h
Width	590 mm
Height	1092 mm
Depth	580 mm
Weight	46 kg
Air connector	Ø 160, 4
Electrical connection	230 V, 50 Hz
Connection to condensation pipe	Ø19 soft plastic (for 3/4" pipe)



Ordering:

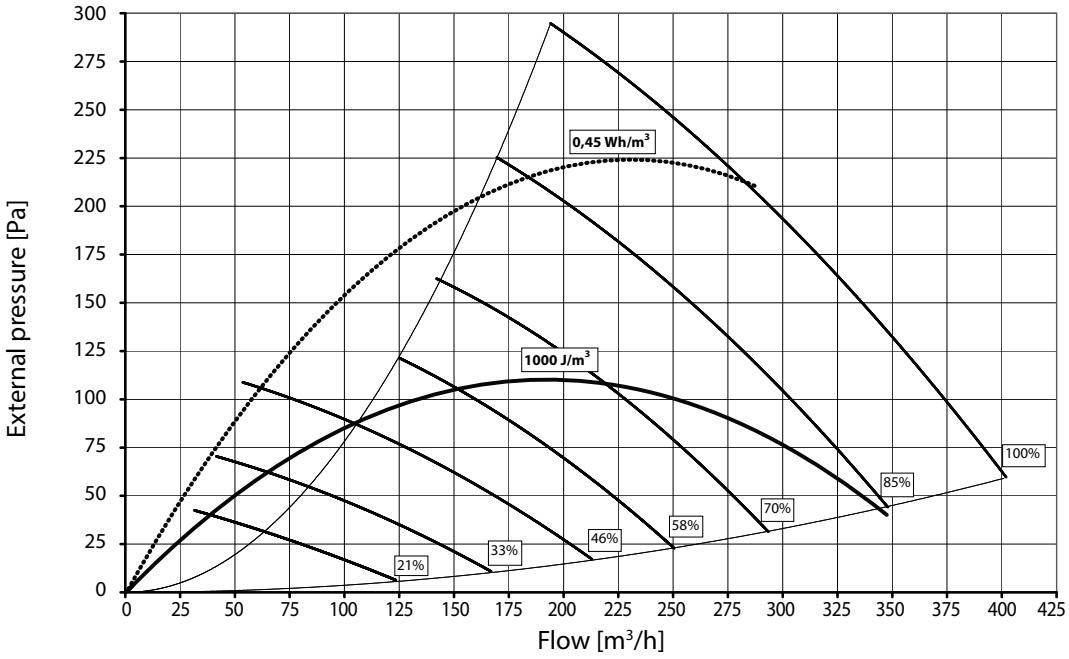
Code..... 089F0234

Dimensions



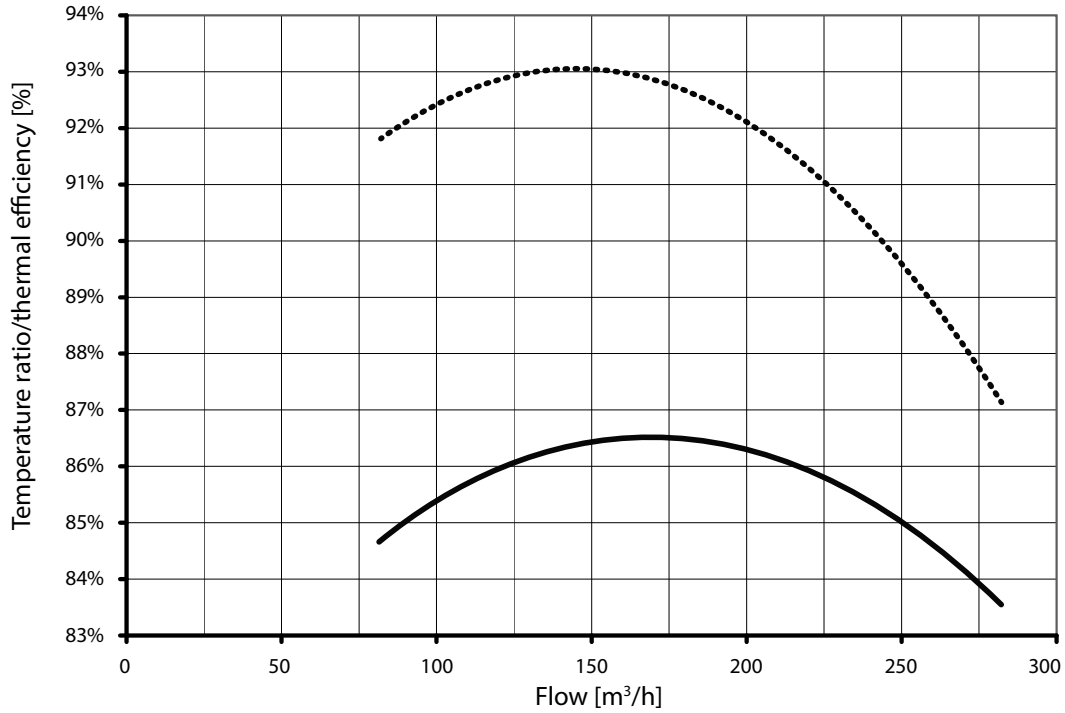
① Supply air
② Extract air
③ Exhaust air
④ Outdoor air
⑤ Condensate drain
⑥ Filter, extract air
⑦ Filter, supply air
⑧ Differential pressure for extract air
⑨ Differential pressure for supply air
⑩ Filter reset button
Weight of unit: 45 kg

Capacity



0,45 W/m³/h = passive house requirements
% = % of fan speed

Temperature ratio



..... extract air: t=21°C; RH=36%
fresh air: t= -3°C; RH=80%
with condensation with 5% imbalance
——— extract air: t=25°C; RH<27%
fresh air: t=5°C
as acc. to EN308

Typical operation

Flow	Pext.	SFP	P_1 tot.
160 m³/h	50 Pa	700 J/m³	31 W
220 m³/h	70 Pa	832 J/m³	51 W
220 m³/h	100 Pa	963 J/m³	59 W
260 m³/h	70 Pa	892 J/m³	64 W
260 m³/h	100 Pa	996 J/m³	72 W
280 m³/h	90 Pa	1000 J/m³	78 W

Sound data

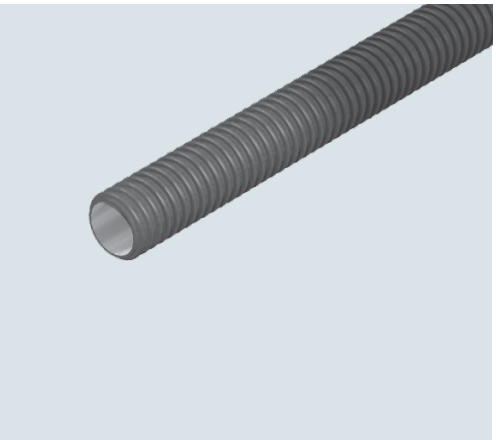
Flow	Pressure	Measured at:	Frequency band, sound power Lw(A) [dB(A)]								Sound pressure Lp(A) (standard* room)
m³/h	Pa		63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	[dB(A)]
126	50	Supply air duct	20	30	34	36	23	19	17	18	
		Extract air duct	16	31	37	36	29	21	17	18	
		Cabinet									39
162	70	Supply air duct	23	33	35	40	32	24	18	18	
		Extract air duct	20	33	44	39	34	26	18	18	
		Cabinet									44
162	100	Supply air duct	25	36	42	42	34	28	18	18	
		Extract air duct	21	33	43	41	35	28	18	18	
		Cabinet									46
216	70	Supply air duct	25	34	42	42	35	28	19	18	
		Extract air duct	22	34	44	43	37	31	20	18	
		Cabinet									47
216	100	Supply air duct	26	36	43	44	36	30	20	18	
		Extract air duct	23	34	45	44	33	32	20	18	
		Cabinet									49
250	100	Supply air duct	27	36	45	45	38	31	21	18	
		Extract air duct	24	37	47	45	40	34	22	18	
		Cabinet									53

* Values for sound pressure calculated for a standard room with A = 10m², H = 2.4m and mean absorption 0.2

FLEX PIPE

Application

Used in ventilation systems that require a high level of flexibility - for both supply and exhaust.



Material

The raw material consists of environmentally-friendly poly-ethylene (PE), with no admixtures.

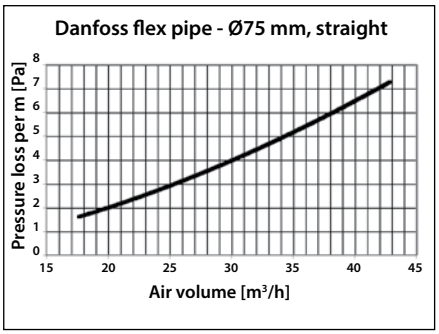
Chemical resistance

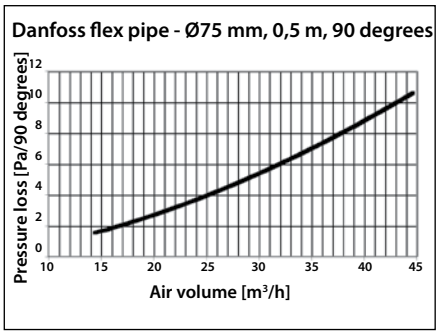
PE is resistant to almost all media (alcohol, grease, mineral oil, etc.). Only concentrated and highly oxidised acids can affect PE.

