BOXSMART
KIT BOXSMART

- CONNECTION TO A BMS SYSTEM VIA RTU MODBUS.
- INTERNAL MEMORY FOR SAVING THE LAST STATUS AFTER A POWER LOSS.
- ONCE THE FIRE ALARM SYSTEM IS ACTIVATED, IT WILL REMAIN ACTIVE EVEN IF THE ACTIVATION SIGNAL IS INTERRUPTED.
- RUN AND FAULT CONFIRMATION SIGNALS FOR COMMUNICATION WITH THE FIRE DETECTION SYSTEM.
- RUGGED BOXES WITH VANDAL PROOF METAL CASING.
- CM-SMART: EXTERNAL CONTROL PANEL FOR FIREFIGHTERS.

SODECA®

PRESSURISATION CONTROL SYSTEMS FOR STAIRCASES, LOBBIES AND ESCAPE ROUTES

BOXSMART AND KIT BOXSMART

The staircase or escape route pressurisation system enables automatic control of airflow rate as well as maintaining a differential pressure of 50 Pa in a single unit, based on standard EN 12101-6.

The BOXSMART system is calibrated to guarantee that the system operates quickly and accurately, to ensure stability during a fire situation.

The equipment is supplied complete, ready to connect to the power supply, the fan and the fire signal, to control the pressurisation of the staircase.

To facilitate the installation, the KIT BOXSMART is supplied with the appropriate fan and ready to operate.

Options depending on the requirements of the project

Different options are available fit the needs of the project:

BOXSMART EC

Unit designed for the operation of high efficiency systems with EC motors with integral electronics.

BOXSMART

Equipment suitable for staircase pressurisation solutions and escape routes.

BOXSMART II

Equipment designed for operating systems that require an auto-changeover run and standby fan.

BOXSMART FLAP

Equipment designed for operating systems that require a fan with a hatch, to improve the thermal efficiency of the building. The unit will open and close the hatch automatically.

Accessories

CM-SMART

External control panel for firefighters

The CM-SMART indicates the status of the system and provides the option of turning the system on and off manually via the selector.

We recommend installing this panel at the main entrance to the area that is protected by the equipment.

SI-CALENDAR

Programmable timer with calendar for setting the daily operating hours of the ventilation systems

Allows daily operational hours to be programmed or each day of the week. Compatible with other BOXSMART models. Fire operation will take priority. Incorporates NFC Technology for programming from a SMARTPHONE.

Main characteristics of BOXSMART

Connection to a BMS system via **RTU modbus**.

When a fire alarm is activated, it will remain **active** even if the activation signal is interrupted.

Rugged boxes with vandal proof **metal casing** with an IP66 rating.

Internal memory to save the last status in case of power loss.

Automatic restart in case of failure.

Safe operating protocol if pressure probe fails.

TEST selector switch to check system operation during maintenance.

CM-SMART external control panel for firefighters.

Exclusive selector for firefighters 0-auto-manual.

Operating, alarm and fire activation **LED indicators**.

Compatibility with the firefighter control panel.

Speed shifter programmed at 50 Pa, differential pressure probe and thermal-magnetic switch; accurately calibrated and ready for AC/EC motors.

Start and fault **confirmation signals** for communicating with fire detection system.

KIT BOXSMART

The staircase or escape route pressurisation system enables automatic control of airflow rate as well as maintaining a differential pressure of 50 Pa in a single unit, based on standard EN 12101-6.

The correct operation of a pressurisation system depends not only on great design, but also on correct operation of the system, so it is extremely important to have accurately calibrated, high precision regulating elements to allow systems to work quickly and with stability.

KIT BOXSMART EC
Staircase pressurisation kit comprising of a control panel (BOXSMART EC) and a high efficiency impulsion unit with EC TECHNOLOGY motors (CJK/EC).

KIT BOXSMART
Staircase pressurisation kit comprising of a control panel (BOXSMART) and an impulsion unit (CJHCH or CJBD), for staircase and escape route pressurisation.

KIT BOXSMART II
Pressurisation kit with run and standby fans comprising of a control panel (BOXSMART II) with a built-in auto-changeover system that maintains pressurisation in the event of failure of the main fan.

