
Operating instructions and spare parts list

OptiFeed B

Fresh powder system (FPS18 type)

TW
Gema



Documentation OptiFeed B Fresh powder system

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Printed in Switzerland

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General safety regulations

This chapter sets out the fundamental safety regulations that must be followed by the user and third parties using the OptiFeed B Fresh powder system.

These safety regulations must be read and understood before the OptiFeed B Fresh powder system is used.

Safety symbols (pictograms)

The following warnings with their meanings can be found in the ITW Gema operating instructions. The general safety precautions must also be followed as well as the regulations in the operating instructions.



DANGER!

Danger due to live electricity or moving parts. Possible consequences: Death or serious injury



WARNING!

Improper use of the equipment could damage the machine or cause it to malfunction. Possible consequences: minor injuries or damage to equipment



INFORMATION!



Useful tips and other information

Conformity of use

1. The OptiFeed B Fresh powder system is built to the latest specification and conforms to the recognized technical safety regulations. It is designed for the normal application of powder coating.
2. Any other use is considered as non-conform. The manufacturer is not responsible for damage resulting from improper use of this equipment; the end-user alone is responsible. If the OptiFeed B Fresh powder system is to be used for other purposes or other substances outside of our guidelines then ITW Gema AG should be consulted.
3. Observance of the operating, service and maintenance instructions specified by the manufacturer is also part of conformity of

use. The OptiFeed B Fresh powder system should only be used, maintained and started up by trained personnel, who are informed about and are familiar with the possible hazards involved.

4. Start-up (i.e. the execution of a particular operation) is forbidden until it has been established that the OptiFeed B Fresh powder system has been set up and wired according to the guidelines for machinery (98/37 EG). EN 60204-1 (machine safety) must also be observed.
5. Unauthorized modifications to OptiFeed B Fresh powder system exempts the manufacturer from any liability from resulting damage.
6. The relevant accident prevention regulations, as well as other generally recognized safety regulations, occupational health and structural regulations are to be observed.
7. Furthermore the country-specific safety regulations must be observed.

Explosion protection	Protection type	Temperature class
 	IP54	T6

Technical safety regulations for stationary electrostatic powder spraying equipment

General information

The powder spraying equipment from ITW Gema is designed with safety in mind and is built according to the latest technological specifications. This equipment can be dangerous if it is not used for its specified purpose. Consequently it should be noted that there exists a danger to life and limb of the user or third party, a danger of damage to the equipment and other machinery belonging to the user and a hazard to the efficient operation of the equipment.

1. The powder spraying equipment should only be started up and used once the operating instructions have been carefully studied. Improper use of the controlling device can lead to accidents, malfunction or damage to the control itself.
2. Before every start-up check the equipment for operational safety (regular servicing is essential)!
3. Safety regulations BGI 764 and VDE regulations DIN VDE 0147, Part 1, must be observed for safe operation.
4. Safety precautions specified by local legislation must be observed.
5. The plug must be disconnected before the machine is opened for repair.
6. The plug and socket connection between the powder spraying equipment and the mains network should only be taken out when the power is switched off.
7. The connecting cable between the controlling device and the spray gun must be set up so that it cannot be damaged during

operation. Safety precautions specified by local legislation must be observed!

8. Only original ITW-Gema spare parts should be used, because the explosion protection will also be preserved that way. Damage caused by other parts is not covered by guarantee.
9. If ITW-Gema powder spraying equipment is used in conjunction with machinery from other manufacturers then their safety regulations must also be taken into account.
10. Before starting work familiarize yourself with all installations and operating elements, as well as with their functions! Familiarization during operation is too late!
11. Caution must be exercised when working with a powder/air mixture! A powder/air mixture in the right concentration is flammable! Smoking is forbidden in the entire plant area!
12. As a general rule for all powder spraying installations, persons with pacemakers should never enter high voltage areas or areas with electromagnetic fields. Persons with pacemakers should not enter areas with powder spraying installations!



WARNING!

We emphasize that the customer himself is responsible for the safe operation of equipment. ITW-Gema is in no way responsible for any resulting damages!