Standard/classification

All tubes listed below meet the requirements set out in DIN EN 50086-24.

Technical data





Ordering and Specifications

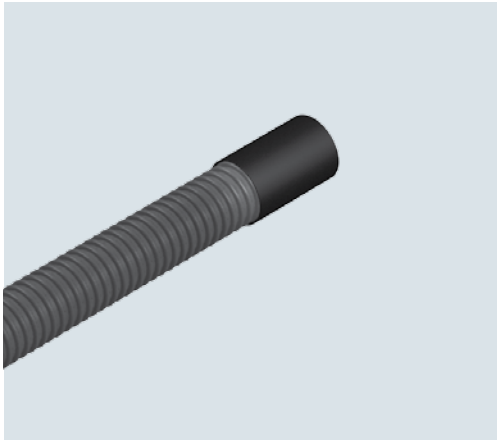
Order number	Type	Ext. diameter	Int. diameter	Length	Weight
089F0601	DFP-75	Ø75	Ø61	50 m	13,65 kg

Danfoss flex pipe is always delivered in 50-metre rolls.

FLEX COUPLING

Application

The Danfoss plastic coupling is used to connect two ends of Danfoss flex pipes.



Material

The raw material consists of environmentally-friendly poly-ethylene (PE), with no admixtures.

Standard/classification

The products listed below meet the requirements set out in DIN EN 50086-24.

Ordering and Specifications

Order number	Type	Ext. diameter	Int. diameter
089F0607	DPC-75	Ø78	Ø75

FLEX ELBOW

Application

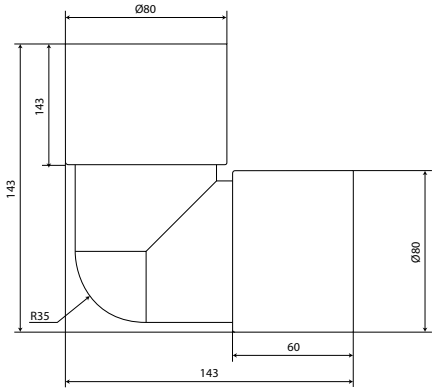
Danfoss plastic elbow is used to connect two ends of Danfoss flex pipes, where a 90 degree angle is required.



Standard/classification

The products listed below meet the requirements set out in DIN EN 50086- 24.

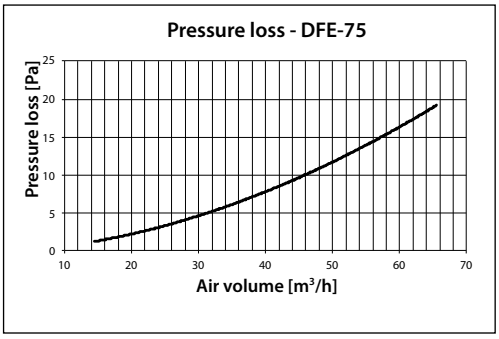
Dimensions



Material

The raw material consists of environmentally-friendly poly-ethylene (PE), with no admixtures.

Technical data



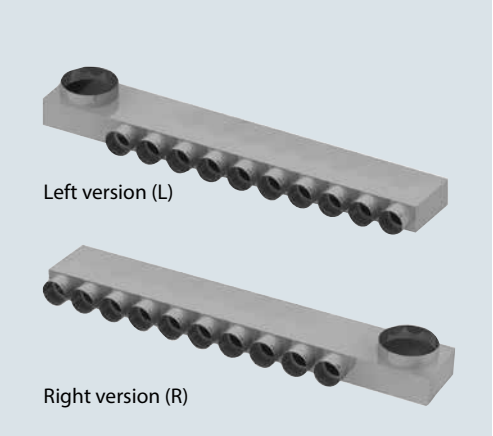
Ordering and Specifications

Order number	Type	Ext. diameter	Int. diameter
089F0654	DFE-75	Ø80	Ø77

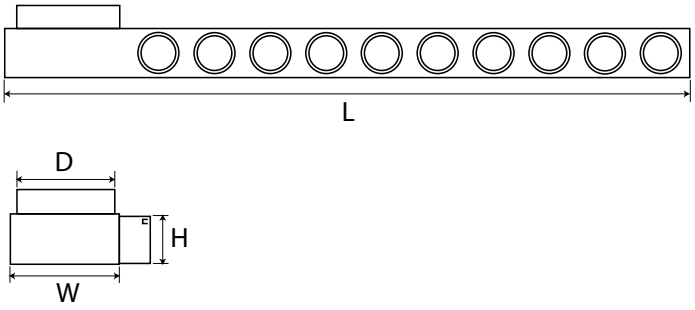
FLEX MANIFOLD

Application

The manifolds are used in ventilation systems for both supply and exhaust. All types are made as both "Left" and "Right" versions, to secure an optimal placement of the manifold.
Can be set in concrete or mounted in the plant room.
In order to facilitate cleaning, mount a DCH-150x150.



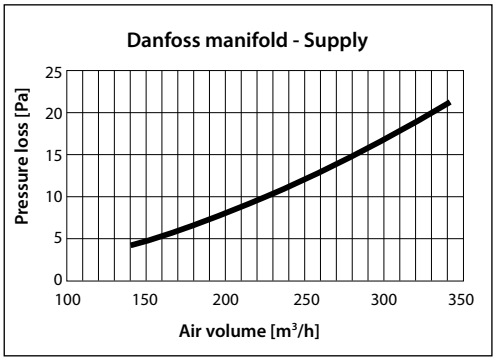
Dimensions

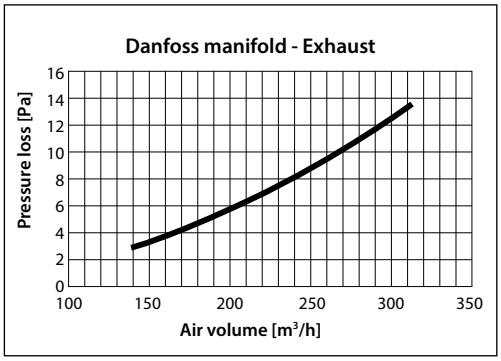


Material

Galvanised plate.

Technical data





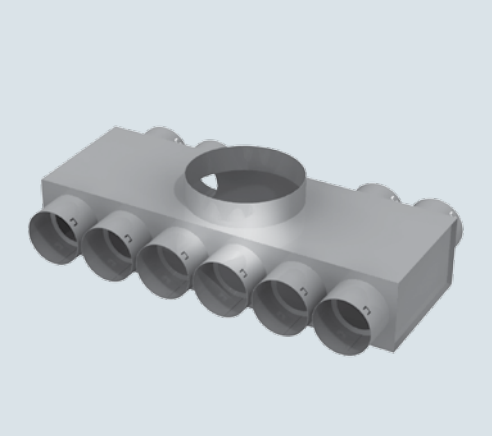
Ordering and Specifications

Order number	Type	H	B	L	D	Connection	Weight
089F0644	DMF-160/10x75-R	85 mm	180 mm	1170 mm	Ø160 mm	10 x ø75	3,0 kg
089F0645	DMF-160/10x75-L	85 mm	180 mm	1170 mm	Ø160 mm	10 x ø75	3,0 kg
089F0646	DMF-160/12x75-R	85 mm	180 mm	1290 mm	Ø160 mm	12 x ø75	3,3 kg
089F0647	DMF-160/12x75-L	85 mm	180 mm	1290 mm	Ø160 mm	12 x ø75	3,3 kg
089F0648	DMF-125/8x75-R	85 mm	180 mm	885 mm	Ø125 mm	8 x ø75	2,7 kg
089F0649	DMF-125/8x75-L	85 mm	180 mm	885 mm	Ø125 mm	8 x ø75	2,7 kg
089F0650	DMF-125/10x10-R	85 mm	180 mm	1070 mm	Ø125 mm	10 x ø75	3,0 kg
089F0651	DMF-125/10x10-L	85 mm	180 mm	1070 mm	Ø125 mm	10 x ø75	3,0 kg

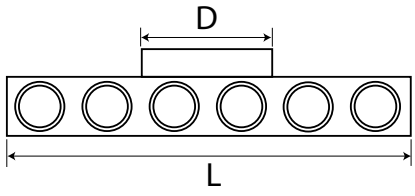
FLEX MANIFOLD

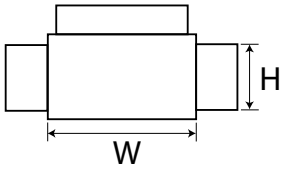
Application

DMF-160/14x75 and DMF-160/10x75 are used in ventilation systems for both supply and exhaust. DMF-125/6x75 is used for smaller ventilation systems, or in systems in which the volume of air must be distributed to two or more manifolds. Can be set in concrete or mounted in the plant room.
In order to facilitate cleaning, mount a DCH-150x150.