KIT BOXSMART FLAP
Pressurisation kit with hatch fan comprising of a control panel (BOXSMART FLAP) with a built-in control system for fans with hatch (WALL or HATCH).

- Easy to install
- A compact, autonomous solution
- Preventive maintenance
- Easy start-up
- Safe, functional installation

CM-SMART External control panel for firefighters

The CM-SMART shows system status and allows optional manual operation via a selector switch. We recommend installing this panel at the main entrance to the area that is protected by the pressurisation system.

This equipment is not included in the KIT BOXSMART.
The BOXSMART and BOXSMART II models are compatible with CM-SMART.
The BOXSMART FLAP models are compatible with CM-SMART FLAP.

Order code

KIT BOXSMART	—	***7100***	—	***230***
KIT BOXSMART EC: Pressurisation unit for operating EC motors with built-in electronics KIT BOXSMART: Pressurisation unit KIT BOXSMART II: Pressurisation unit with standby fan KIT BOXSMART FLAP: Pressurisation unit with hatch fan		Maximum flow rate (m^3/h)		230: Single-phase 200 to 240 V 50/60 Hz input 380: Three-phase 380 to 480 V 50/60 Hz input

Technical characteristics

Model	Power (kW)	Power supply (V/Hz)	Output (V)	Maximum flow rate (m^3/h)	Impulsion unit
KIT BOXSMART-1900 - 230 - EC	0.20	200 to 240 V 50/60 Hz	230 V 50/60 Hz	1920	CJK/EC-310
KIT BOXSMART-3600 - 230 - EC	0.50	200 to 240 V 50/60 Hz	230 V 50/60 Hz	3642	CJK/EC-400
KIT BOXSMART-6500 - 400 - EC	1.10	380 to 480 V 50/60 Hz	400 V 50/60 Hz	6577	CJK/EC-500
KIT BOXSMART-2880 - 230	0.37	200 to 240 V 50/60 Hz	230 V 50/60 Hz	2880	CJBD-2828-4M 1/2
KIT BOXSMART-7100 - 230	0.37	200 to 240 V 50/60 Hz	230 V 50/60 Hz	7100	CJHCH-45-4T-0.5 IE3
KIT BOXSMART-7800 - 230	1.10	200 to 240 V 50/60 Hz	230 V 50/60 Hz	7800	CJBD-3333-6T 1 1/2
KIT BOXSMART-12900 - 230	0.75	200 to 240 V 50/60 Hz	230 V 50/60 Hz	12900	CJHCH-56-4T-1 IE3
KIT BOXSMART-17000 - 230	1.10	200 to 240 V 50/60 Hz	230 V 50/60 Hz	17000	CJHCH-63-4T-1.5 IE3
KIT BOXSMART-7800 - 400	1.10	380 to 480 V 50/60 Hz	400 V 50/60 Hz	7800	CJBD-3333-6T-1.5 IE3
KIT BOXSMART-12900 - 400	0.75	380 to 480 V 50/60 Hz	400 V 50/60 Hz	12900	CJHCH-56-4T-1 IE3
KIT BOXSMART-17000 - 400	1.10	380 to 480 V 50/60 Hz	400 V 50/60 Hz	17000	CJHCH-63-4T-1.5 IE3
KIT BOXSMART-21100 - 400	1.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	22100	CJHCH-71-4T-2 IE3
KIT BOXSMART FLAP-21100 - 400	1.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	21100	WALL/DUCT-71-4T IE3
KIT BOXSMART FLAP-25400 - 400	3.00	380 to 480 V 50/60 Hz	400 V 50/60 Hz	25400	HCT/HATCH-63-4T-4 IE3
KIT BOXSMART FLAP-41850 - 400	4.00	380 to 480 V 50/60 Hz	400 V 50/60 Hz	41850	WALL/DUCT-90-4T-5.5 IE3
KIT BOXSMART FLAP-52500 - 400	5.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	52500	HCT/HATCH-100-4T-7.5 IE3

*The output power is reduced by 20% when the equipment is operating in the lower electrical power range. The same models, except the FLAP models, may be supplied with the KIT BOXSMART II for standby fan (a second impulsion unit is added to the KIT BOXSMART).

