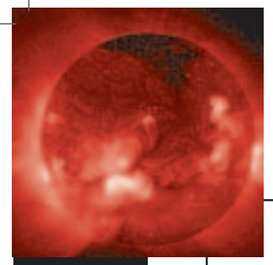
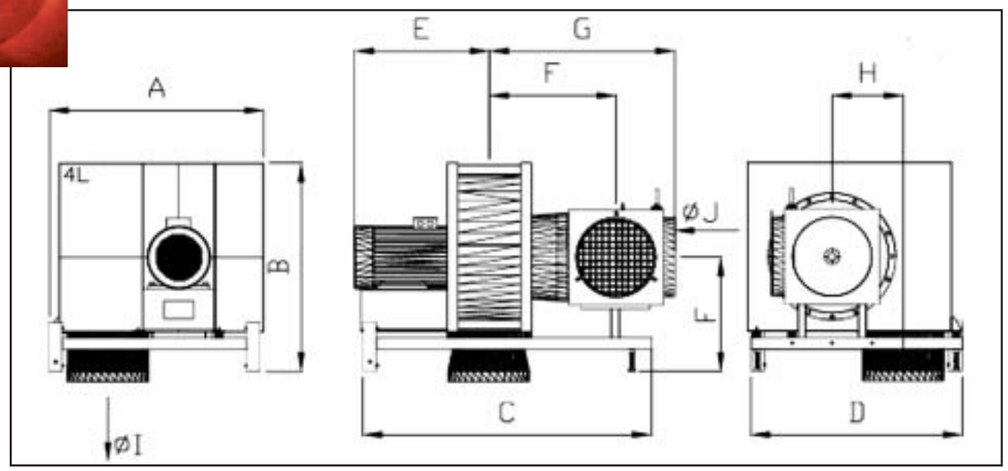
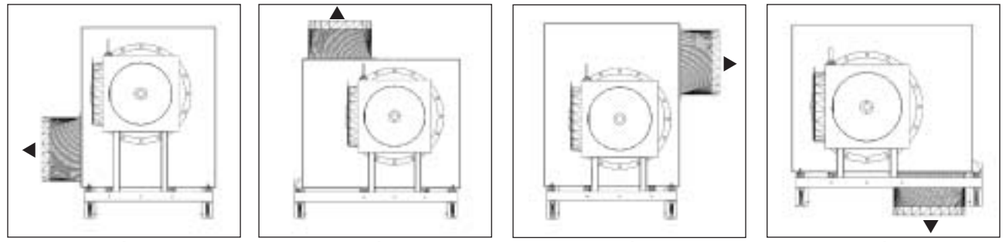


Dimension chart



fan type	Position	Iec	A	B	C	D	E	F	G	H	I	J
2,2	4L	90	880	915	1015,5	865	392	515	754,5	305	315	300
3,0	4L	100	880	915	1015,5	865	392	515	754,5	305	315	300
4,0	4L	112	925	980	1039,5	910	445	555	766,5	314	315	300
5,5	4L	132	925	980	1104,5	910	543	555	766,5	314	315	300
7,5	4L	132	1075	1050	1131,5	1060	556,5	575	780	397	315	300
11,0	4L	160	1075	1050	1448,5	1060	675,5	575	929	356	400	400
15 - 18,5	4L	160	1190	1218	1572,5	1175	827	658	948,5	360,5	500	500
22,0	4L	180	1190	1218	1572,5	1175	760	658	948,5	360,5	500	500
30,0	4L	200	1320	1327	1750,5	1305	906,5	697	1070	401,5	500	500

Subject to change ©19-10-2004



1L 2L 3L 4L

Choises position fan outlet side

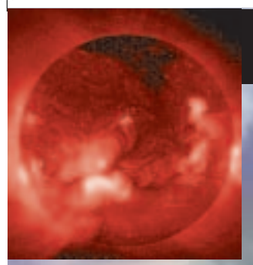
Zantingh B.V., Aarbergerweg 9, 1435 CA Rijsenhout
P.O. Box 255, 1430 AG Aalsmeer, the Netherlands
Telephone: (+31) (0)297 - 21 91 00, *Fax:* (+31) (0)297 - 21 91 99
Internet: www.zantingh.com, *E-mail:* info@zantingh.com