Dimensions

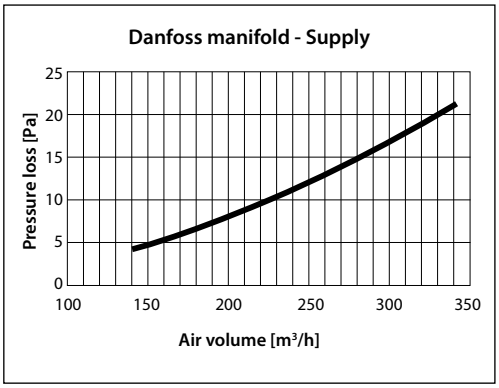


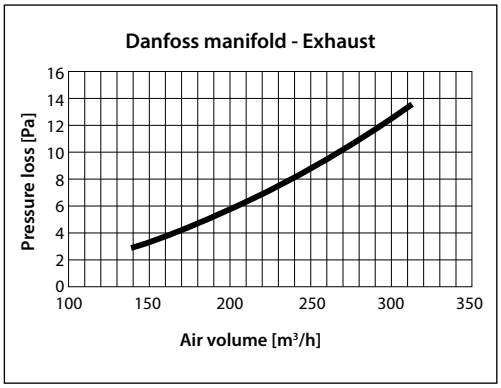


Material

Galvanised plate.

Technical data





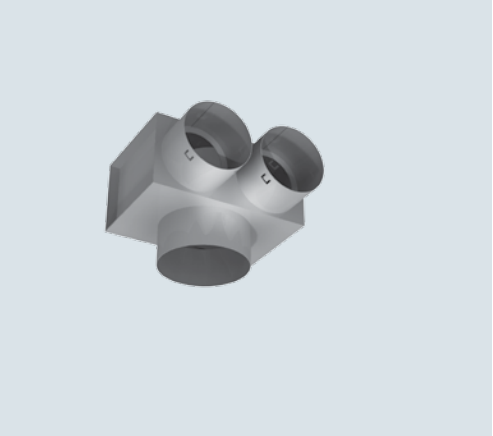
Ordering and Specifications

Order number	Type	H	W	L	D	Connection	Weight
089F0616	DMF-125/6x75	85	180	515	ø125	6 x ø75	1,9 kg
089F0617	DMF-160/10x75	85	180	515	ø160	10 x ø75	2,9 kg
089F0618	DMF-160/14x75	85	180	850	ø160	14 x ø75	3,1 kg

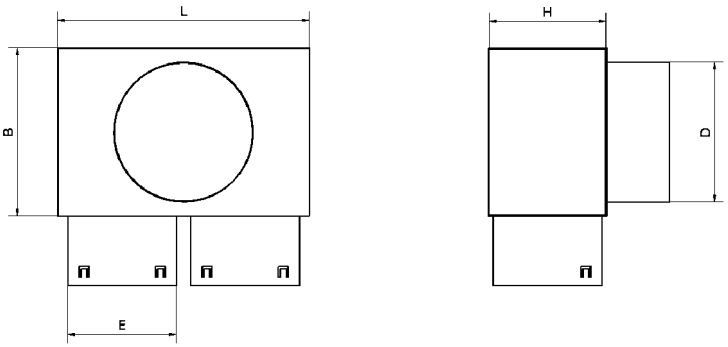
FLEX CEILING/WALL BOX

Application

Used in ventilation systems for supply and/or exhaust. Can be mounted on the ceiling or wall. Is equipped for the mounting of DFVS and DFVE valve types. Lindab KI, KIR, KU and KSU control valves can also be mounted in the box.
All valves must be ordered separately.



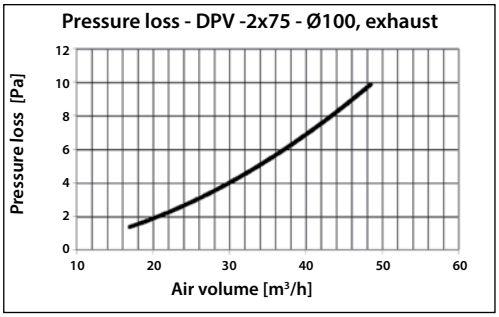
Dimensions

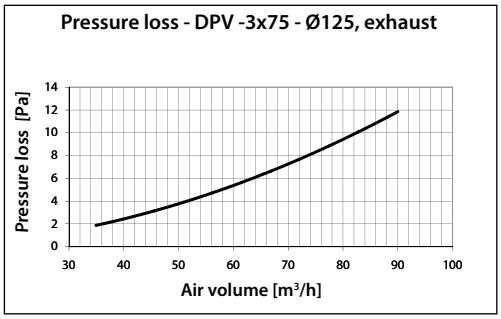


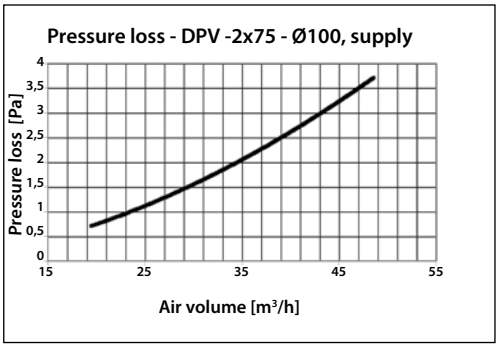
Material

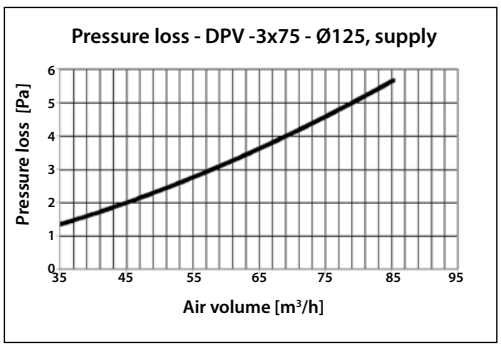
Galvanised plate.

Pressure loss diagram, supply
(only for box)









Ordering and Specifications

Order number	Type	H	W	L	D	Connection	Weight
089F0619	DPV-100/75	85	120	180	ø100	2xø75	0,75 kg
089F0620	DPV-125/75	85	145	265	ø125	3xø75	1,10 kg

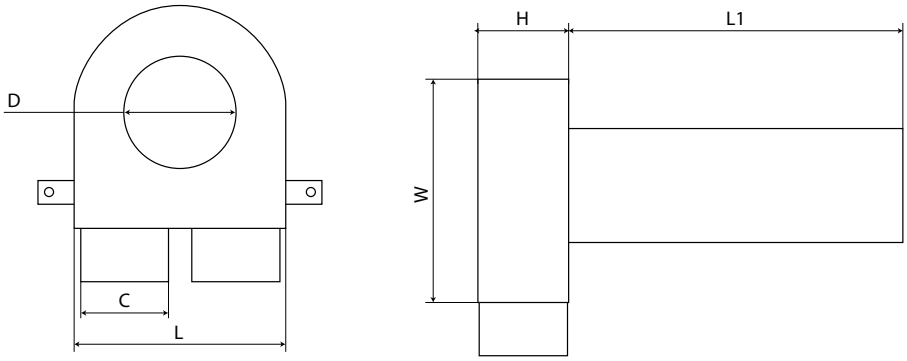
FLEX CEILING/WALL BOX, LONG NECK

Application

Used in ventilation systems for supply and/or exhaust. Can be mounted on the ceiling or wall. Is equipped for the mounting of DFVS and DFVE valve types. Lindab KI, KIR, KU and KSU control valves can also be mounted in the box.
All valves must be ordered separately.



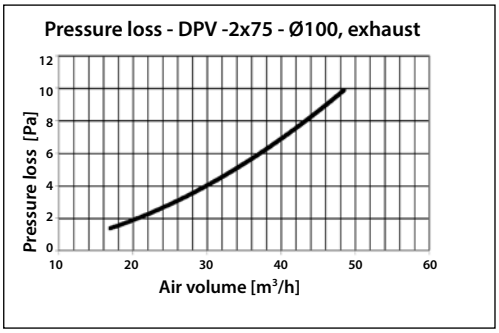
Dimensions

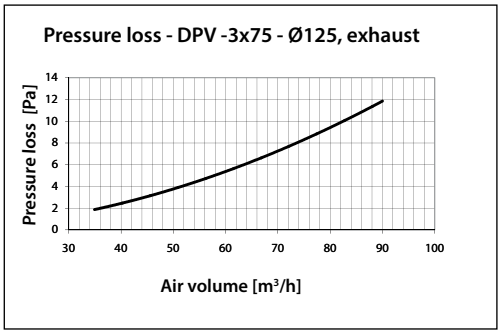


Material

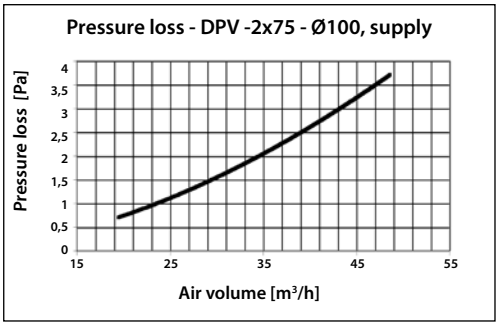
Galvanised plate.

