FILTRATION

SORBENT DOSING STATION

Original instructions for use

CE

CZ

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CONTENTS

ABOUT THE INSTRUCTION

PURPOSE OF NSTRUCTION

The instructions are intended for the operator of the equipment and all persons who come into contact with it.
contact during **installation**, **operation and maintenance**.

PLATINUM INSTRUCTIONS

These instructions are valid for all supplied types of sorbent dosing stations $Ca(OH)_2$ or $_{CaCO3}$. The differences in types are given in the technical data.

SYMBOLS USED IN INSTRUCTIONS

SYMBOL	IMPORTANCE
	These symbols have the meanings of " **WARNING**" and " **WARNING**" and indicate facts that may cause serious injury to the user and/or damage to the equipment. They also draw attention to an important instruction, feature, procedure or matter that must be followed during n and maintenance of the equipment to comply with or take note of.
	The symbol draws attention to an important action that must be followed but which does not endanger health or cause damage to the product.
	The symbol highlights useful information related to the device :essories.
	The symbol is a reference to another chapter in this manual.

IMPORTANT NOTICES

Please read these instructions carefully. Follow the instructions in it exactly to not only make it easier for you to use the equipment, but also to ensure its optimum use and longevity.

Do not operate the equipment until you are thoroughly familiar with all instructions,
the prohibitions and recommendations contained in these instructions.

The illustrations used in this manual do not necessarily correspond to reality; they are intended to describe the main principles of the device. However, the texts, drawings, photographs and other elements shown here are protected by copyright. Any misuse or unauthorized copying is punishable by law.

The manual must be considered as part of the equipment and must not be separated from it. Therefore, keep it for future reference.

RELATED DOCUMENTATION

In addition to these instructions, further documentation is available from the manufacturers of the installed components and is included with the equipment. A full list of documentation is provided in the **MANUFACTURER DOCUMENTATION** section
AND SUBCONTRACTORS.

CONTACT US MANUFACTURER

In practice, there are also unforeseen situations that could not be included and described in this manual. Therefore, always contact the manufacturer if you are unsure of the procedure:

G&G filtration CZ, s.r.o.
Hrubínova 1903/9
664 51 Šlapanice
Czech Republic

T: +420 725 745 300
E: vesely@ggf.cz
W: www.ggf.cz

1 | DELIVERY

PACKAGING AND DELIVERY CONTENT

The equipment is delivered as one complete unit, mounted on a standard shipping pallet. It is wrapped with suitable foil and the areas susceptible to damage are secured with paper reinforcement.

Upon receipt of the equipment, check for damage to any part or packaging and report any damage to the carrier immediately. In addition, check that the delivery is complete and that it agrees with the order or packing slip. Report any shortcomings immediately. contractors.

The following is included:

- transport pallet
- complete equipment according to the operator's specification
- a delivery note indicating the exact configuration of the equipment
- instructions for use
- manufacturers' manuals for selected components
- connecting screws

HANDLING OF THE VAN

Use a forklift or lifting device with adequate lifting capacity to handle the packed equipment. The weight of the equipment supplied is indicated in the technical data sheet.

Lift the load with the lifting device and transport it to the designated unpacking or storage location.

The delivered equipment may only be transported in the position in which it was stored by the manufacturer. Under no circumstances may it be transported in any other position - there is a risk of serious damage to the components.

We recommend that the lifting equipment and load are handled by persons who are qualified to do so.

STORAGE BEFORE UNPACKING

If you are not going to unpack and install the equipment immediately after delivery, store it under the following conditions:

- store the equipment in its original packaging in dry areas, protected against weathering that could cause damage to the packaging and deterioration
- do not dismantle the device from the pallet and do not tip it on its side or lean it in an inclined position
- Do not place any other objects or materials on top of the packaged equipment

Recommended storage site characteristics:

Temperature:-5 °C to +50 °C
Humidity :<60%
Air cleanliness: Dust-free
environmentOther: Dry storage areas

Unpacking and transporting the equipment to the installation site is described in t h e chapter INSTALLATION AND REPLACEMENT.

2 | TECHNICAL INFORMATION

PURPOSE OF THE DEVICE

In industrial extraction applications where the filter media is at risk of ignition from
of the sucked hot particles, a micro sorbent dosing unit is used for dosing ground limestone into the suction pipe. The limestone forms a protective film on the filter media, which significantly reduces the risk of ignition from sucked sparks or hot spheres.