BOXSMART CONTROL PANELS

The BOXSMART control panel includes:

- Frequency inverter programmed at 50 Pa and highly accurate differential pressure probe.
- External connection to the control panel for exclusive use by firefighters.
- A thermal-magnetic switch.
- Status indicator lamp: Operational, Alarm, Activated by fire and Start.
- Built-in control panel with TEST selector for maintenance and selector for the exclusive use by firefighters 0-AUTO-MANUAL.
- Operating protocol in safe mode in case of failure of the differential pressure probe and automatic restart of the system in case of failure.
- Connection of status signals using free power contacts (FAULT, START and FIRE ACTIVATION) and connection to BMS systems via RTU Modbus for monitoring the equipment.
- Memory of the last activation status for increased safety, can be reset using the RESET selector on the control panel.
- External connection for use in daily ventilation via the SI-CALENDAR accessory.
- Metal casing with IP66 protection and lock with service key.
- Enabled for controlling asynchronous motors, IPM or RM.
- Ready to operate for pressure control.
- Just needs to be connected to power supply impulsion fan and fire signal.
- Different input voltage ranges and power on request.

Order code

BOXSMART	—	***1.1***	—	***230***	—	***M***
BOXSMART EC: Control panel for an EC motor fan BOXSMART: Control panel for a fan BOXSMART II: Control panel with standby fan BOXSMART FLAP: Control panel with hatch fan		Power (kW)		Input voltage		M: single-phase input T: Three-phase input

Technical characteristics and dimensions

BOXSMART EC and BOXSMART

Model	Power (kW)	Power supply (V/Hz)	Output (V)	Max. output current (m^3/h)	Size	Measurements (length x width x depth)	Weight (kg)
BOXSMART EC-0.5-230 V 50/60 Hz-M-M	0.50	200 to 240 V 50/60 Hz	230 V 50/60 Hz	1.5	1	300x400x200	10
BOXSMART EC-1.1-400 V 50/60 Hz-T-T	1.10	380 to 480 V 50/60 Hz	400 V 50/60 Hz	2.0	1	300X400X200	10
BOXSMART-0.37-230 V 50/60 Hz-M-T	0.37	200 to 240 V 50/60 Hz	230 V 50/60 Hz	2.3	1	300x400x200	11
BOXSMART-0.75-230 V 50/60 Hz-M-T	0.75	200 to 240 V 50/60 Hz	230 V 50/60 Hz	4.3	1	300x400x200	11
BOXSMART-1.5-230 V 50/60 Hz-M-T	1.50	200 to 240 V 50/60 Hz	230 V 50/60 Hz	7.0	1	300x400x200	11
BOXSMART-0.75-400 V 50/60 Hz-T-T	0.75	380 to 480 V 50/60 Hz	400 V 50/60 Hz	2.2	1	300x400x200	11
BOXSMART-1.5-400 V 50/60 Hz-T-T	1.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	4.1	1	300x400x200	11
BOXSMART-2.2-400 V 50/60 Hz-T-T	2.20	380 to 480 V 50/60 Hz	400 V 50/60 Hz	5.8	2	400x500x250	18
BOXSMART-4-400 V 50/60 Hz-T-T	4.00	380 to 480 V 50/60 Hz	400 V 50/60 Hz	9.5	2	400x500x250	18
BOXSMART-5.5-400 V 50/60 Hz-T-T	5.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	14	3	400x600x250	21
BOXSMART-7.5-400 V 50/60 Hz-T-T	7.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	18	3	400x600x250	21
BOXSMART-11-400 V 50/60 Hz-T-T	11.00	380 to 480 V 50/60 Hz	400 V 50/60 Hz	24	3	400x600x250	21