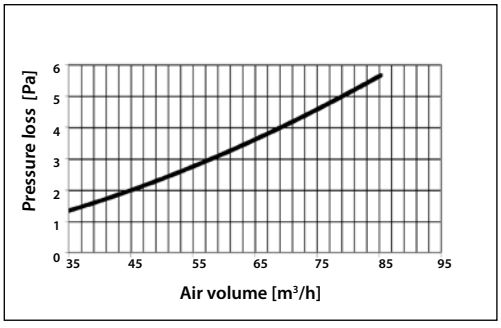
Pressure loss diagram, exhaust
(only for box)





Pressure loss diagram, supply
(only for box)





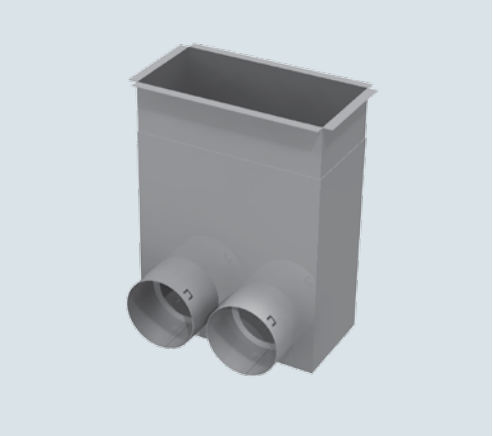
Ordering and Specifications

Order number	Type	H	B	L	L1	D	Connection	Weight
089F0657	DPV-100/75-300	82 mm	195 mm	190 mm	300 mm	ø100 mm	2xø75	1,0 kg
089F0658	DPV-125/75-300	82 mm	195 mm	290 mm	300 mm	ø125 mm	3xø75	1,3 kg

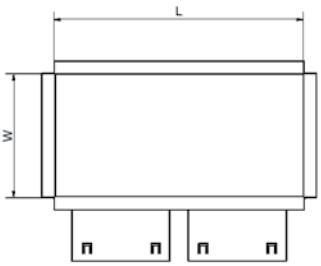
FLEX FLOOR BOX

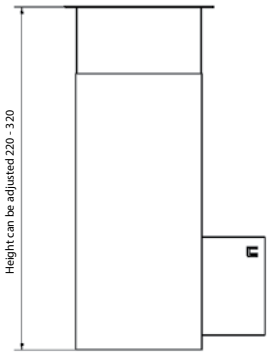
Application

Used in ventilation systems for supply air. Can be set in concrete.
Equipped with a telescopic collar for height adjustment.
For use with grills type DFG (p. 8).



Dimensions



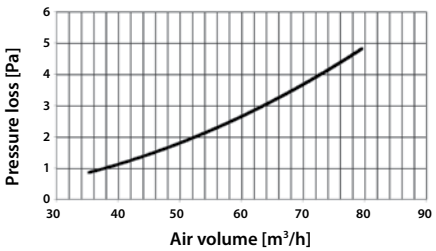


Material

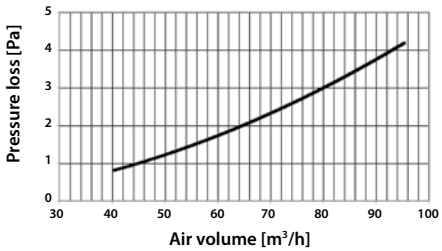
Galvanised plate.

Pressure loss diagram

Pressure loss DPGF - 200x100/75, incl. **DFG-200x100**



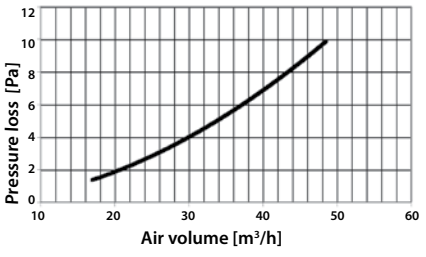
Pressure loss DPGF - 300x100/75, incl. DFG-300x100



Ordering and Specifications

Order number	Type	H	W	L	Connection	Weight
089F0621	DPGF-200x100/75	220-320	100	200	2 x ø75	1,4 kg
089F0622	DPGF-300x100/75	220-320	100	300	3 x ø75	1,9 kg

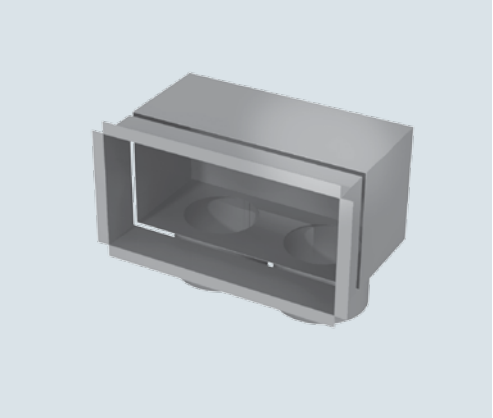
Pressure loss - DPV -2x75 - Ø100, exhaust



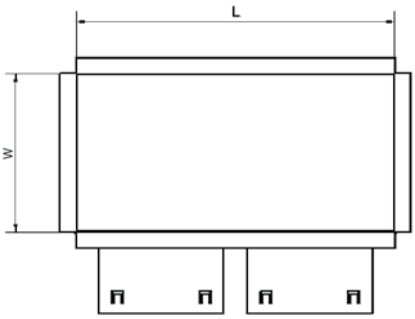
FLEX CEILING/WALL BOX

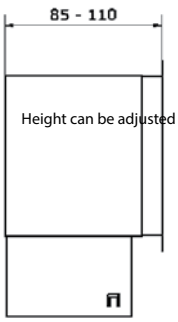
Application

Used in ventilation systems for supply and/ or exhaust. Can be mounted on the ceiling or wall.
Equipped with a telescopic collar for height adjustment.
For use with grills type DFG (p. 8).



Dimensions

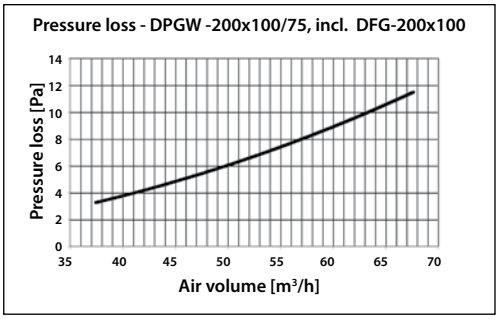


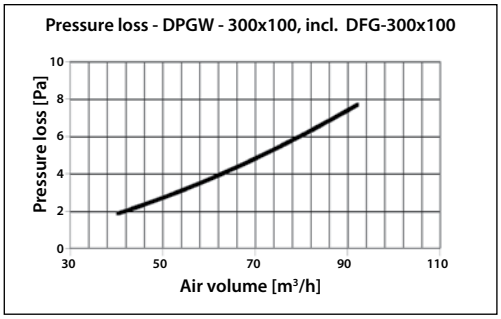


Material

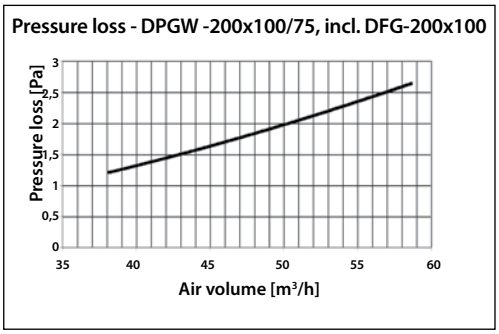
Galvanised plate.

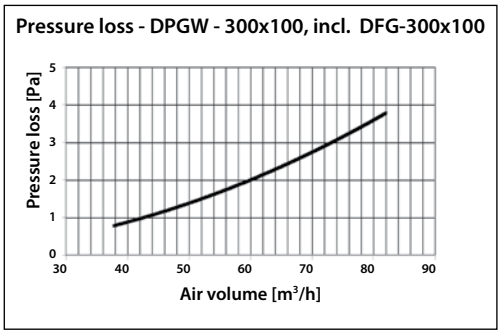
Pressure loss diagram, exhaust





Pressure loss diagram, supply





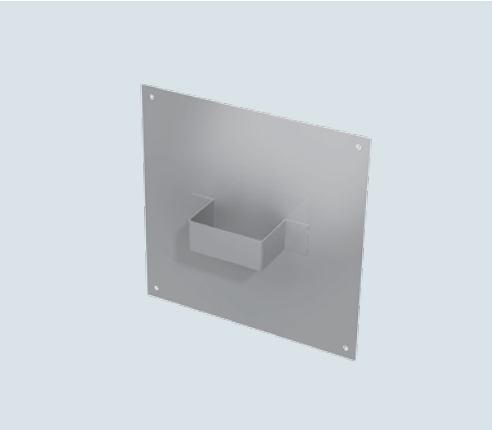
Ordering and Specifications

Order number	Type	H	W	L	Connection	Weight
089F0623	DPGW-200x100/75	85-110	100	200	2 x ø75	0,68 kg
089F0624	DPGW-300x100/75	85-110	100	300	3 x ø75	0,90 kg

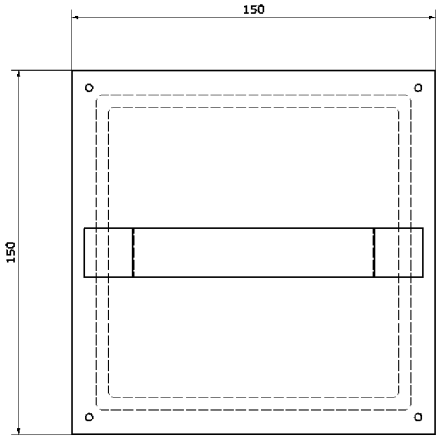
FLEX INSPECTION HATCH

Application

The Danfoss inspection hatch can be used to access the manifold after mounting.



