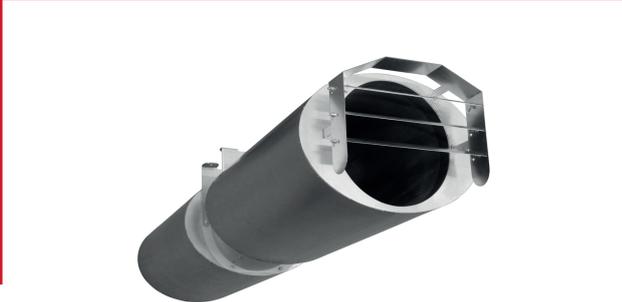


SCF400

SMOKE CONTROL JET FAN



Product Characteristics:

Smoke control jet fan in F400 temperature class for the ductless smoke extraction and ventilation systems. Equipped with two-speed reversible motors and acoustic silencers.

Intended Use

SCF type jet fans are basic elements of ductless fire protection systems and periodic ventilation of large area spaces with a small height.

The jet fan systems are most often installed in tunnels, underground car parks and garages, fulfilling the functions of reliable and effective ventilation, while ensuring a high level of safety, removing smoke and hot gases resulting from a fire.

Product Classification

The fans are certified according to PN-EN 12101-3:2015-10 and are classified as **F120400** according to PN-EN 13501-5:2016-07.

Description

SCF400 jet fans are manufactured in three sizes: 315, 355 and 400 mm, all as reversible and two-speed fans.

Smoke control function

Smoke control function is carried out during the fire. The purpose of the jet fans is to pump smoke and heat to the exhaust points, which allow their rapid removal from the protected space. The jet fan ventilation system while operating, restrains spreading of smoke and provides an access way for fire brigades. After putting out the fire, the installation provides rapid purification of the space from smoke and fire gases. An additional advantage of this solution is reducing the temperature of smoke, which results in protecting the building's structure against the effects of excessive heat.

Ventilation function

Ventilation function is carried out during daily operation of the system. The purpose of the system is to remove the harmful contaminants (such as aldehydes, oxides, etc.) which can occur in a garage. Appropriate location of the jet fans ensures air flow throughout the whole space, which eliminates so called „blind spots“, which could accumulate contamination.

Dimensions

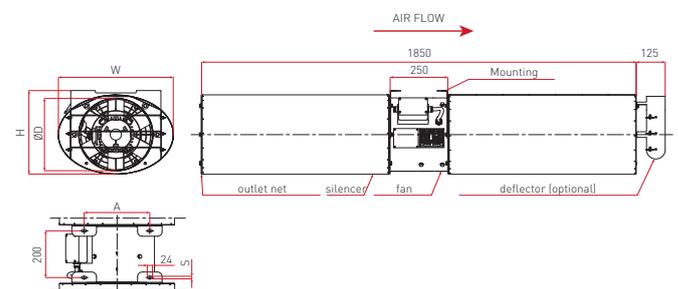


Figure 1. SCF400 dimensions.

Table 1. SCF400 dimensions.

Fan type	ØD [mm]	W [mm]	H [mm]	A [mm]	S [mm]
SCF400 - 315	315	490	365	280	11
SCF400 - 355	355	555	405	320	13
SCF400 - 400	400	625	446	375	13

Design

SCF400 fan casing is made of electro-galvanized steel sheet, with 2 mounting brackets. The rotor is welded from alloy steel. A terminal box is mounted on the fan casing. The fans are equipped with two-speed, three-phase 400V / 50Hz motors. The motors are IP55 protection class and insulation class H.

As standard, all fans of the SCF400 series are fitted with 800 mm long T-type silencers at the inlet and outlet. The silencers have an elliptical casing shape, which allows the maximum reduction of the distance between the fan and the ceiling of the room.

As a standard solution, S-type safety nets are mounted at the ends of the silencers. D deflectors can be supplied as additional equipment, allowing for appropriate direction of the air stream, which allows to avoid obstacles such as beams. Additionally, deflectors can be used to prevent the air stream from sticking to the ceiling (the so-called Coanda effect) by properly directing the air stream. On request, deflectors can be installed on one or both sides of the fan.

FIRE VENTILATION ZONE

Meets the requirements of:
PN-EN 12101-3:2004



SCF400 fans can be used with service switches located outside or in the fire-affected zone. These switches can only be mounted outside the fan casing, e.g. to a building structure, in accordance with the accepted design requirements.

Technical Data

Table 2. SCF400 parameters.

Fan type	Diameter	Air flow	Thrust theoretical and actual		Motor power	Working current	Rotation speed	Acoustic power level (3m distance)	Weight
	ØD [mm]	V [m³/h]	F ₁ [N]	F ₂ [N]	P [kW]	I [A]	[obr/min]	L _{PA} [dB(A)]	m [kg]
SCF400-315	315	2140/4240	5/21	4/17	0,25/1,1	0,776/2,49	1390/2810	45/61	78
SCF400-355	355	3200/6300	10/38	7/27	0,37/1,5	1,19/3,45	1430/2875	55/74	86
SCF400-400	400	4600/8900	16/58	14/44	0,5/2,2	1,66/5,82	1450/2900	52/69	101

F₁ - theoretical thrust, calculated acc. to $F = m \cdot w$ [N] (m – mass stream of the air [kg/s], w – air velocity [m/s])

F₂ - actual thrust, measured in accordance to the procedure described in PN-EN ISO 13350



The efficiency of the fan is the same in both directions.



Performance parameters, including actual thrust, efficiency and noise, tested in accordance with PN-EN ISO 13350 Industrial fans. Examination of the performance of jet fans.

SCF400 – Smoke control jet fan

When ordering, please provide information in accordance with the following pattern:

SCF400 - <D> - <M> - <P> <RAL>

Where:

D	nominal diameter, mm
M	elements mounted at the fan
	SS - fan with 2 safety nets (standard)
	SD - fan with 1 safety net and deflector
	DD - fan with 2 deflectors
P	finishing:
	SO - galvanized steel
	SL - steel coated
RAL	colour of the casing RAL [for SL]

Order example: **SCF400- 355 - SS - SL9010**