



NetterVibration

Operating instructions for
Netter dosing stations
series *DosyPack*



March 2022
No. 2063E
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These operating instructions apply to: *DosyPack 4*
DosyPack 25
DosyPack 40
DosyPack 56
DosyPack 80



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Scope of delivery

Please refer to the delivery note for the scope of delivery.
Check the packaging for possible transport damage. In the event of damage to the packaging, check the contents for completeness and possible damage. Inform the carrier in the case of damage.

Designation

The Dosing Stations of the series DosyPack are hereafter referred to as "machines".

Version of document

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1 General information

Use and storage

Before installing the machines read these instructions carefully. It is the basis for any action when dealing with the machines, and may be used for training purposes. The instructions should be subsequently stored at the operation site.

Target group

The target group for these instructions is technical staff, who have basic knowledge in mechanics and pneumatics.

Only complying technical staff may work on the machines.

The machines may only be installed, put into operation, maintained, troubleshoot and disassembled by persons authorised by the operator.

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Limitation of liability

All technical information, data and instructions for installation, operation and maintenance in these instructions are based on the latest information available at the time of printing and take our past experience to the best of our knowledge into account.

No claims can be derived from the information, illustrations and descriptions in these operating instructions.

The manufacturer does not assume liability for damages resulting from:

- failure to observe the instructions,
- improper use,
- unauthorised repairs,
- technical modifications,
- use of non-permissible spare parts.

Translations are made to the best of our knowledge.

NetterVibration does not assume liability for translation errors, even if the translation was made by us or on our behalf. Only the original German text remains binding.

Directives / standards observed


The Dosing Stations of the series DositPack comply with the EC Machinery Directive 2006/42/EC.


In particular, the standard EN ISO 12100 has been observed.

Instruction and warning symbols

The following instruction and warning symbols are used in these instructions:

Personal injuries

⚠ WARNING	
	<p>indicates a potential danger. Disregard of this notice can result in death or severe personal injuries.</p>


⚠ CAUTION	
	<p>indicates a potentially dangerous situation. Disregard of this notice can result in minor or moderate personal injuries.</p>

Material damages

NOTICE	
<p>indicates potential material damage. Disregard of this notice can result in material damage.</p>	

Notes

IMPORTANT	
<p>indicates actions, methods or notes that are not relative to safety, e.g. useful information and tips.</p>	

	<p>Environmentally safe disposal indicates the obligation of environmentally safe disposal.</p>
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Applicable Documents

The following applicable documents are part of these operating instructions and must be observed:

- Technical data sheet
- Overview drawing with spare parts list
- Operating instruction of the vibrator
- Operating instruction of the maintenance unit (optional)

2 Safety

Intended use

The machine is a custom-made product that meets special customer requirements and purposes.

The Dosing Stations of the series DosyPack convey bulk materials from a hopper via a conveyor trough, with the aid of vibration.

The vibration is generated by a pneumatic vibrator. The vibration is transmitted via the conveyor trough to the product on it.

The machine may only be operated within the permissible operating conditions.

The Dosing Stations of the series DosyPack can be used under strict hygienic conditions in the chemical, pharmaceutical and food industries.

The machine may not be used outdoors or in a humid environment.

Any other use is considered improper.

Qualification of qualified personnel

Installation, commissioning, maintenance and troubleshooting of the machines may only be performed by authorised qualified personnel.

All handling of the machines is the responsibility of the operator.

Safety instructions for the vibrator

IMPORTANT

The safety instructions for individual vibrators can be found in the operating instructions of the respective vibrator.

Compressed air

⚠ WARNING

Compressed air

A loosened hose which is under pressure can lead to personal injuries.

- Screw the hose lines on carefully.
- Check the hose lines and connections after one hour of operation and thereafter regularly (generally monthly).
- Retighten the hose lines, if necessary.
- Ensure that the compressed air is disconnected from the supply lines during all work on the machines.
- Prevent the machines from being switched back on during all work.

Heavy parts

⚠ WARNING

Risk of injury while handling heavy parts

Risk of serious injury due to weight during transport and installation of the machines.