Dimensions



Material

Galvanised plate.

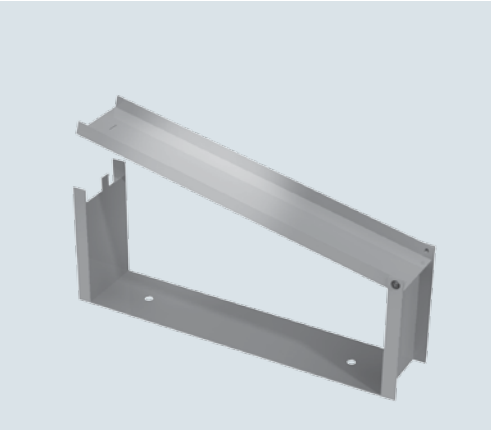
Ordering and Specifications

Order number	Type	Weight
089F0643	DCH-150x150	0,17 kg

FLEX FIX

Application

Flex fix is used to fasten the flexible pipes in e.g. the styropor. Can also be used to fasten the pipes in place when mounting on the wall or ceiling.



Material

Galvanised plate.

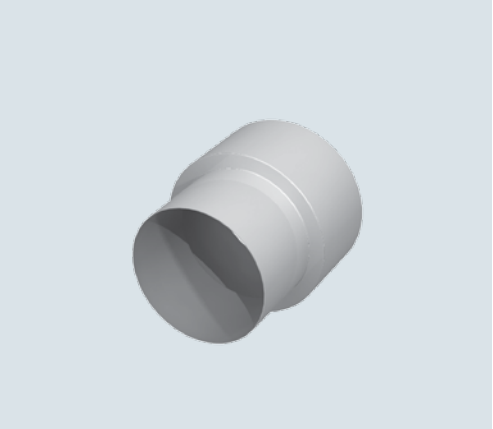
Ordering and Specifications

Order number	Type	Weight
089F0640	DFF-2x75	0,22 kg
089F0641	DFF-3x75	0,29 kg

FLEX TRANSFER

Application

DFT is used when there is a need to combine Flex pipe with steel ducts.



Material

Galvanised plate.

Ordering and Specifications

Order number	Type	Weight
089F0636	DFT-75-63	0,10 kg

FLEX GRILL

Application

The DFG can be used for both supply and exhaust. The grill is delivered with spring clamps for mounting in box type DPGW and DPGF.



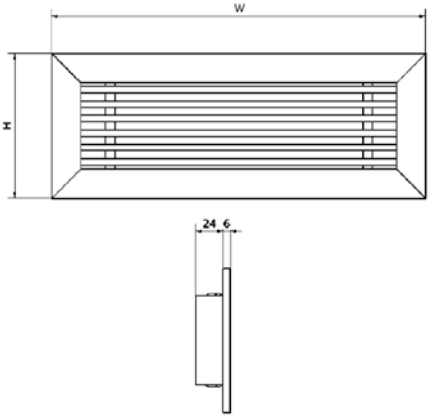
Maintenance

Remove the grill to access the box. Clean the outer parts with a damp cloth.

Pressure loss diagram

Pressure loss is indicated with box type DPGW and DPGF.

Dimensions



Material

Aluminium, naturally anodised

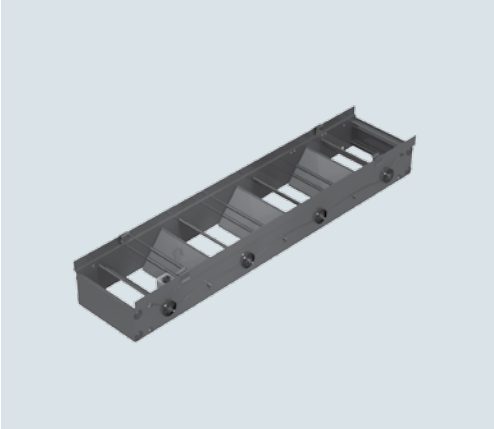
Ordering and Specifications

Order number	Type	H	W	Weight
089F0631	DFG-200x100	125	225	0,30 kg
089F0632	DFG-300x100	125	325	0,40 kg

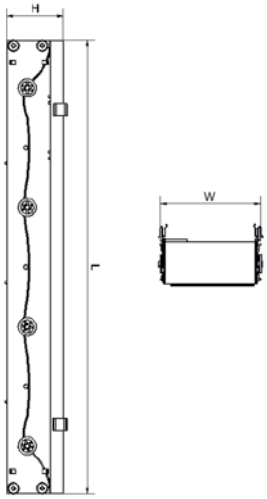
FLEX DAMPER

Application

DDG is used in places requiring air volume regulation. Must be mounted on grill type DFG.



Dimensions



Material

Galvanised plate.

Ordering and Specifications

Order number	Type	H	W	L	Weight
089F0633	DDG-200x100	47	75	175	0,20 kg
089F0634	DDG-300x100	47	75	275	0,30 kg

FLEX END CAP

Application

DPD is used to protect the Flex pipe as well as manifolds and boxes during mounting.



Standard/classification

The products listed below meet the requirements set out in DIN EN 50086-24.

Material

PELD

Ordering and Specifications

Order number	Type	Application
089F0613	DEC-75	Danfoss flex pipe 75/61
089F0615	DEC-77	Danfoss manifolds and boxes

Available in packages of ten.

FLEX SEALING RING

Application

Danfoss sealing ring, mounted on Danfoss Flex pipe to ensure an airtight seal between the pipe and manifold, box and coupler.



Standard/classification

The products listed below meet the requirements set out in DIN EN 50086-24.

Ordering and Specifications

Order number	Type
089F0610	DSR-75

Available in packages of ten.

FLEX SUPPLY VALVE

Application

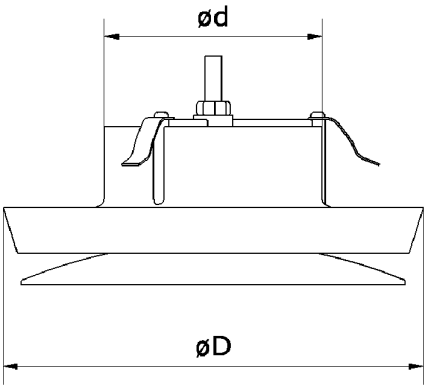
The DFVS supply valve has three leaf springs that allow it to be mounted directly in the DPV air box without the use of tools or other devices.



Maintenance

Remove the valve to access the air box. Clean the outer parts with a damp cloth.

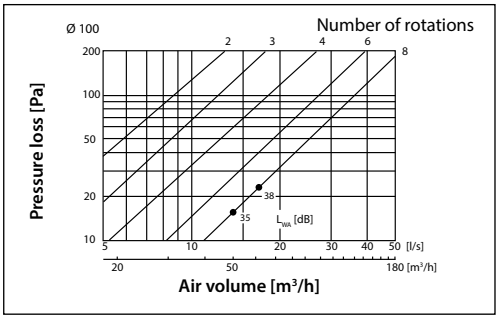
Dimensions

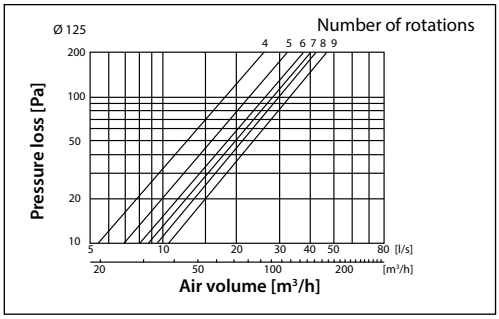


Material

Plastic, RAL 9010

Technical data





Ordering and Specifications

Order number	Type	øD	ød	Weight
089F0625	DFVS-100	140	100	0,10 kg
089F0626	DFVS-125	170	125	0,16 kg

FLEX EXHAUST VALVE

Application

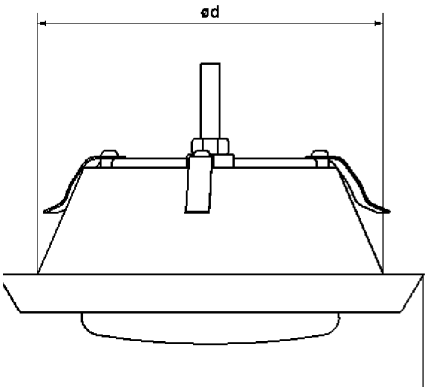
The DFVE exhaust valve has three leaf springs that allow it to be mounted directly in the DPV air box without the use of tools or other devices.



Maintenance

Remove the valve to access the air box. Clean the outer parts with a damp cloth.