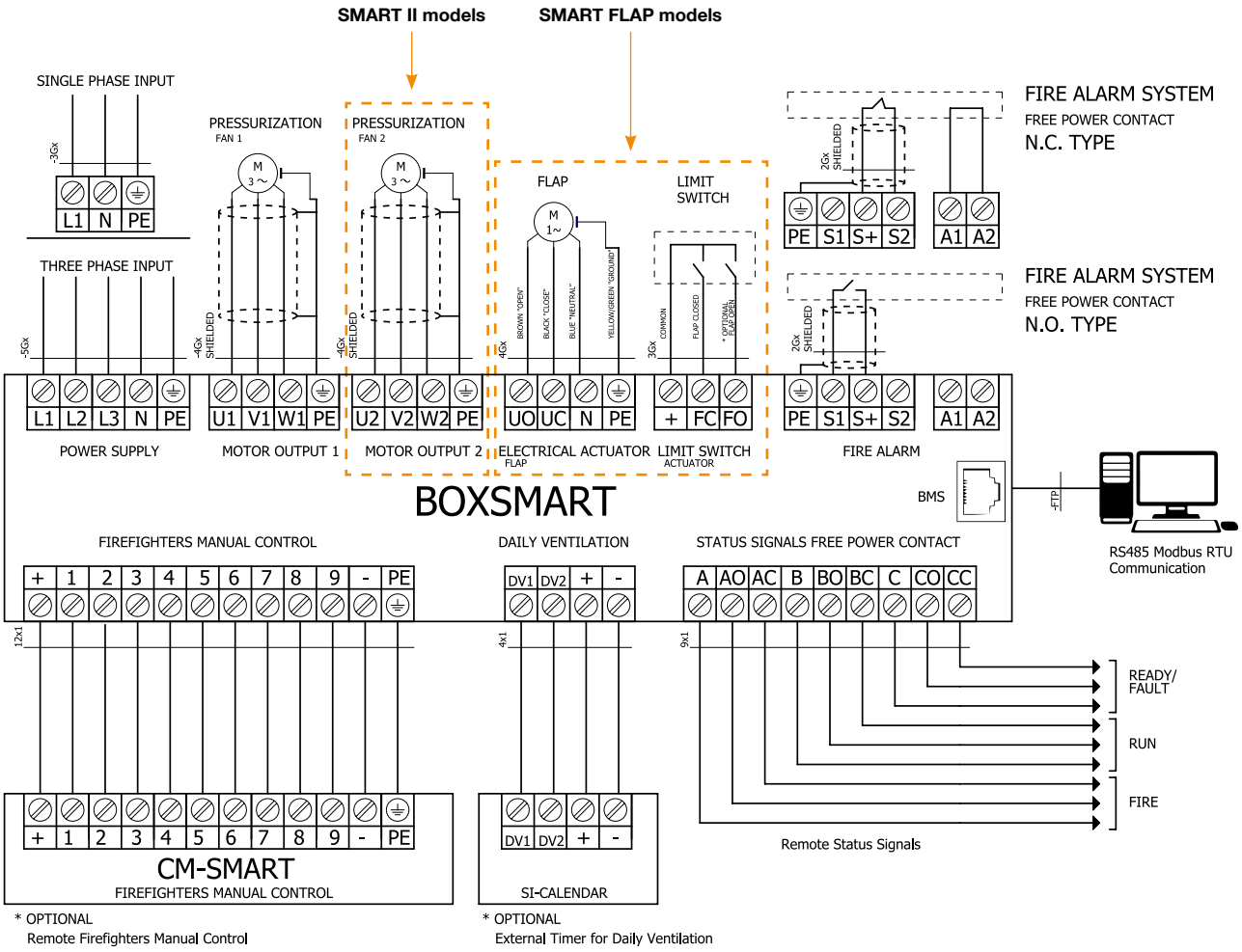
BOXSMART II and BOXSMART FLAP

For systems with standby fan. The fans will never operate simultaneously.