Safety conscious working

Each person responsible for the assembly, start-up, operation, service and repair of powder spraying equipment must have read and understood the operating instructions and the "Safety regulations"-chapter. The operator must ensure that the user has had the appropriate training for powder spraying equipment and is aware of the possible sources of danger.

The control units for the spray guns must only be set up and used in zone 22. The spray guns are permitted in the zone 21 created by them.

The powder spraying equipment should only be used by trained and authorized personnel. This applies to modifications to the electrical equipment, which should only be carried out by a specialist.

The operating instructions and the necessary closing down procedures must be followed before any work is carried out concerning the set-up, start-up, operation, modification, operating conditions, mode of operation, servicing, inspection or repairs.

The powder spray equipment can be turned off by using the main switch or failing that, the emergency shut-down. Individual components can be turned off during operation by using the appropriate switches.

Individual safety regulations for the operating firm and/or operating personnel

1. Any operating method which will negatively influence the technical safety of the powder spraying equipment is to be avoided.
2. The operator should care about no non-authorized personnel works on the powder spraying equipment (e.g. this also includes using the equipment for non-conform work).

3. For dangerous materials, the employer has to provide an operating instructions manual for specifying the dangers arising for humans and environment by handling dangerous materials, as well as the necessary preventive measures and behavior rules. The operating instructions manual has to be written in an understandable form and in the language of the persons employed, and has to be announced in a suitable place in the working area.
4. The operator is under obligation to check the powder spraying equipment at least once every shift for signs of external damage, defects or changes (including the operating characteristics) which could influence safety and to report them immediately.
5. The operator is obliged to check that the powder spraying equipment is only operated when in satisfactory condition.
6. As far as it is necessary, the operating firm must ensure that the operating personnel wear protective clothing (e.g. facemasks).
7. The operating firm must guarantee cleanliness and an overview of the workplace with suitable instructions and checks in and around the powder spraying equipment.
8. No safety devices should be dismantled or put out of operation. If the dismantling of a safety device for set-up, repair or servicing is necessary, reassembly of the safety devices must take place immediately after the maintenance or repair work is finished. The powder spraying device must be turned off while servicing is carried out. The operator must train and commit the responsible personnel to this.
9. Activities such as checking powder fluidization or checking the high voltage spray gun etc. must be carried out with the powder spraying equipment switched on.

Notes on special types of hazard

Power

It is necessary to refer once more to the danger of life from high voltage current if the shut-down procedures are not observed. High voltage equipment must not be opened - the plug must first be taken out - otherwise there is danger of electric shock.

Powder

Powder/air mixtures can be ignited by sparks. There must be sufficient ventilation in the powder coating booth. Powder lying on the floor around the powder spraying device is a potentially dangerous source of slipping.

Static charges

Static charges can have the following consequences: Charges to people, electric shocks, sparking. Charging of objects must be avoided - see "Earthing".

Grounding/Earthing

All electricity conducting parts and machinery found in the workplace (according to DIN VDE 0745, part 102) must be earthed 1.5 meters either side and 2.5 meters around each booth opening. The earthing resistance must amount to maximally 1 MOhm. The resistance must be tested on a regular basis. The condition of the machinery surroundings as well as the

suspension gear must ensure that the machinery remains earthed. If the earthing of the machinery includes the suspension arrangements, then these must constantly be kept clean in order to guarantee the necessary conductivity. The appropriate measuring devices must be kept ready in the workplace in order to check the earthing.

Compressed air

When there are longer pauses or stand-still times between working, the powder spraying equipment should be drained of compressed air. There is a danger of injury when pneumatic hoses are damaged and from the uncontrolled release and improper use of compressed air.

Crushing and cutting

During operation, moving parts may automatically start to move in the operating area. It must be ensured that only instructed and trained personnel go near these parts. The operator should ensure that barriers comply with the local security regulations.

Access under exceptional circumstances

The operating firm must ensure that local conditions are met when repairs are made to the electronic parts or when the equipment is restarted so that there are additional measures such as barriers to prevent unauthorized access.

Prohibition of unauthorized conversions and modifications to machines

All unauthorized conversions and modifications to electrostatic spraying equipment are forbidden for safety reasons.