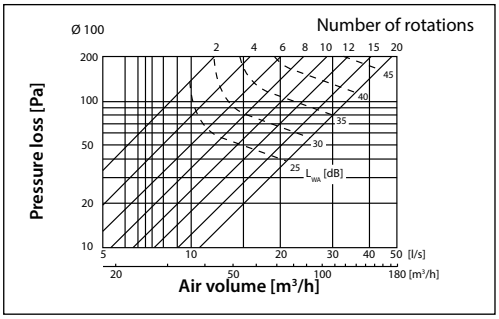
Dimensions

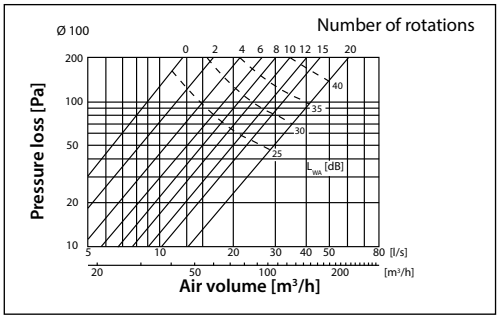


Material

Plastic, RAL 9010

Technical data





Ordering and Specifications

Order number	Type	øD	ød	Weight
089F0628	DFVE-100	140	100	0,10 kg
089F0629	DFVE-125	170	125	0,16 kg

FLEX ROOF HOOD, INCL. FLASHING

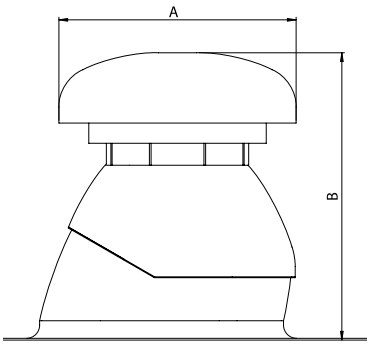
Application

The roof hood is used in ventilation intended for both outlet and inlet air.
The flexible bottom part is designed to adapt to all types of roof profiles. Furthermore it is possible to burn tar paper on the flexible material.
Top of the hood can be mounted at an angle from 0-50 degrees, making the cap applicable to virtually all roofing.

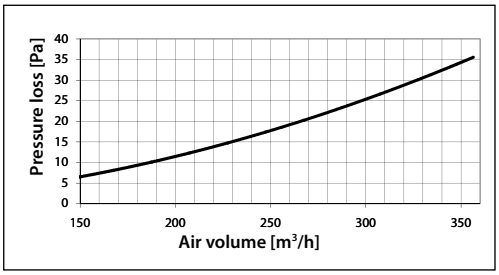
Note: The top can be turned 180 degrees, depending on desired angle.



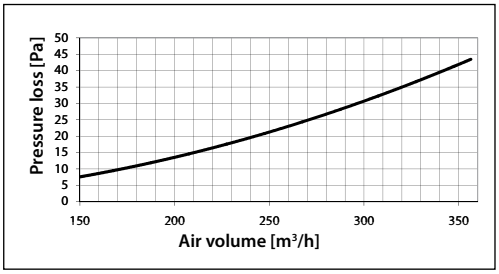
Dimensions



Roof Hood DRH 160
Pressure loss - Exhaust



Roof Hood DRH 160
Pressure loss - supply



Ordering and Specifications

Order number	Type	A	B	Connection	Weight
089F0655	DRH-160-B	Ø 260 mm	330 mm	Ø 160 mm	2,3 kg
089F0656	DRH-160-R	Ø 260 mm	330 mm	Ø 160 mm	2,3 kg

GEOTHERMAL HEATING SURFACE GEO 250

Description:

The geothermal surface has two functions:
In the winter it preheats the outdoor air so that the system is protected against icing up.
In the summer it cools the outdoor air so that fresh, cool air is blown in. The typical air supply temperature will be 14-16°C depending on the outdoor temperature, soil conditions for the brine circuit, etc.
The geothermal surface is connected to a buried ground pipe in which brine (antifreeze) is circulated. The only power consumption required for this solution is for the circulation pump. The surface is supplied fully assembled incl. automation, two temperature sensors for duct fitting and the required cables. Plug'n'play installation - the system recognises and configures the surface automatically on connection.
The surface is fitted in the duct system on the outdoor side.



Width	600 mm
Height	335 mm
Depth	250 mm
Weight	6,3 kg
Duct system connector	Ø 250 mm
Power consumption	3-10 W
Electrical connection	230 V, 50 Hz

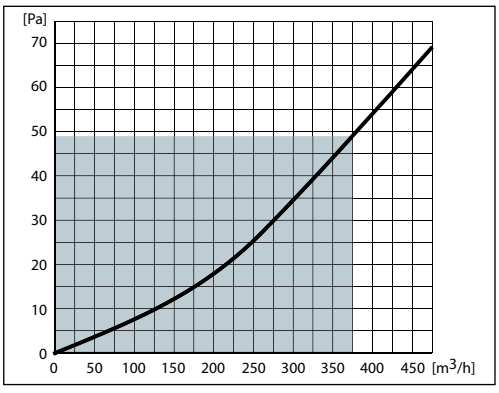
Ordering:

Code..... 089F0354

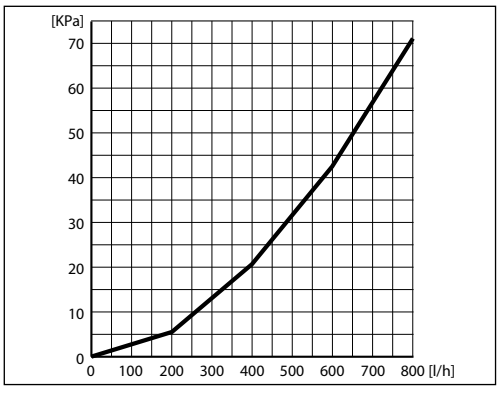
Technical data

Connection, air	Ø 250 mm
Connection, water	3/8" RG, nipple
Box	Highly insulated, fire-resistant EPS shell (U-factor 0.8)
Heating effect (winter)	820 W
Cooling effect (summer)	850 W (actual cooling to room)
Installation	Horizontal
Max. brine flow	400-600 l/h
Weight	6,6 kg
Dimensions (l x w x h)	600 x 250 x 335 mm

Pressure loss curve for the air side



Pressure loss curve for the brine side



WATER HEATING SURFACE W-AH 250

Description:

Water heating surface for the heating of supply air (comfort safeguard).
The surface can also under special conditions (in a Passive house) work as the only heating source. Fitted in the duct system on the supply air side and connected to the house's central heating system. Supplied fully assembled with two temperature sensors, motor-driven control valve and control panel automation which automatically registers with Air Dial on connection.
The heating surface can typically raise the supply air temperature to up to 40-45°C (at 70/40°C).

Width	600 mm
Height	335 mm
Depth	250 mm
Weight	6,6 kg
Duct system connector	Ø 250 mm
Power consumption	3-10 W
Electrical connection	230 V, 50 Hz



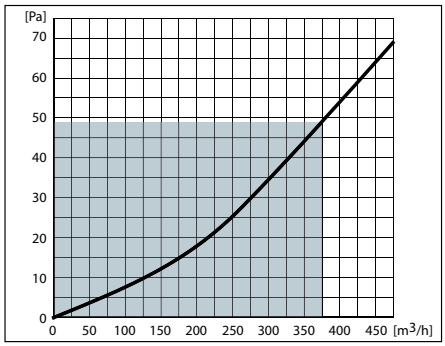
Ordering:

Code..... 089F0355

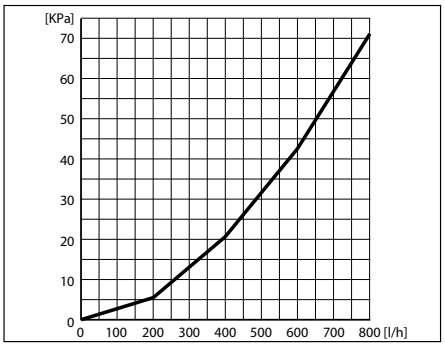
Technical data

Connection, air	Ø 250 mm
Connection, water	3/8" RG, nipple
Box	Highly insulated, fire-resistant EPS shell (U-factor 0.8)
Max. heating surface (400 m^3/h, temp. 70/40/20°)	2350 W
Heating effect (winter)	820 W
Installation	Horizontal
Max. water flow (W-AH 250)	150 l/h
Weight	6,6 kg
Dimensions (l x w x h)	600 x 250 x 335 mm

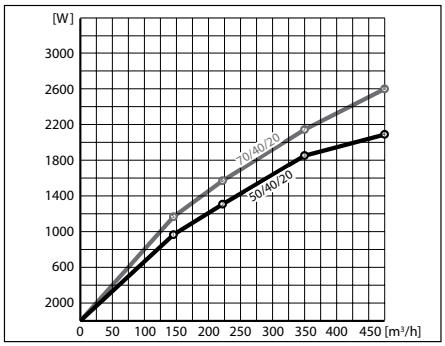
Pressure loss curve for the air side



Pressure loss curve for the water side



Power output curve for the air side



ELECTRICAL PREHEATING SURFACE EL-PH

Description:

Electrical preheating surface to prevent system icing up.
Fitted in the duct system on the outdoor side and can be supplied in Ø125-900W / Ø160-1500W / Ø250-2100W respectively. The surfaces have an integrated double safety feature for thermal protection with overheating and are supplied with a complete automation box for connection by certified electrician. Plug'n'play installation - the system recognises and configures the surface automatically on connection. The output is accurately controlled by a solid state relay.