- Observe the weight information in the technical data sheet.
- Only qualified personnel may transport and install the machines.
- Use suitable load handling devices and slinging equipment.
- Never stand under suspended loads.
- Wear suitable personal protective equipment.

Vibration energy

⚠ WARNING

Health damage from vibration energy

Vibrating whole bodies or body parts will cause health damage.

- Keep a sufficient safety distance while operating the machines.
- Do not touch any vibrating parts during operation.
- Never use any vibrating part as a stepping or sitting surface.

Machine movement

⚠ WARNING

Risk of injury due to uncontrolled machine movement

If fastening screws become loose due to vibration, there is a risk of injury due to uncontrolled machine movements.

- Check fastening screws regularly and retighten if necessary.
- Switch off the machines immediately if you notice any irregularities during operation. Eliminate the fault before switching on again.

Sound level

⚠ WARNING



Sound level

Near the machines or in the vicinity of the constructions connected with the machines, the sound pressure level may exceed 80 dB(A). The human ear can be permanently damaged by the high sound level.

- When working in the noise area, use ear protection if 80 dB(A) is exceeded.

Maximum load

NOTICE

Damage of the machine due to too high load

Exceeding the maximum load can lead to damage to the machine.

- Observe the specifications for the maximum load in the enclosed technical data sheet.

Cable and hose lines

NOTICE

Damage to cable and hose lines

Vibrating parts can chafe through cable and hose lines.

- Lay cable and hose lines during assembly so that they do not touch any vibrating parts.

3 Technical data

Permissible operating conditions

Parameter	Description
Permissible ambient temperature	See technical data sheet.
Humidity	The relative humidity should not exceed 90 %.
Maximum load	See technical data sheet. The machines may only be operated with load.
Requirements for the installation area	<ul style="list-style-type: none"> • flat installation surface • required load capacity, see technical data sheet • sufficient access areas around the machine
Vibrator	
Type	NTS or NTK
Permissible operating conditions and technical data	See operating instructions and brochure of the vibrators.

Dimensions and weight

See technical data sheet.

Sound pressure level

See technical data sheet.

Note that the sound pressure level can be higher with customer-specific load. Wear suitable hearing protection if necessary.

The sound level can be reduced by reducing the vibrating frequency .

Type plate



- 1 Type designation
- 2 Type of vibrator
- 3 Year of manufacture
- 4 Item number
- 5 Machine number

The values can be found on the type plate. The type plate is situated on the housing of the machines.

Tightening torques

NetterVibration recommends the following tightening torques for fastening screws and nuts:

Thread	Tightening torque [Nm]	
	Steel strength class 8.8 (sliding friction coefficient 0.14)	Stainless steel strength class 70 (sliding friction coefficient 0.1 - 0.2)
M4	3	2-3
M5	6	3-5
M6	10	6-9
M8	25	14-21
M10	50	30-44
M12	85	50-74
M16	200	121-183
M20	410	224-370
M24	710	400-608