The powder spraying equipment should not be used if damaged, the faulty part must be immediately replaced or repaired. Only original ITW-Gema replacement parts should be used. Damage caused by other parts is not covered by guarantee.

Repairs must only be carried out by specialists or in ITW-Gema workshops. Unauthorized conversions and modifications may lead to injury or damage to machinery. The ITW Gema AG guarantee would no longer be valid.

Safety requirements for electrostatic powder coating

1. This equipment is dangerous if the instructions in this operating manual are not followed.
2. All electrostatic conductive parts, in particular the machinery within 5 meters of the coating equipment, must be earthed.
3. The floor of the coating area must conduct electricity (normal concrete is generally conductive).
4. The operating personnel must wear electricity conducting footwear (e.g. leather soles).
5. The operating personnel should hold the gun with bare hands. If gloves are worn, these must also conduct electricity.
6. The supplied earthing cable (green/yellow) must be connected to the earthing screw of the electrostatic powder spraying hand appliance. The earthing cable must have a good metallic connec-

tion with the coating booth, the recovery unit and the conveyor chain and with the suspension arrangement of the objects.

7. The electricity and powder supply to the hand guns must be set up so that they are fully protected against heat and chemical damage.
8. The powder coating device may only be switched on once the booth has been started up. If the booth cuts out then the powder coating device must be switched off.
9. The earthing of all electricity conducting devices (e.g. hooks, conveyor chains) must be checked on a weekly basis. The earthing resistance must amount to maximally 1 MOhm.
10. The control device must be switched off if the hand gun is cleaned or the nozzle is changed.
11. When working with cleaning agents there may be a risk of hazardous fumes. The manufacturers instructions must be observed when using such cleaning agents.
12. The manufacturers instructions and the applicable environmental requirements must be observed when disposing of powder lacquer and cleaning agents.
13. If any part of the spray gun is damaged (broken parts, tears) or missing then it should not be used.
14. For your own safety, only use accessories and attachments listed in the operating instructions. The use of other parts can lead to risk of injury. Only original ITW-Gema replacement parts should be used.
15. Repairs must only be carried out by specialists and under no circumstances should they be carried out in the operating area. The former protection must not be reduced.
16. Conditions leading to dangerous levels of dust concentration in the powder spraying booths or in the powder spraying areas must be avoided. There must be sufficient technical ventilation available, to prevent a dust concentration of more than 50% of the lower explosion limit (UEG) (UEG = max. permissible powder/air concentration). If the UEG is not known then a value of 10 g/m³ should be used.

A summary of the rules and regulations

The following is a list of relevant rules and regulations which are to be observed:

Guidelines and regulations, German professional association

BGV A1	Prevention principles
BGV A3	Electrical equipment and material
BGI 764	Electrostatic coating
BGR 132	Guidelines for the avoidance of the dangers of ignition due to electrostatic charging (guideline "Static Electricity")
VDMA 24371	Guidelines for electrostatic coating with synthetic powder ¹⁾ - Part 1 General requirements - Part 2 Examples of use

EN European standards

RL94/9/EC	The approximation of the laws of the Member States relating to apparatus and safety systems for their intended use in potentially explosive atmospheres
EN 12100-1 EN 12100-2	Machine safety ²⁾
EN IEC 60079-0	Electrical equipment for locations where there is danger of explosion ³⁾
EN 50 050	Electrical apparatus for potentially explosive atmospheres - electrostatic hand-held spraying equipment ²⁾
EN 50 053, part 2	Requirements for the selection, installation and use of electrostatic spraying equipment for flammable materials - hand-held electrostatic powder spray guns ²⁾
EN 50 177	Stationary electrostatic spraying equipment for flammable coating powder ²⁾
EN 12981	Coating plants - spray booths for application of organic powder coating material - safety requirements
EN 60 529, identical: DIN 40050	IP-Type protection: contact, foreign bodies and water protection for electrical equipment ²⁾
EN 60 204 identical: DIN VDE 0113	VDE regulations for the setting up of high voltage electrical machine tools and processing machines with mains voltages up to 1000 V ³⁾