Duct system connector	Ø 125 mm	Ø 160 mm	Ø 250 mm
Recessed length	278 mm		
Weight	2,4 kg	3,2 kg	4,6 kg
Output	900 W	1500 W	2100 W
Max. power	3,9 A	6,5 A	9,1 A
Electrical connection*	230 V, 50 Hz		

** We recommend that the surfaces are supplied from a separate group.*



900 W, Ø 125 mm

Ordering: Code..... 089F0356

1500 W, Ø 160 mm

Ordering: Code..... 089F0357

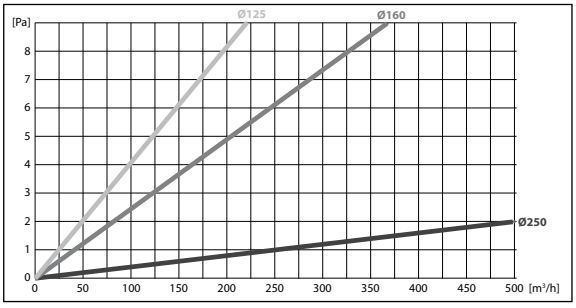
2100 W, Ø 250 mm

Ordering: Code..... 089F0358

Technical data

Type	Ø 125 mm	Ø 160 mm	Ø 250 mm
Connection, air	Ø 125 mm	Ø 160 mm	Ø 250 mm
Box	Galvanised steel plate	Galvanised steel plate	Galvanised steel plate-
Max. output	900 W	1.500 W	2.100 W
Installation	Horizontal / upwards	Horizontal / upwards	Horizontal / upwards
Safety thermostat	Double, built-in, automatic re-closure at 70°C, manual re-closure at 120°C	Double, built-in, automatic re-closure at 70°C, manual re-closure at 120°C	Double, built-in, automatic re-closure at 70°C, manual re-closure at 120°C
Weight	2,4 kg	3,2 kg	4,6 kg
Length	375 mm	375 mm	375 mm

Pressure loss curves for electrical heating surfaces (both pre-heating and after heating surfaces)



ELECTRICAL AFTERHEATING SURFACE

Description:

Electrical afterheating surface for heating the supply air (comfort safeguard). Fitted in the duct system on the supply side and can be supplied in Ø125-900W / Ø160-1500W / Ø250-2100W respectively. The surfaces have an integrated double safety feature for thermal protection with overheating and are supplied with a complete automation box for connection by certified electrician. Plug'n'play installation - the system recognises and configures the surface automatically on connection. The output is accurately controlled by a solid state relay.

Duct system connector	Ø 125 mm	Ø 160 mm	Ø 250 mm
Recessed length	278 mm		
Weight	2,4 kg	3,2 kg	4,6 kg
Output	900 W	1500 W	2100 W
Max. power	3,9 A	6,5 A	9,1 A
Electrical connection*	230 V, 50 Hz		

** We recommend that the surfaces are supplied from a separate group.*



900 W, Ø 125 mm

Ordering: Code..... 089F0359

1500 W, Ø 160 mm

Ordering: Code..... 089F0360

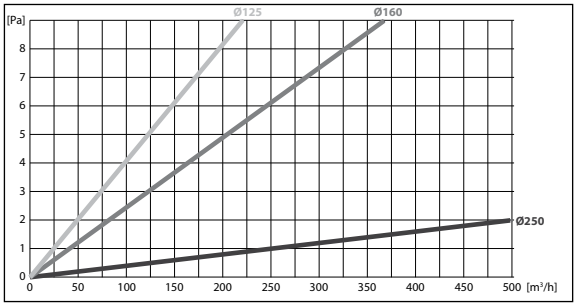
2100 W, Ø 250 mm

Ordering: Code..... 089F0361

Technical data

Type	Ø 125 mm	Ø 160 mm	Ø 250 mm
Connection, air	Ø 125 mm	Ø 160 mm	Ø 250 mm
Box	Galvanised steel plate	Galvanised steel plate	Galvanised steel plate
Max. output	900 W	1500 W	2100 W
Installation	Horizontal / upwards	Horizontal / upwards	Horizontal / upwards
Safety thermostat	Double, built-in, automatic re-closure at 70°C, manual re-closure at 120°C	Double, built-in, automatic re-closure at 70°C, manual re-closure at 120°C	Double, built-in, automatic re-closure at 70°C, manual re-closure at 120°C
Weight	2,4 kg	3,2 kg	4,6 kg
Length	375 mm	375 mm	375 mm

Pressure loss curves for electrical heating surfaces (both pre-heating and after heating surfaces)



FILTER UNIT FU 250

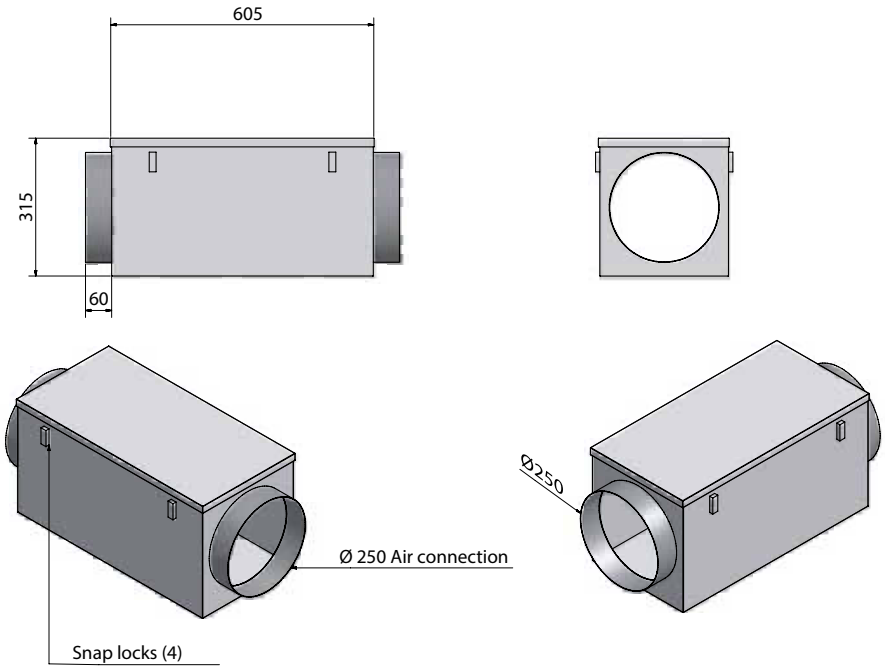
Description:

The Filter unit is used when a Danfoss Air unit is equipped with a geothermal surface. The geothermal surface must be protected against dust and dirt from the outside air, so that the performance is sustained in all conditions. The filter unit is fitted with G3 filter that easily can be changed by opening the lid of the box.

It is recommended that a pre filter is mounted in front of the geothermal heating surface in order to avoid soiling of the surface that will lead to an increased pressure loss.

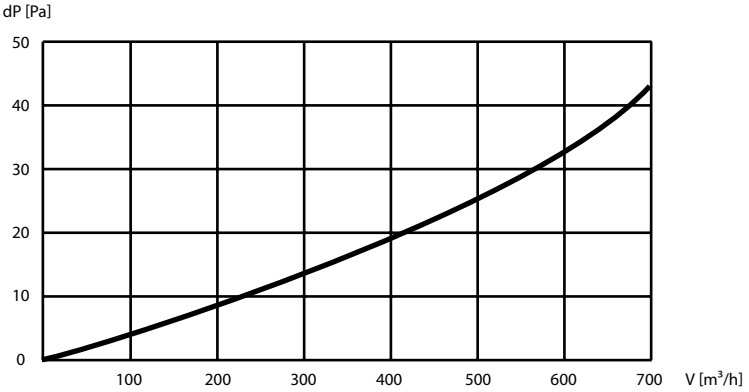


Dimensions:



Technical data

Flow chart Danfoss Air Filter Unit
Filter media: 630 x 300 x 20 mm G3 filter mat (Synthetic filter, T350 - G3 acc. to EN 799 definitions)



STANDARD FILTER SET

Description:

Standard filter set consisting of two G4 cartridge filters. Pleated filter in thermofixed polyethylene - efficiently filters particles down to 10 µm. Filter class is given in accordance with EN 779.



Standard filter set for Danfoss Air w[1] unit

Ordering: Code..... 089F0238

Standard filter set for Danfoss Air w[2] unit

Ordering: Code..... 089F0239

Standard filter set for Danfoss Air a[2] unit

Ordering: Code..... 089F0236

Standard filter set for Danfoss Air a[3] unit

Ordering: Code..... 089F0237

POLLEN FILTER SET

Description:

Pollen filter set consisting of one standard G4 cartridge filter for the exhaust air and one F7 pollen filter for the supply air (the pollen filter efficiently filters particles down to 5 µm).
Filter classes are given in accordance to EN 779.



Pollen filter set for Danfoss Air w¹ unit

Ordering: Code..... 089F0242

Pollen filter set for Danfoss Air w² unit

Ordering: Code..... 089F0243

Pollen filter set for Danfoss Air a² unit

Ordering: Code..... 089F0240

Pollen filter set for Danfoss Air a³ unit

Ordering: Code..... 089F0241

SIPHON FOR DANFOSS AIR UNIT

Description:

Box siphon with ¾" reinforced tube to be connected to the unit and ¾" threaded (union) to be connected to the outlet. White RAL 9010 for wall mounting.
Can be used with both w and a models.