ISO 9001 registered by GASTEC

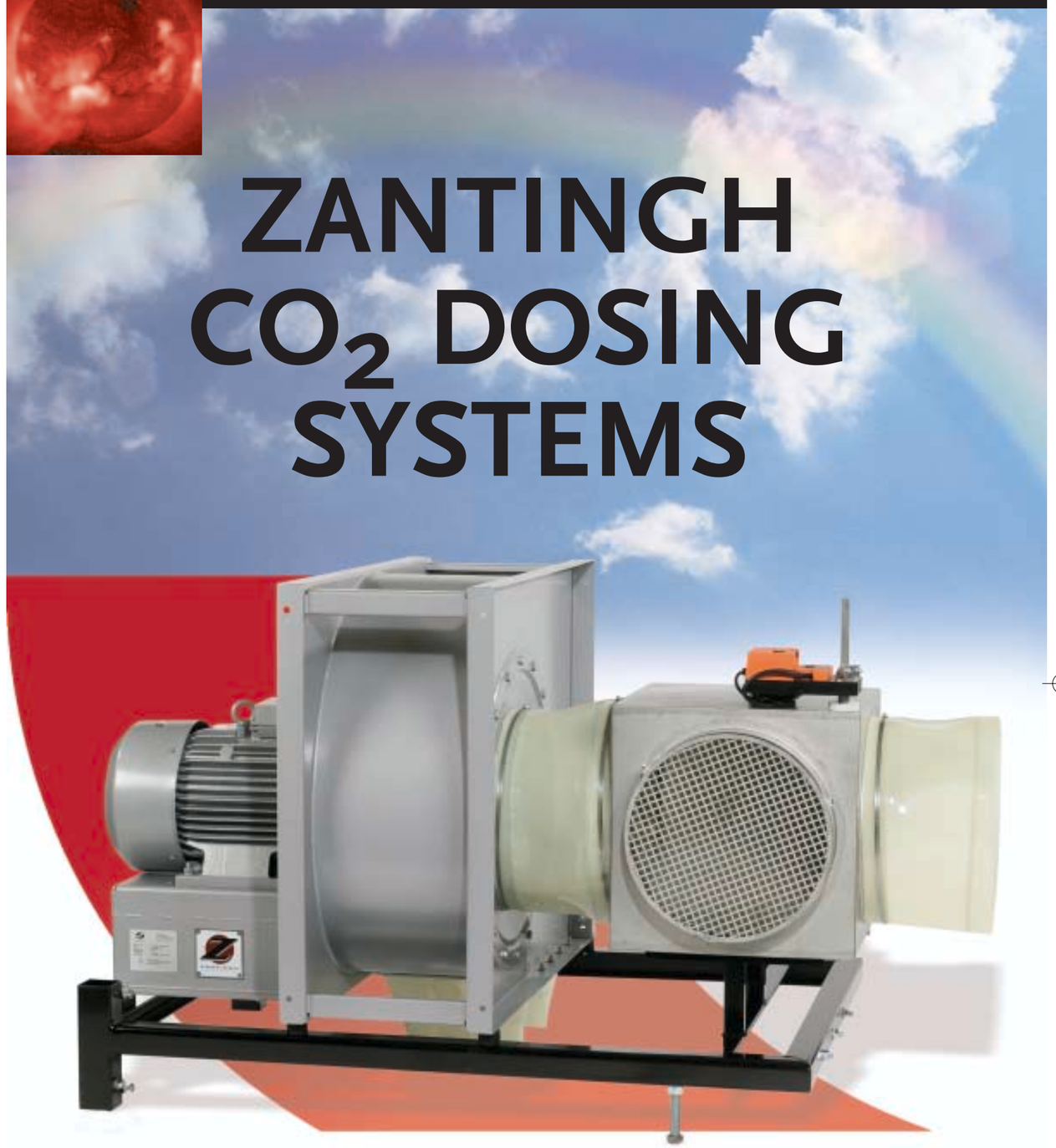
Certified by GASTEC

ZANTINGH

A BRIGHT FUTURE WITH ZANTINGH



ZANTINGH CO_2 DOSING SYSTEMS



ZANTINGH

A BRIGHT FUTURE WITH ZANTINGH

Stainless steel CO_2 Dosing System

The Zantingh CO_2 units are used for central CO_2 dosage in glasshouses. The flue gas from natural gasfired boilers is transported by an exhaust fan to the greenhouse area. The flue gas is distributed within the greenhouses using PVC pipes and CO_2 hoses.

The Zantingh CO_2 dosing systems are suitable for transporting flue gas from natural gas fired boilers with a maximum temperature of 60°C.
The Zantingh CO_2 dosing system consists of a ***stainless steel*** fan with a directly linked ***stainless steel*** fan wheel and a three-phase motor; a switch panel and a ***stainless steel*** inlet combination valve. This inlet valve has two openings for flue gas supply and mixed air and has been provided with an open/close servo motor. The system is obviously also provided with all the required temperature and pressure safeties and a flexible connection sleeve at the inlet and the outlet sides.