VDE (Association of German Engineers) Regulations

DIN VDE 0100	Regulations for setting-up high voltage equipment with mains voltages up to 1000 V ⁴⁾
DIN VDE 0105 part 1 part 4	VDE regulations for the operation of high voltage equipment ⁴⁾ General regulations Supplementary definitions for stationary electrical spraying equipment
DIN VDE 0147 part 1	Setting up stationary electrostatic spraying equipment ⁴⁾
DIN VDE 0165	Setting up electrical equipment in locations in areas with danger of explosion ⁴⁾

Sources:

- ¹⁾ Carl Heymanns Verlag KG, Luxemburger Strasse 449, 5000 Köln 41, or from the appropriate employers association
- ²⁾ Beuth Verlag GmbH, Burgrafenstrasse 4, 1000 Berlin 30
- ³⁾ General secretariat, Rue Bréderode 2, B-1000 Bruxelles, or the appropriate national committee
- ⁴⁾ VDE Verlag GmbH, Bismarckstrasse 33, 1000 Berlin 12

Product specific security measures

- The installation work, to be done by the customer, must be carried out according to local regulations
- Before starting up the plant, a check must be made that no foreign objects are in the booth or in the ducting (input and exhaust air)
- It must be observed, that all components are grounded according to the local regulations, before start-up

About this manual

General information

This operating manual contains all the important information which you require for the working with the OptiFeed B Fresh powder system. It will safely guide you through the start-up process and give you references and tips for the optimal use of your new powder coating system.

Information about the function mode of the individual system components - reciprocators, booths, powder gun control units, powder guns etc. - should be referenced to their corresponding documents.

Function description

Field of application

The OptiFeed B Fresh powder system conveys fluidized coating powder dust free from a powder container to the place of destination.



Note:

The use of the OptiFeed B Fresh powder system must take place in the areas defined for it!

OptiFeed B Fresh powder system

General information

The OptiFeed B Fresh powder system is equipped with a OptiFeed PP05 powder pump and a fluidizing/suction unit.



OptiFeed B Fresh powder system - overview

Function

The powder box is placed on the vibrating table of the OptiFeed B Fresh powder system. The coating powder is sucked in by the OptiFeed PP05 Powder pump through the fluidizing/suction unit. Then, the powder is transported through the powder hose, which is fastened to the corresponding powder pump connection.



Note:

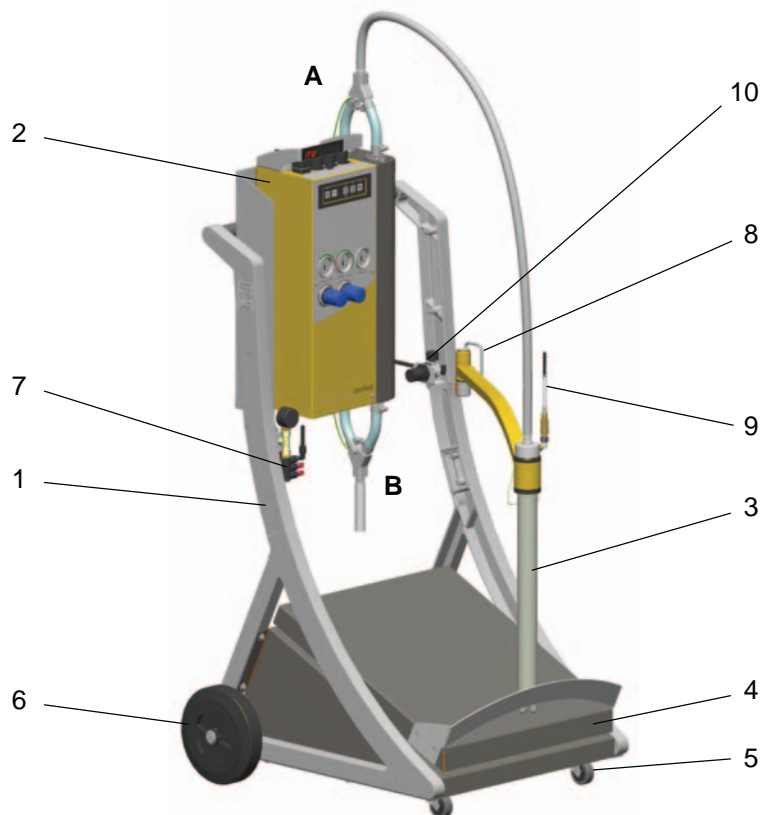
For further information, see the OptiFeed PP05 Powder pump operating manual!