Ordering: Code..... 089F0262

Installer kit

Description:

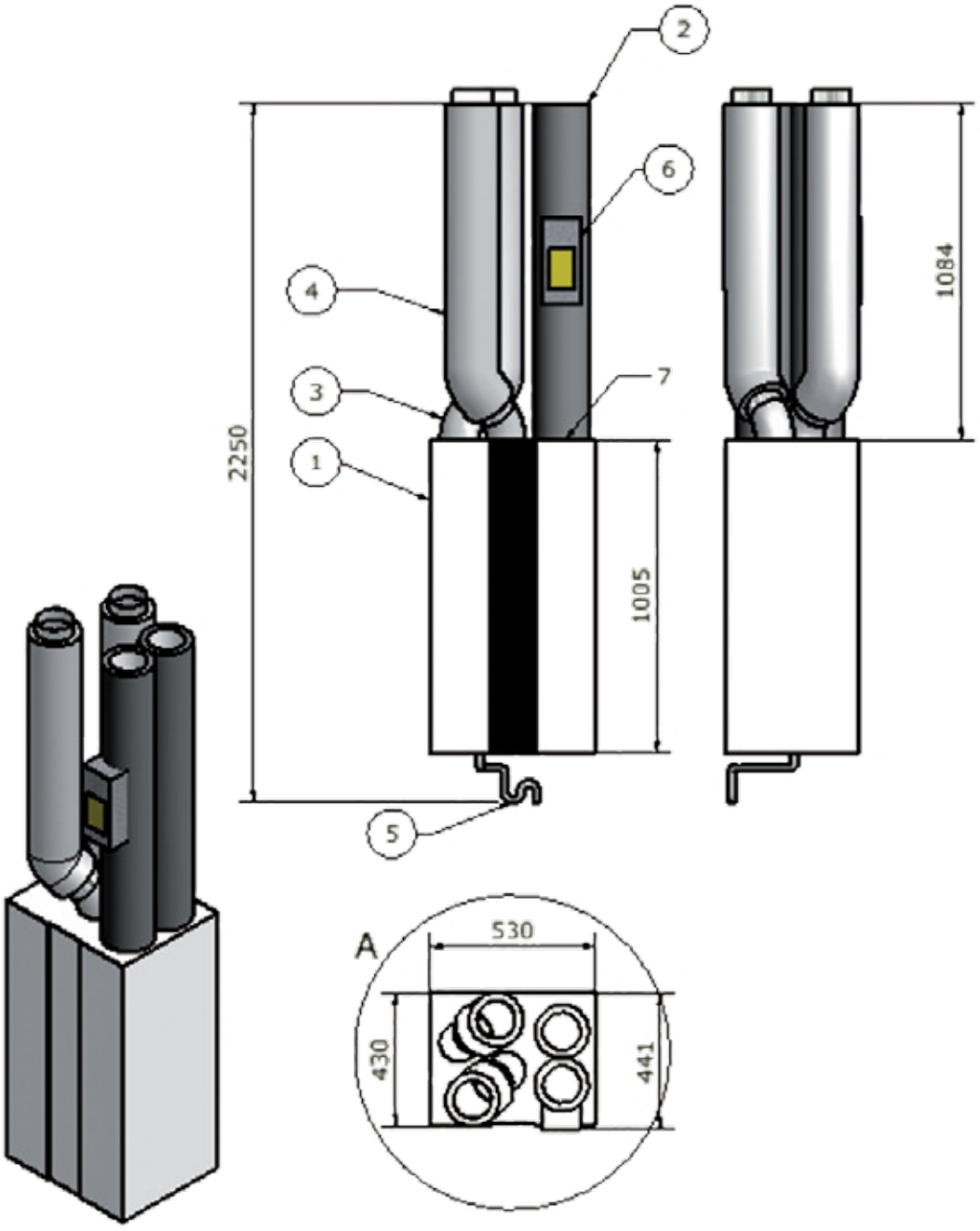
The installer kit has been developed to help installers when installing Danfoss Air Units. The kit contains 1 Gb USB plug along with Danfoss Air software and 1 metre mini usb->usb cable to connect the CCM module to the portable computer (requires Windows XP or Vista).

The installer kit guides the installer through the installation procedure step by step and gives tips and good advice along the way concluding with a well-documented report of settings.



Ordering: Code..... 089F0235

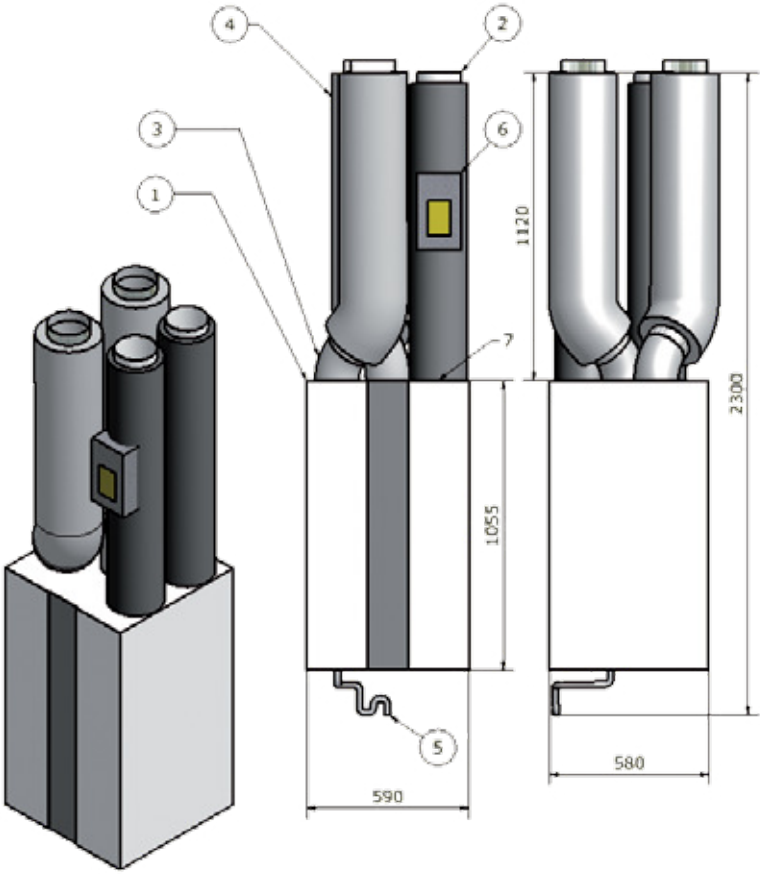
APPLICATION DRAWING FOR W[1]



① Danfoss Air w[1] unit
② Ø125 steel duct
③ Ø125, 45 degree elbow
④ Ø125, silencer (flexible L=1000 (max), preferably with aluminum outer surface)
Alternative: A standard alu. silencer as Lindab type SLU can be used - Recomended length L=900 mm
⑤ Siphon (schematically illustrative)
⑥ Ø125, 900W pre-heater
⑦ Ø125 spigots - Is needed if no other product with female connection is mounted

It's recommended that all 4 connections are insulated with minimum 25 mm, even inside the climate shield to avoid condensation

APPLICATION DRAWING FOR W²



① Danfoss Air w² unit
② Ø160 steel duct
③ Ø160, 45 degree elbow
④ Ø160, silencer (flexible L=1000 (max), preferably with aluminum outer surface)
Alternative: A standard alu. silencer as Lindab type SLU can be used - Recomended length L=900 mm
⑤ Siphon (schematically illustrative)
⑥ Ø160, 1500W pre-heater
⑦ Ø160 spigots - Is needed if no other product with female connection is mounted

It's recommended that all 4 connections are insulated with minimum 25 mm, even inside the climate shield to avoid condensation

Danish Indoor Climate Labelling Certificate no. 084

Danish Indoor Climate Labelling hereby certifies that the product group

Danfoss Air Flex

manufactured by

Danfoss A/S
Ulvehavevej 61
DK-7100 Vejle

has been approved and awarded a labelling licence

The declared indoor-relevant time-value has been determined according to the labelling criteria listed in the following documents issued by the Danish Indoor Climate Labelling:

Testing and Labelling Criteria for Furniture, 3rd edition, 2005 and General Labelling Criteria, 5th edition, 2007

The certificate is based on tests of a flexible LDPE/HDPE tube

The certificate is valid 5 years from:

28th October 2009

and is subject to annual renewal by attestation of the Schedule 1-084 to this certificate according to the procedures of Danish Indoor Climate Labelling.

Danish Indoor Climate Labelling may withdraw the rights to use this Certificate in case the company does not meet the requirements.

This certificate including schedule 1-084 can also be found at: www.teknologisk.dk/DIM

For Danish Indoor Climate Labelling

Certification Manager

Date

28.10.2009

ENGINEERING
TOMORROW

Danfoss is a full-service supplier with more than 75 years of experience in making solutions work for you. We take pride in working closely with installers, engineers and planners all over the world, and we know the importance of being able to deliver the right solution at the right time.

Regardless of project size and phase, we are here to offer you our full professional support, and we look forward to welcoming you on team Danfoss.

To learn more about the value of ventilation and Danfoss Air, visit us at **air.danfoss.com**

YOUR TRUSTED PARTNER IN AIR





1 click

to learn more.
Visit air.danfoss.com
to download tools,
documentation and
much more.

Danfoss A/S · Heating Solutions · Ulvehavevej 61 · DK-7100 Vejle · Tel. +45 7488 8500 · Fax +45 7488 8603
E-mail heating@danfoss.com · www.heating.danfoss.com · www.air.danfoss.com

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.