Model	Power (kW)	Power supply (V/Hz)	Output (V)	Max. output current (m^3/h)	Size	Measurements (length x width x depth)	Weight (kg)
BOXSMART II-0.37-230 V 50/60 Hz-M-T	0.37	200 to 240 V 50/60 Hz	230 V 50/60 Hz	2.3	2	400x500x250	18
BOXSMART II-0.75-230 V 50/60 Hz-M-T	0.75	200 to 240 V 50/60 Hz	230 V 50/60 Hz	4.3	2	400x500x250	18
BOXSMART II-1.5-230 V 50/60 Hz-M-T	1.50	200 to 240 V 50/60 Hz	230 V 50/60 Hz	7.0	2	400x500x250	18
BOXSMART II-0.75-400 V 50/60 Hz-T-T	0.75	380 to 480 V 50/60 Hz	400 V 50/60 Hz	2.2	2	400x500x250	18
BOXSMART II-1.5-400 V 50/60 Hz-T-T	1.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	4.1	2	400x500x250	18
BOXSMART II-2.2-400 V 50/60 Hz-T-T	2.20	380 to 480 V 50/60 Hz	400 V 50/60 Hz	5.8	3	400x600x250	20
BOXSMART II-4-400 V 50/60 Hz-T-T	4.00	380 to 480 V 50/60 Hz	400 V 50/60 Hz	9.5	3	400x600x250	20
BOXSMART II-5.5-400 V 50/60 Hz-T-T	5.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	14	4	500x700x250	28
BOXSMART II-7.5-400 V 50/60 Hz-T-T	7.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	18	4	500x700x250	28
BOXSMART II-11-400 V 50/60 Hz-T-T	11.00	380 to 480 V 50/60 Hz	400 V 50/60 Hz	24	4	500x700x250	28
BOXSMART FLAP-1.5-400 V 50/60 Hz-T-T	1.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	4.1	2	400x500x250	18
BOXSMART FLAP-4-400 V 50/60 Hz-T-T	4.00	380 to 480 V 50/60 Hz	400 V 50/60 Hz	9.5	3	400x600x250	20
BOXSMART FLAP-5.5-400 V 50/60 Hz-T-T	5.50	380 to 480 V 50/60 Hz	400 V 50/60 Hz	14	4	500x700x250	28

Connections

*All connections are located on the top section of the panel.



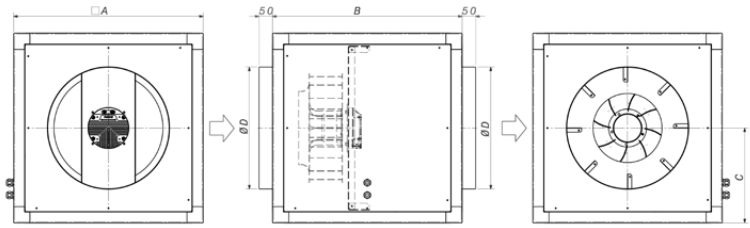
Accessories

CM-SMART and SMART FLAP

SI-CALENDAR

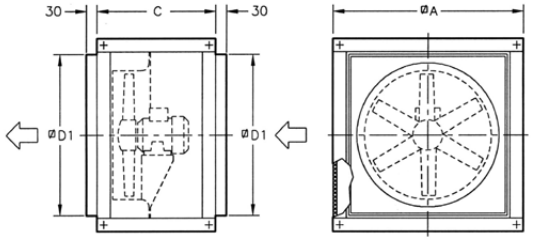
Dimensions mm

CJK/EC



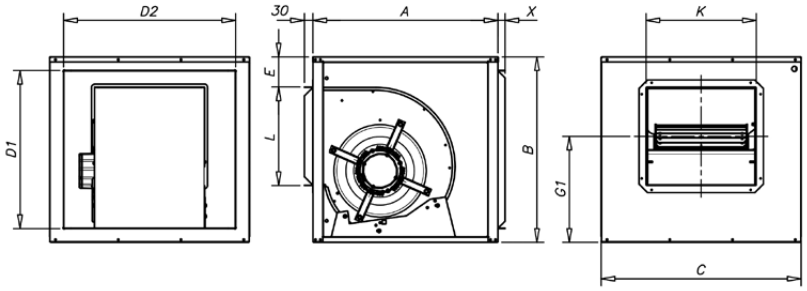
Model	A	B	C	ØD
CJK/EC-310	500	500	250	355
CJK/EC-400	700	700	350	450
CJK/EC-500	900	900	450	500

CJHCH



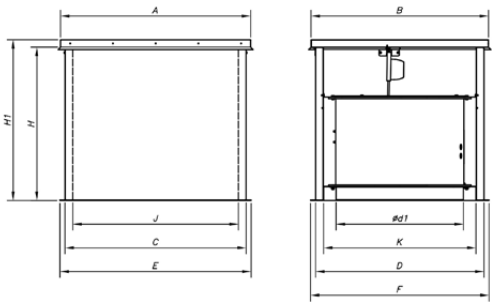
Model	⍁A	C	⍁D1
CJHCH-45	700	550	556
CJHCH-56/63	825	550	690
CJHCH-71	1000	650	850