In industrial dust extraction applications such as aluminium grinding, it is possible to change the nature of the dust from explosive to non-explosive by installing a sorbent dosing station. By adding sorbent to the suction line, the explosive dust particles are mixed with the sorbent in a ratio of approximately 1:1 and the resulting mixture entering the filtration system no longer has the character of explosive dust. The operation of the filtration plant must be subject to monitoring of the sorbent level in the dosing unit and other continuities which must be consulted before the installation and adjustment of the dosing station.

Adding sorbent to the extraction line has a positive effect on the regenerability of the filter media. Especially in welding shop exhaust systems where evaporated oil is extracted together with dust particles and smoke. It is the oil trapped in the filter media that causes high pressure loss, low filter media life and premature filter cartridge replacement. The sorbent, mainly $Ca(OH)_2$ and $CaCO_3$, holds the oil particles and significantly increases the regeneration efficiency. After regeneration of the filter media, it is then separated together with the trapped dust into the collection vessel of the filter system. The filtration system operates at lower pressure losses which has a positive effect on the power consumption of the extraction fan.

More precise specification of individual versions is given in the chapter DESCRIPTION AND FUNCTIONS.

IMPROPER USE OF EQUIPMENT

The dispensing station must not be used for purposes and under conditions other than those specified above. Furthermore, it is forbidden to operate them with components other than those with which they were supplied.

The dosing station must not be operated in a range other than that specified in these instructions for use.

Improper use of a dispensing station includes installation and maintenance by an untrained or unauthorized person, operation with a malfunction or defect, and operation with disassembled or modified covers.

If it is found that the equipment has been installed or serviced by an untrained or unauthorized person, or has been used for purposes other than those for which it was originally intended, or has been operated in violation of applicable standards, general regulations, end user's internal regulations, or in violation of this manual, all warranties on this
facility.

DESCRIPTION AND FUNCTIONS

Sorbent dispensers are used in industrial extraction applications. By us
The manufactured screw dispensers are supplied in the form of compact stations, equipped with a brushing mechanism, protection against paper bag dropping and a closing lid. The speed of the dosing screw can be controlled by means of a frequency converter. The dispensers have a capacity of 3 kg to 100 kg per hour of operation. Cyclic control of the dispenser operation is used to set the optimum dosing rate. The micro sorbent doser can be connected as an external device to any industrial extraction system.

Construction

The cabinet consists of front and rear side panels with a bearing and left and right shells. **Rotor**,
mounted on the shaft by means of bearings located outside the conveyed material space, it is equipped with **blades** with flexible endings. This ensures tightness and separates the two independent pressure environments. In the case of protective systems, the blades thus prevent the transmission of the dangerous effects of explosions, pressure waves, flames and sparks. The rotary motion of the rotor is provided by an **electric motor with gearbox and clutch**. The material to be transported is uniformly carried in the direction of free fall.

CONNECTION TO THE MAINS

Transmission: 400 V / 50 Hz

A detailed description of the parameters of the electrical network is given in the instructions drawn up by the electric motor manufacturer and included in the delivery of the dosing station.

LABELS ON EQUIPMENT

Production label

G&G FILTRATION

G&G filtration, s.r.o.
www.ggfiltration.com

CE

Výrobek:	Dávkovací stanice
Typ:	DSGG-52-72
Rok výroby:	2021
Zakázkové číslo:	ZV22097
Výrobní číslo:	DS-2021-00008
Objem zásobníku	72 l
Dopravní kapacita	52 l/h
Prostředí uvnitř	BNV
Prostředí vně	BNV
Hmotnost:	76 kg

„Made in Czech & Slovak company"

Other labels

Direction of rotation

Danger of injury

The device is designed for operation in an environment with explosion hazard

SUBSCRIPTIONS ABOUT THE AGREEMENT

The Declaration of Conformity is supplied in separate documentation supplied with the dispenser.

3 | SAFETY INFORMATION

GENERAL NFORMATION

It is primarily the responsibility of the operator to ensure their personal safety when operating the equipment
a person designated by the operator. The manufacturer of the equipment shall not be held liable

for personal injury or damage to the equipment and environmental damage caused by not being used and operated in accordance with the instructions for use and applicable safety regulations.

The dosing station is designed in accordance with international standards and regulations applicable to the manufacture of such equipment. The electrical components of the dispenser comply with international regulations on protection against dangerous contact voltages. All the electrical elements either have the appropriate protection prescribed by the standard or are located in enclosures whose protection meets the regulations of these standards.