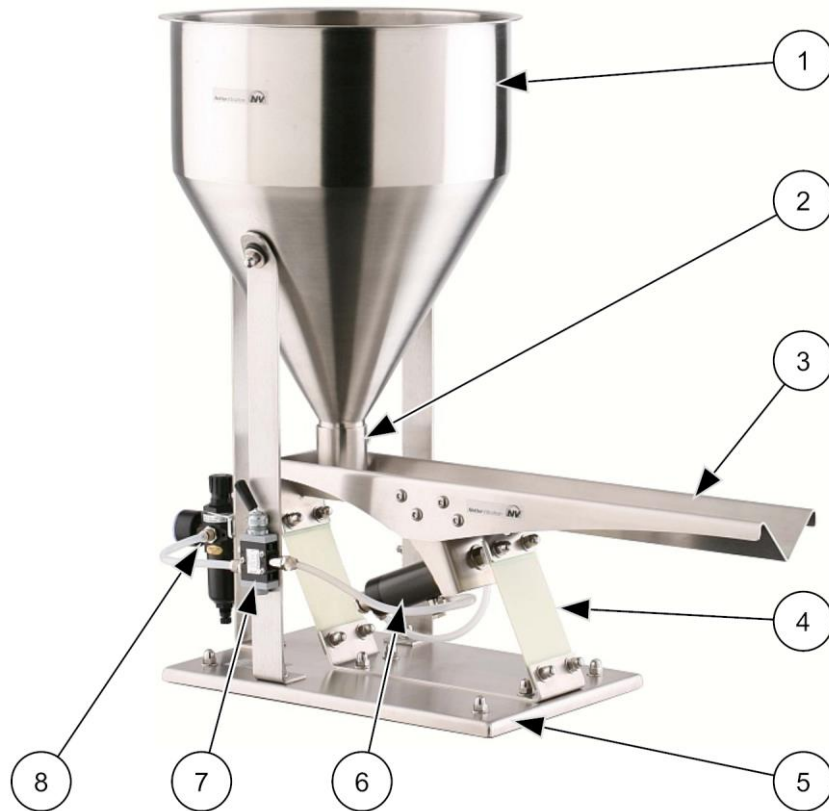
Always use a torque wrench and tighten screws crosswise.

Higher tightening torques can lead to breaking of the screws or tearing of the threads.

4 Design and function

Design

Principle design. The exact design is customer-specific.



No.	Element	Function
1	Hopper	Stores the bulk material.
2	Dosing adapter with knurled screw	Change gap size. Adjust flow rate.
3	Customized conveyor trough (optional)	Carries and transports the product.
4	Insulation elements: Blade springs	Enable the directional swinging of the vibration plate. Ensure that only a small amount of vibration is conducted into the base frame.
5	Bottom part	Supports the components of the machine. Ensures the safe stand of the machine.
6	Vibrator	Generates the vibrations that are transmitted to the conveyor trough.
7	Directional valve (optional)	Used to actuate the vibrator.
8	Maintenance unit (optional)	Prepare compressed air. Setting and reading the operating pressure.

Function

The machines serve for conveying bulk materials.

The bulk material in the hopper reaches the conveyor trough via the dosing adapter. The vibration is transmitted to the bulk material via the conveyor trough. The leaf springs enable directed vibrations and thus the continuous transport of the bulk material. Furthermore, they ensure that the conveyor trough can vibrate freely and that only a small amount of vibration is transmitted to the bottom part.

An optional directional control valve must be provided to actuate the machine. In addition, a maintenance unit (optional) with pressure regulator and exhaust air throttle valve is required.

The frequency of the vibrator and thus the flow rate can be adjusted via the pressure regulator of an optional maintenance unit. The conveying speed (vibration amplitude) is adjustable via an optional exhaust air throttle.

For operation the machine must be placed on a suitable, level surface.

Other customer-specific designs, e.g. with cover of the conveying trough or sieve insert are possible.

5 Transport and storage



Observe the safety instructions in chap. Safety, from page 5 on.

Transportation options

The machines can be transported manually as a unit. Depending on the version, two people are required for transportation. Observe the weight specifications on the technical data sheet. During transport, care must be taken that the vibrator(s) and attachments are not damaged.

Alternatively the machines can be transported in the following ways:

- With a crane:
Attach suitable lifting equipment (e.g. ropes or belts) of the same length to the vibration plate or to the transport eyes provided for this purpose. Lift, transport and lower the machines carefully.
- With a forklift or pallet truck:
Place machines on a suitable pallet and secure against tipping over or slipping. Lift, transport and lower the pallet carefully.

Observe the information in the applicable documents.

Delivery units and Packaging

The machines are delivered packed as a unit.

The packaging protects the machines from transport damage. The packaging material has been selected from an environmentally safe and technically disposable point of view and is therefore recyclable.

The return of packaging to the material cycle conserves raw materials and reduces the amount of waste.

Storage

- Store the machines in a dry and clean environment.
- The permissible storage temperature is between -20 °C and +60 °C.
- Protect the machines from UV-exposures, weather and ozone.