Fluidizing the coating powder

The fluidization of the coating powder with fluidizing air improves the conveying characteristics of the powder. For this purpose, the fluidizing air is fed into the external tube of the fluidizing/suction unit and exits through three fluidizing pads at the lower end of the tube. Thereby, the area around the suction tube is fluidized, the powder obtains fluid-like characteristics and will be sucked into the tube.

The table vibration causes an even sinking of the powder level and prevents a depositing of residual powder in the corners of the powder box. That way, the powder can be used entirely (optimum powder utilization).

Mechanical structure



OptiFeed B Fresh powder system - mechanical structure

A	Suction side	5	Swivel wheel
B	Transport side	6	Rubber wheel
1	Mobile frame with hand rail	7	Compressed air connection
2	OptiFeed PP05 Powder pump	8	Hose holder
3	Fluidizing/suction unit	9	Fluidizing air connection
4	Vibrating table	10	Pressure regulator for fluidizing air

OptiFeed B scope of delivery

- A mobile trolley with a gun/hose support
- A vibrating table with a fluidizing/suction unit
- An OptiFeed PP05 Powder pump
- Pneumatic hoses and connection cable
- Special cable jack for the connection of an external control signal

Accessory

- LM02 Level sensor

Technical data

OptiFeed B Fresh powder system

Electrical data

OptiFeed B Fresh powder system	
Nominal input voltage	100-240 VAC
Frequency	50/60 Hz
Power	120 VA
Protection type	IP54
Temperature range	+10°C - +40°C

Pneumactical data

OptiFeed B Fresh powder system	
Max. input pressure	8 bar
Min. input pressure	6 bar
Air consumption (complete system)	8-11 Nm ³ /h
Air consumption (transport)	2-5 Nm ³ /h
Max. water vapor content of the compressed air	1.3 g/m ³
Max. oil vapor content of the compressed air	0.1 mg/m ³

Conveying performance/powder output

OptiFeed B Fresh powder system	
Powder hose length 0-8 m	5000 g/min
Powder hose length 8-16 m	4000 g/min
Powder hose length 16-25 m	3500 g/min
Powder pump	OptiFeed PP05 type

Dimensions

OptiFeed B Fresh powder system	
Width	690 mm
Depth	800 mm
Height	1310 mm
Weight	60 kg
Max. powder box size (L x W x H)	510 x 480 x 390 mm



Note:

For further information, see the OptiFeed PP05 Powder pump operating manual!

Start-up

OptiFeed B Fresh powder system

General information

The OptiFeed B Fresh powder system is delivered completely assembled. Only powder hoses and power supply must be connected.

Preparing the powder container

1. Swivel aside the fluidizing/suction unit
2. Place the open powder container on the vibrating table
3. Place the fluidizing/suction unit onto the powder
4. Start up the OptiFeed B Fresh powder system

Powder fluidization

The powder will obtain a fluid-like consistency, so that a conveying can take place. This occurs by blowing air into the powder (fluidization). The fluidization takes place in a fluidized powder hopper, or locally around a suction lance, which aspirates the powder from a vibrated container.



Note:

For a better understanding of the interrelationships in powder coating, it is recommended to read completely the operating instructions of the other components, so as to be familiar with their functions too!

The fluidization of the coating powder with fluidizing air improves the conveying characteristics of the powder. The fluidization and vibration characteristics of the powder are dependent on the powder type, the air humidity and the ambient temperature.

The fluidization and the vibration start by switching on the OptiFeed B Fresh powder system. The fluidizing air is adjusted with the pressure regulator on the OptiFeed B Fresh powder system.

Functional check

1. Switch on the OptiFeed PP05 Powder pump
2. Activate the powder transport on the powder pump
3. The fluidizing air and the vibration must be in operation
4. The fluidizing/suction unit digs itself into the powder and the powder pump conveys powder to the powder hose



Note:

For further information, see the OptiFeed PP05 Powder pump operating manual!