The fan with valve is built on a sturdy support frame and can be mounted on the floor or at a specific height, for example, on the flue gas condenser. A mounting set with support legs is included in the delivery when ordered in combination with a Zantingh flue gas condenser.

The switch panel is supplied separately. In general, the switches for the CO_2 system are built-in into the burner system switch panel. The required electrical circuit diagrams are also provided. The switch panel is provided with all the required control and protection equipment. When the fan motor has a capacity greater than 3.0 kW, the panel is provided with a star/delta connection. The delivery side of the fan can be supplied in various positions. This means that the units can be used without any problems under virtually any circumstances.

Standard Stainless Steel CO_2 Dosing System Delivery:

- A stainless steel fan with a three-phase motor with a directly linked stainless steel fan wheel.
- A specially constructed stainless steel inlet combination valve. This inlet combination valve has an open/close servo motor.
- A complete switch panel that meets the requirements of the applicable regulations.
- A pressure switch for monitoring the flow.
- A maximum thermostat for maximum temperature safety.
- A flexible sleeve for the connection of the piping onto the suction and outlet side of the fan.

CO Detector

The Zantingh CO detector is suitable for measuring CO on the delivery side of the CO_2 fan or in the pipes. The detector is supplied with a sensor of the semiconductor type. This sensor is completely selective for what concerns measuring CO levels. This protection is essential to prevent that harmful carbon monoxide can reach the greenhouse area. The display unit of the CO detector is mounted on the switch panel when supplied in combination with a CO_2 dosing system.

Standard Zantingh CO Detector Delivery:

- A read-only unit with a digital display for the CO concentration in ppm.
- A CO sensitive sensor that is placed directly in the flue gas flow (maximum flue gas temperature is 40°C).
- A sensor support with a set of hoses.

The CO detector can be expanded with a sampling pump for the intake of the flue gas condenser that will detect CO directly behind the boiler where the flue gas is hot. This option is often selected when there are multiple sources of CO_2 (boiler, cogeneration, etc.).

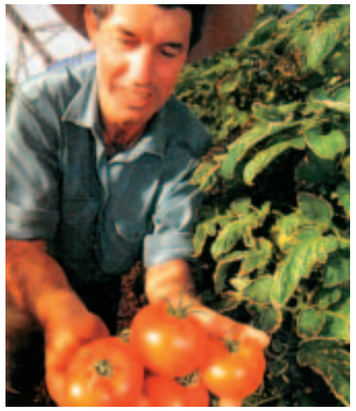
Options:

The Zantingh CO_2 dosage systems can be expanded with the following options:

- Fan motor frequency control. This option can be applied when, for example, certain sections at the greenhouse area are not to be supplied.
- Modulating temperature control This option is applied, for example, when no flue gas condenser is mounted and the hot flue gas is to be mixed with ambient air before entering the greenhouse area.

CO_2 Piping Layout Diagrams

The calculations required to provide a complete CO_2 piping layout diagram can be safely left to Zantingh. We determine the most optimal piping route based on a dimensional sketch of the available greenhouse space. This means that the pressure distribution over the total surface area that has to be dosed is optimised through distribution by the CO_2 fan which is generally set up in the boiler room.
In practice, the required PVC piping for this will vary in length and diameter. The calculation program differentiates between main distribution pipes and CO_2 hoses placed among the plants. The CO_2 hoses that are perforated at specific intervals with holes that have a specific diameter are connected to the piping network with special connection sets which have special restriction plates. The diameter of the holes in the restriction plates also varies and will be calculated by Zantingh. Our method will always guarantee an optimum distribution and the best dosage result.
In order to perform the calculation correctly it is important to know both the type of culture (vegetables, cut flowers, pot plants, etc.) as well as the dosage standard required (usually a value expressed in cubic meters gas per hectare).



The Zantingh "EASY-CONNECT" system

Zantingh is proud to introduce the "easy-connect" system to be used when mounting a CO_2 dosage system directly on the flue gas condenser. It has never been this easy to mount a CO_2 unit directly next to a flue gas condenser. The CO_2 unit is supplied by Zantingh on a mounting frame.
This frame can be mounted at a specific height using, for example, a fork-lift truck. The CO_2 unit is connected to the condenser using a fitting piece which is mounted on the condenser. The frame is supported by the supplied support legs. Everything is premounted which makes assembly ***very easy***.
Other advantages are that the frame can be placed either to the left or to the right of the condenser, that multiple frames can be connected in series and that the corresponding stack with roof lead-through can be delivered as standard.