Observe the information in the applicable documents.

6 Installation



Observe the safety instructions in chap. Safety, from page 5 on.

Regulations

Installation work as well as operation of the system are to be carried out taking the valid accident prevention regulations into account.

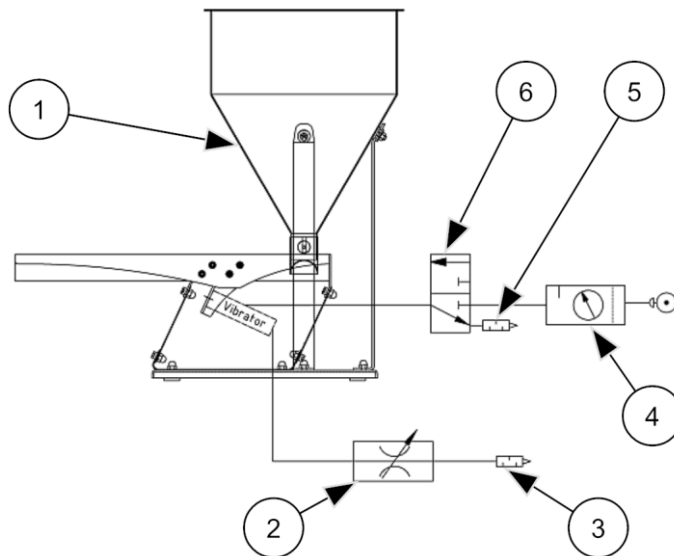
The operator is responsible for the proper condition of the system.

Procedure

Carry out the following steps in succession:

1. Place the machine at the place of use on a level, sufficiently firm surface, with sufficient distance (min. 30 mm) to adjacent interfering edges. If necessary, secure the machine against tipping over and falling down.
2. Connect the optional maintenance unit. Observe the specifications in the operating instructions of the maintenance unit.
3. Connect the compressed air lines to the vibrator. Observe the specifications in the following section "Standard installation" and in the operating instructions of the vibrator.

Standard installation



- 1 DosyPack
- 2 Exhaust air throttle valve
- 3 Silencer
- 4 Maintenance unit with filter, pressure regulator and oiler (optional)
- 5 Silencer
- 6 3/2-way valve



**Checklist
Installation**

Check that the following steps have been carried out:

- Permissible operating conditions observed?
- Installation surface is level and corresponds to the required load-bearing capacity?
- Conveyor trough freely movable?
- Maintenance unit and compressed air lines installed?
- Compressed air connection of the vibrator carried out according to the operating instructions of the vibrator?

7 Start-up and operation



Observe the safety instructions in chap. Safety, from page 5 on.

Permissible operating conditions

Please refer to chap. Technical data, page 8 for permissible operating conditions.

Regulations

Installation work as well as operation of the system are to be carried out taking the valid accident prevention regulations into account.

The operator is responsible for the proper condition of the system.

Measures

Carry out the following measures before start-up:

1. Check whether all permissible operating conditions are fulfilled.
2. Check that all protective measures on the system have been observed.
3. Check that the compressed air lines are undamaged and have been laid in accordance with the operating instructions of the vibrator.
4. Check that the maintenance unit is correctly installed and connected. To start up the maintenance unit, observe the specifications in the operating instructions for the maintenance unit.
5. Check that all components of the machine have been correctly assembled.
6. Check that the machine is correctly positioned and, if necessary, secured against tipping over and falling down.
7. Loosen mechanical blockages (e.g. transport clamps).
8. Visually check the vibration table. Make sure that the conveyor trough can move freely and that no compressed air lines can come into contact with vibrating parts.
9. Eliminate possible errors.

Start-up

Carry out the following measures:

1. Open the compressed air supply.
2. Check whether there is a pressure of 6 bar at the maintenance unit.
3. Set the compressed air regulator for the vibrators to 3 bar.
4. Fill the hopper with the desired material.
5. Start the vibrator.
6. Observe the running behaviour of the material.
If necessary, adjust the flow rate with the dosing adapter.
If necessary, change the frequency with the pressure regulator of the maintenance unit.