Powder hose rinsing

In order to prevent hose cloggings, the powder hose must be cleaned by powder residues, if a longer standstill takes place.

The powder hose rinsing function of the OptiFeed PP05 Powder pump allows the cleaning of the powder hoses and the filter elements.



Note:

For further information, see the OptiFeed PP05 Powder pump operating manual!

Color change

General procedure

The color change takes place in accordance to the following instructions:

- Clean the fluidizing/suction unit thoroughly (see "Cleaning the fluidizing/suction unit")
- Blow through the powder hose with compressed air
- Clean the OptiFeed PP05 Powder pump (see the corresponding operating manual)
- Prepare the OptiFeed B Fresh powder system with the new powder for start-up (see therefore chapter "Start-up")

Maintenance

OptiFeed B Fresh powder system


Note:

Regular and conscientious maintenance increases the service life of the fresh powder system and ensures a longer, more constant conveying performance!

Daily maintenance

- Empty the powder hose by removing the fluidizing/suction unit from the powder container when the conveying is activated

Weekly maintenance

- Visual check of the pinch valves in the PP05 Powder pump for possible damages


Note:

For further information, see the OptiFeed PP05 Powder pump operating manual!

Longer standstill of the fresh powder system

- Interrupt the power supply/remove the mains plug
- Turn off the compressed air main supply
- Clean the OptiFeed B Fresh powder system thoroughly

Cleaning the fluidizing/suction unit

- Remove the fresh powder pump from the fluidizing/suction unit
- Remove the fluidizing/suction unit
- Clean the fluidizing/suction unit with compressed air. Blow off the suction tube also with compressed air
- Visual check of the fluidizing/suction unit for possible damages

- Clean the fresh powder pump (see therefore the OptiFeed PP05 Powder pump operating manual)
- Reassemble the individual parts and reinsert the fresh powder pump

Troubleshooting

Problem fixing

Problem/error/malfunction	Cause	Procedures/remedy
Vibration not running	Vibration motor not connected or defective	Connect the cable Replace the vibration motor
Fluidization not running	Compressed air not present	Ensure the compressed air supply
Pump does not convey or conveys insufficient		See therefore the OptiFeed PP05 Powder pump operating manual
Level control with level sensor (option) not running	Level control defective Level sensor defective	Send in the level control unit for repair Send in the level sensor for repair



Note:

For further information, see the OptiFeed PP05 Powder pump operating manual!

Spare parts list

Ordering spare parts

When ordering spare parts for powder coating equipment, please indicate the following specifications:

- Type and serial number of your powder coating equipment
- Order number, quantity and description of each spare part

Example:

- **Type** OptiFeed B Fresh powder system
Serial number 1234 5678
- **Order no.** 203 386, 1 piece, Clamp - Ø 18/15 mm

When ordering cable or hose material, the required length must also be given. The spare part numbers of this yard/meter ware is always marked with an *.

The wear parts are always marked with a #.

All dimensions of plastic hoses are specified with the external and internal diameter:

Example:

Ø 8/6 mm, 8 mm outside diameter (o/d) / 6 mm inside diameter (i/d)



WARNING!

Only original ITW-Gema spare parts should be used, because the hazardous location approval will be preserved that way! The use of spare parts from other manufacturers will invalidate the ITW Gema guarantee conditions!