OBLIGATIONS OF THE OPERATOR

The company that implements the dispenser in its technology, or the dispenser operator must ensure the following:

- must clearly define the scope of responsibilities and competencies of the personnel designated for installation and connection to technology
- before putting the equipment into operation, ensure that all those who come into contact with it can thoroughly familiarise themselves with the contents of the instructions for use
- must ensure that the spatial arrangement of the installation does not endanger the operation and the activity of transport technology operators
- must take care to protect the health of workers installing the equipment and assign them appropriate personal protective equipment (PPE)

STAFF REQUIREMENTS

Qualification of personnel to install the dosing station:
Training in mechanical engineering - a knowledgeable person, i.e. a person with appropriate technical education, training and/or experience to recognise and avoid the hazards that may occur when handling and installing the dispenser.

Qualification of personnel to connect the electrical system to the parent control system of the transport technology:
Education in the field of electrical engineering according to the relevant legislation of the country of the operator, knowledge of the control system of the transport technology used.

Dressing:
During the assembly of the dosing station, the designated personnel must use appropriate personal protective equipment according to the general regulations, internal regulations and the nature of the work to be performed, such as fire-resistant and dielectric workwear, steel-toed work boots, gloves, helmet, safety glasses, ear protectors, etc.

PROHIBITED ACTIVITIES

- it is forbidden to modify the equipment in any way without the manufacturer's knowledge
- it is forbidden to remove or damage the labels on the equipment
- it is forbidden to allow maintenance and servicing by persons who are not competent to maintain and service this type of equipment
- it is forbidden to use the equipment if it is found to be defective

RESIDUAL RISKS

The equipment and its parts are designed so that, when used properly, they will operate in
in perfect technical condition did not endanger the health of workers and did not cause economic damage to surrounding facilities. Nevertheless, during installation and maintenance of the equipment, situations may arise which are a source of danger to the user if he is not aware of them and does not observe the principles of safe work. These hazards are so-called residual risks - they are risks that remain even when all preventive and protective measures have been considered and implemented.

HAZARD: Electric shock during installation, maintenance or servicing of electrical parts of the equipment. Electric shock when persons touch parts that have become live due to a fault in the electrical equipment.

PROTECTION: Wiring, maintenance and servicing of electrical parts of the equipment must only be carried out by designated and properly trained personnel with appropriate qualifications.

HAZARD: Crushing of body parts or bumping while handling the equipment during installation. Injury due to slips, trips and falls of persons on edges or other parts of the equipment during installation or maintenance.

SAFETY: Always pay the utmost attention to the work you are doing and follow safety regulations. Wear the prescribed personal protective equipment. Make sure that any person involved in installation or maintenance is familiar with each step of the installation.

DANGER: Burn on parts of the equipment that get hot during operation. temperature.

PROTECTION: Do not touch the device until the temperature has dropped properly. There is a risk of burns. Wear protective gloves.

HAZARD: Explosion due to non-compliance with the maximum temperature of filtered particulates in the case of explosive dusts or mixtures.

PROTECTION: Before using the dosing station in an explosive environment, it is necessary to become familiar with the nature of the solid pollutants and to follow the recommendations of the manufacturers of these substances for protection against explosion or spontaneous combustion.

4 | INSTALLATION AND COMMISSIONING

WORKING ENVIRONMENT

To maintain proper operation of the dispenser, the following environment must be provided:
- altitude up to 2 000 m
- relative humidity in the workplace 20-80 % without condensation
- ambient temperature -20 °C to +40 °C
- explosion-proof working environment around the dosing station

OPERATIONAL SPACE

When selecting the installation location, take into account the dimensions of the device as specified in the technical data. Ensure that the chosen location provides sufficient space for the safe installation of the equipment on the transport technology and for any subsequent maintenance or
Service.

AVAILABILITY

When unpacking, proceed as follows:

1 Remove the screws securing the device to the pallet and remove the packaging material.

Dispose of used packaging material according to the operator's internal regulations.

2 Visually check that no parts of the device have been damaged during transport. Report any defects to the supplier or carrier as soon as possible.

The dispensing stations are supplied without preservation, so there is no need to unpack them
unpreserve.

INSTALLATION

1 Check that the prepared flanges on your conveying technology dimensionally match the rotary separator housing (especially the spacing for the screws).

2 Apply commercially available silicone sealant or sealing tape to the flanges of your transport technology on both sides of the holes. Allow the sealant to dry for approximately 30-45 minutes. Follow the sealant manufacturer's instructions.

3 Slowly and carefully seat the dispenser between the flanges of the technology. Take care not to damage the applied sealing layer.

During installation, the dispenser can be left on the shipping pallet and picked up on s i t e with a forklift.

When lifting the dispenser, follow the relevant standards and the operator's internal regulations. Always use personal protective equipment such as work boots when handling the equipment.
with reinforced tip, protective gloves and protective helmets.

CONNECTION TO ELECTRICAL NETWORK

Before connecting to the mains, make sure that the mains has the correct parameters to ensure the performance of the dosing station. Check that the mains voltage and frequency correspond to the information on the motor label. Ensure that the supply cable is not live.