7. Set the conveying speed: The low pressure sufficient for conveying is determined by the outlet throttle valve through which the exhaust air from the vibrator is routed. This also sets the conveying speed. If the throttle valve is set smaller, less air can escape. This reduces the vibration amplitude, the air consumption and thus the conveying speed.
8. In the event of irregularities or malfunctions, switch off the machine and eliminate the malfunction, see chap. Troubleshooting, page 18.
9. Stop the vibrator.

The start-up has been successfully completed. The machines is ready for operation.

Operation

Procedure:

1. Fill the hopper with the desired material. Observe the maximum permissible load.
2. Start the vibrator.
3. Observe the movement of the material.
If necessary, adjust the flow rate with the dosing adapter.
If necessary, change the frequency (pressure regulator) and the conveying speed (exhaust air throttle valve).
In the event of irregularities or malfunctions, switch off the machine and eliminate the malfunction, see chap. Troubleshooting, page 18.
4. Stop the vibrator at the end of the vibration process.

The machines are designed for continuous operation.

Screw connections must be checked after 1 hour of operation (after initial start-up) and then regularly (usually monthly) and, if necessary, tightened with the specified torques.

8 Maintenance and servicing



Observe the safety instructions in chap. Safety, from page 5 on.

Maintenance plan

Maintenance of the machines must be carried out as follows:

Interval	Action
Monthly	Check function of the silencer. Clean silencer.
	Empty the filter of the maintenance unit if necessary. Clean the filter insert (wash out) and replace it if necessary, see operation instructions of the maintenance unit.
	Check the function of the optional mist lubricator. Refill oil if necessary, see operation instruction of the maintenance unit.
Every 6 month	Check proper condition of compressed air lines.
	Check proper condition of the insulation elements (blade springs). Replace damaged insulation elements.

Observe the instructions for maintenance and servicing in the attached operating instructions.

9 Troubleshooting



Observe the safety instructions in chap. Safety, from page 5 on.

Expertise and regulations

Electrical faults may only be processed by a qualified electrician. Work on the machines may only be carried out by authorised persons.
In the case of unauthorised intervention in the machines there is no longer any warranty claim. Interventions of any kind are to be agreed upon with **NetterVibration**.

Trouble-shooting

In the case of malfunctions proceed as follows :

Malfunction	Corrective actions
Machine does not start	Check the functionality of the compressed air network.
	Check compressed air lines and connections.
	Check the functionality of the vibrator. Observe the operating instructions of the vibrator.
Unsteady run/ abnormal running noises	Check the functionality of the vibrator. Observe the operating instructions of the vibrator.
	Check all fastening screws, retighten if necessary.
	Check proper condition of the insulation elements (blade springs). Replace damaged insulation elements..
Loss of performance/ weak vibration	Check for mechanical damage or blockages.
	Check the functionality of the vibrator. Observe the operating instructions of the vibrator.
Insufficient material flow (bridging) in the hopper	Provide additional vibrator at the hopper. Please contact NetterVibration .

10 Spare parts and accessories

Ordering of spare parts

Please provide the following details when ordering spare parts:

- type of machines
- description and position of spare part
- required amount

Spare part list

A list of the parts used can be found in the overview drawing of the machines.


Requirements for exchange

Spare parts of the machines and of the electrical installation must be installed by an authorised electrician. This specialist must be familiar with the protective measures.

Defective parts must be replaced by parts of the same type. If you need to replace components of the machines, then contact **NetterVibration**.

11 Disposal

Prices

	All parts of the machines must be properly disposed of according to the material specifications. The valid disposal prices of the machines are available on request.
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Material specifications

All parts of the machines can be recycled.

Material	Part
Stainless steel	Hopper, dosing adapter, conveyor trough (optional), Bottom part / mounting plate, screws
Plastics	Blade springs with brackets, rubber buffers on holders of the hopper and on the bottom part.

Material specifications of the vibrator can be found in the attached operating instructions.