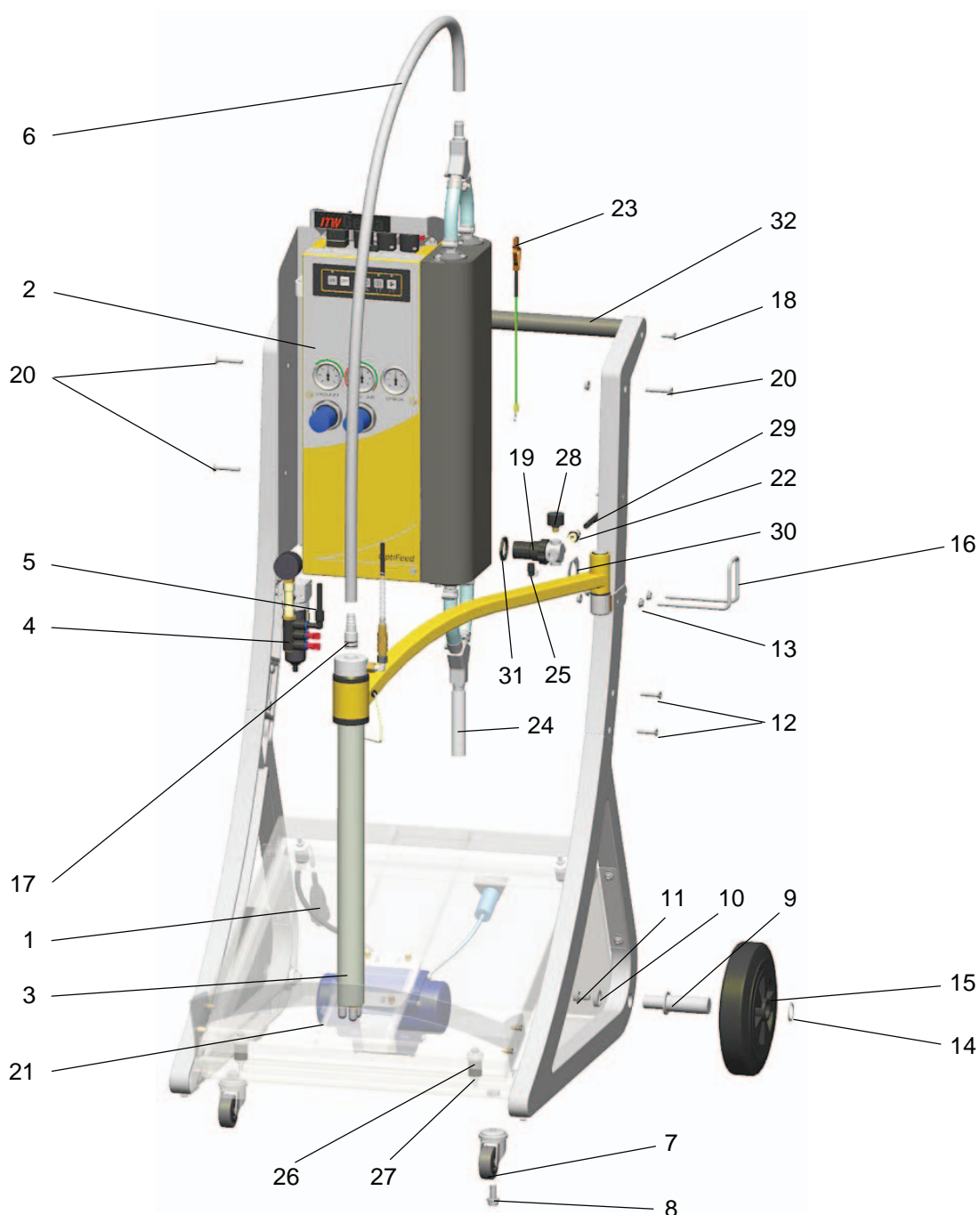
OptiFeed B Fresh powder system - spare parts list