Wiring should be done according to the instructions for the electric motor, see MANUFACTURER AND SUBCONTRACTOR DOCUMENTATION. The wiring diagram for the electric motor is also shown in the motor terminal cover.

The wiring must comply with the applicable standards in the operator's country and varies individually according to the system into which the dosing station is integrated.

In any case, the equipment must be earthed and all parts must be conductively connected.

Unexpected start-up must be prevented for the equipment according to the applicable national standards of the country
operator and shall be equipped with a lockable shut-off device.

There must be an emergency stop button within reach of the operator.

PRE-COMMISSIONING CHECKS

Check:
- Tightness of connecting flanges
- that the dispenser is connected in such a way that fingers or objects cannot be inserted into the dispenser rotor area during operation
- Correctness of the direction of rotation of the electric motor

CONSUMPTION

The operation of the dosing station is dependent on the control system of the transport technology
and launch depends on how it is integrated into your transport technology.

Therefore, this manual does not describe how to start the dispenser.

5 | MAINTENANCE

Always turn off the dispensing station and allow the hot surfaces to cool before performing any maintenance or inspection. We also recommend securing the dispenser against unexpected
Launch.

MAINTENANCE OF ELECTRICAL PARTS

Periodically or according to the operator's internal regulations**, check that all connectors are inserted and that the screws of electrical connections and terminals are tightened**. Carry out these checks with the main switch of the transport technology switched off.

Regularly **check the insulation condition of all cables and the grounding condition**. In the event of any damage, contact electrical maintenance personnel immediately.

Check the electric motor according to the manufacturer's instructions in a separate manual. The instructions are included with the rotary separator.

Maintenance of the electrical parts of the equipment may only be carried out by persons who are properly trained and qualified.

DEMONTAGE AND LIKVIDATION

When dismantling the device, follow the opposite steps to those shown in the chapter INSTALLATION AND FITTINGS.

Due to the nature of the working conditions, which vary from application to application, it is not possible to determine the lifetime of the dosing station in general. However, before disposing of the dispensing station and its parts, render them unusable.

When disposing of parts of the equipment, the instructions of the manufacturers of the individual components must be followed, as well as the relevant national regulations on waste disposal. Individual
We recommend that you have the components of the device disposed of at a specialised disposal facility.

6 | DOCUMENTATION OF THE MANUFACTURER AND SUBCONTRACTORS

ADDED DOCUMENTATION

The following manufacturer's documentation is supplied with this dosing station and subcontractors:

- delivery note (handed over on delivery)
- declaration of conformity
- manufacturers' manuals for selected components

7 | WARRANTY CONDITIONS

WARRANTY CONDITIONS

The manufacturer guarantees its product for 24 months from the date of delivery or handover and acceptance.

THE WARRANTY COVERS:
- hidden defects in the material
- demonstrable design defects

Defects covered by the warranty must be reported in writing to the manufacturer's service department.

Special cases may be decided only after discussion, inspection and assessment by the manufacturer's side.

THE WARRANTY DOES NOT COVER DEFECTS CAUSED BY:

- mechanical damage
- negligent handling
- by unprofessional intervention
- by connecting or reconnecting to the wrong type or voltage of electricity
- normal mechanical wear and tear, etc.

Other warranty conditions can be agreed in the contract.

8 | LIST OF MAINTENANCE TASKS

H	Sorbent dosing station						
č.	Action	Nature	Priority	Daily	Quarterly	Annually	As required
H1	Visual inspection of station function - rotor rotation	Ú	1	X			
H2	Check of sorbent filling in the station	Ú	2	X			
H3	Checking the function of the hatch opening safety sensors	Ú	1	X			
H4	Dosing station housing leak check	Ú	1		X		
H5	Checking bearings, refilling lubricant	Ú	1		X		
H6	Inspection of connecting pipes, pipe integrity, pipe blockage	Ú	2		X		
H7	Checking motor current draw under operating conditions	M	2		X		
H8	Checking and recording the flow velocity in the sorbent extraction line	M	3		X		
H9	Checking the oil level in the gearbox station	Ú	1			X	
H10	Checking the tightening of bearing bolts, housing, gearbox, station mounting	Ú	1			X	
H11	Physical inspection of the dispenser rotor	Ú	1			X	
H12	Physical inspection of the dispenser jacket	Ú	1			X	
H13	Inspection and repair of corroded parts of the feeder surface with paint	Ú	2			X	

M - measurement
Ú - action of the technician P - OPERATION

1 - necessary
2 - suitable
3 - recommended

FILTRATION

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