CJBD



Model	Inches	A	B	C	E	D1	D2	G1	L	K	X
CJBD-2828	10/10	550	575	600	107	479	504	322	292	326	25
CJBD-3333	12/12	650	650	700	106	554	604	372.5	345	387	25

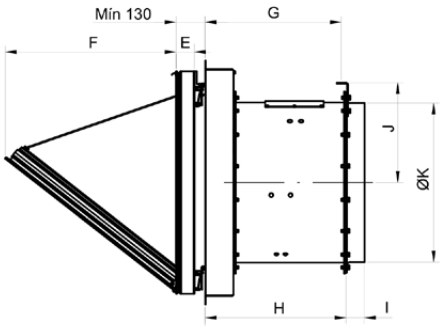
HCT/HATCH

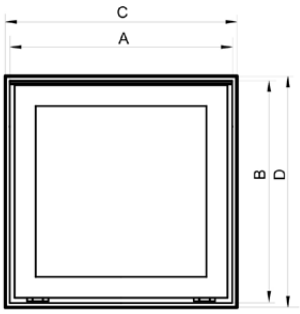


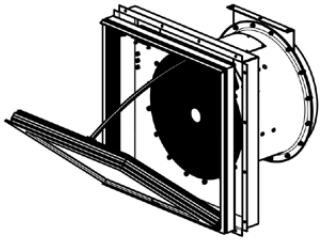
Model	A	B	C	D	Ød1	E	F	H	H1	J	K
HCT/HATCH-63	1295	1195	1222	1122	630	1300	1200	940	1000	1100	1000
HCT/HATCH-100	1492	1392	1420	1320	1000	1500	1400	940	1000	1300	1200

Dimensions mm

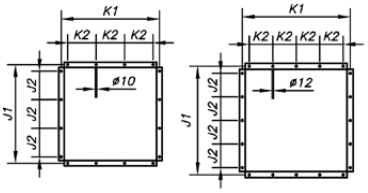
WALL/DUCT





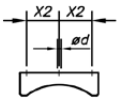


* Wall bracket



WALL/DUCT-71 WALL/DUCT-90

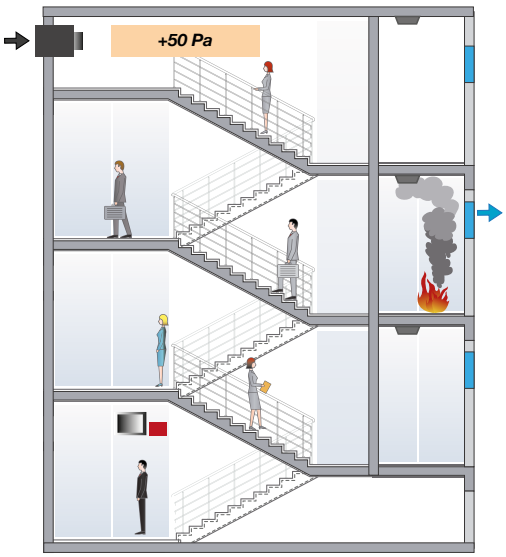
Helix ring support foot



Model	A	B	C	D	ØD*	I	J	H	G	E	F	J1	J2	K1	K2	X2	ød
WALL/DUCT-71	990	990	1000	1000	710	80	445	630	605	82	760	1050	300	1050	300	225	13
WALL/DUCT-90	1190	1190	1200	1200	900	100	550	630	605	82	790	1250	250	1250	250	280	18

(*) Recommended pipe nominal diameter.
(C x D) Nominal size of the wall opening

Example of application



Pressurisation smoke control method

This system consists of pressurisation by injecting air into spaces which are used as escape routes by people in the event fire, such as stairwells, corridors, passageways, lifts, etc., especially in tall buildings with large occupancy.

The method is based on smoke control by the air speed and the artificial barrier created by air pressure differential, preventing smoke from entering the escape routes.

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