	OptiFeed B Fresh powder system - complete, 230 V-50 Hz	1003 679
	OptiFeed B Fresh powder system - complete, 115 V-60 Hz	1003 678
	OptiFeed B Fresh powder system - complete, 105 V-50/60 Hz	1003 677
1	Connection plug - 4 pins, male	206 466
2	OptiFeed PP05 Powder pump (see the corresponding operating manual)	
3	Fluidizing/suction unit - complete (see corresponding spare parts list)	
4	Filter unit - complete (see corresponding spare parts list)	
5	Plastic tube - Ø 6/8 mm, L=1.05 m	103 152*
6	Powder hose - Ø 12/18 mm, L=1.1 m	1001 674*
7	Swivel wheel - Ø 50 mm	260 606
8	Cylinder ribbed screw - M10x20 mm	260 584
9	Bearing bolt	1000 453
10	Counter washer - Ø 26 mm	1000 944
11	Cylinder ribbed Allen screw - M8x16 mm	261 793
12	Countersunk Allen screw - M6x30 mm	1002 952
13	Hexagon shakeproof nut - M6	244 430
14	Snap ring - A-25	237 094
15	Rubber wheel - Ø 200 mm	260 592
16	Hose holder	1000 699
17	Hose connection - complete	1002 469
18	Countersunk Allen screw - M6x20 mm	1002 992
19	Pressure regulator - 0-4 bar	242 225
20	Countersunk Allen screw - M6x40 mm	1002 953
21	Vibrator motor - 220-240 VAC, 50 Hz	1001 748
	Vibrator motor - 100-110 VAC, 50/60 Hz	1001 749
	Vibrator motor - 110-120 VAC, 60 Hz	1001 750
22	Screw-in nipple - 1/4"a, Ø 8 mm	265 136
	Spare parts set - PP05 (not shown), consisting of:	1003 556
	Hose connection - ID12	1003 308
	Hose clamp - 17-25 mm	223 085
	Hose connection - ID15	1003 301
	Fuse - 2A	221 872
23	Grounding cable - complete (included in the PP05 spare parts set)	301 140
24	Powder hose - Ø 16/21 mm, L=10 m	1003 307*
25	Elbow joint - 1/4"a, Ø 6 mm	265 691
26	Spacing ring	375 624

OptiFeed B Fresh powder system - spare parts

27	Rubber damper - Ø 20x25 mm, M6/2a, 43sh	246 000
28	Pressure gauge - Ø 25 mm, 1/8"a, 0-4 bar	1003 775
29	Plastic tube - Ø 6/8 mm, L=1.3 m	103 152*
30	Pressure regulator holder	1003 676
31	Panel nut - M30x1.5 mm	1003 772
32	Handle bar	1002 623

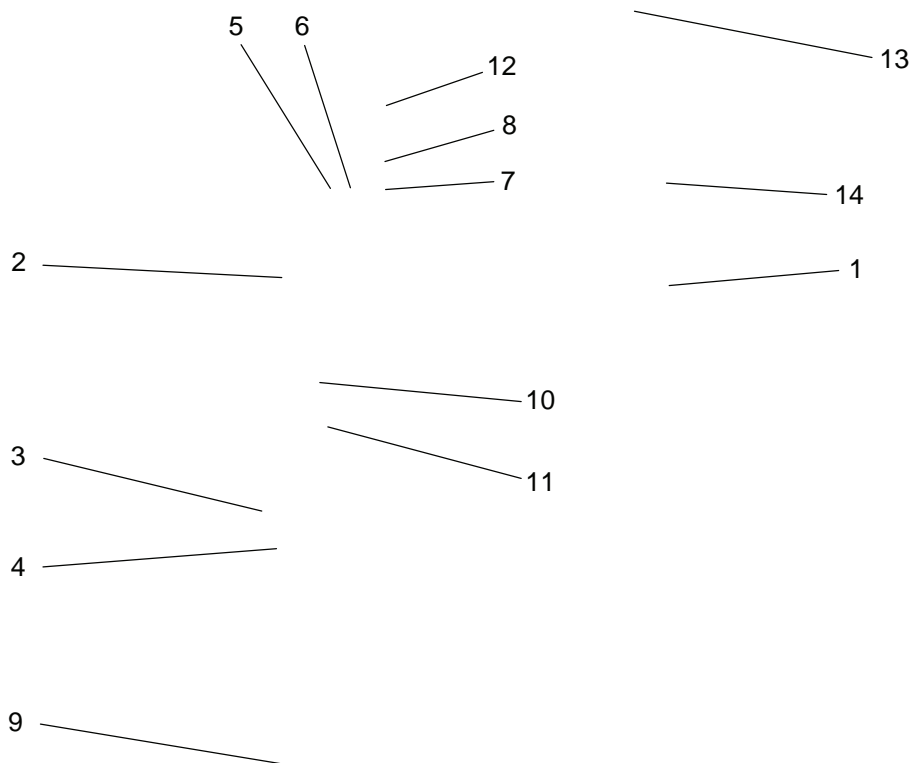
* Please indicate length



OptiFeed B Fresh powder system - spare parts

OptiFeed B Fresh powder system - fluidizing/suction unit

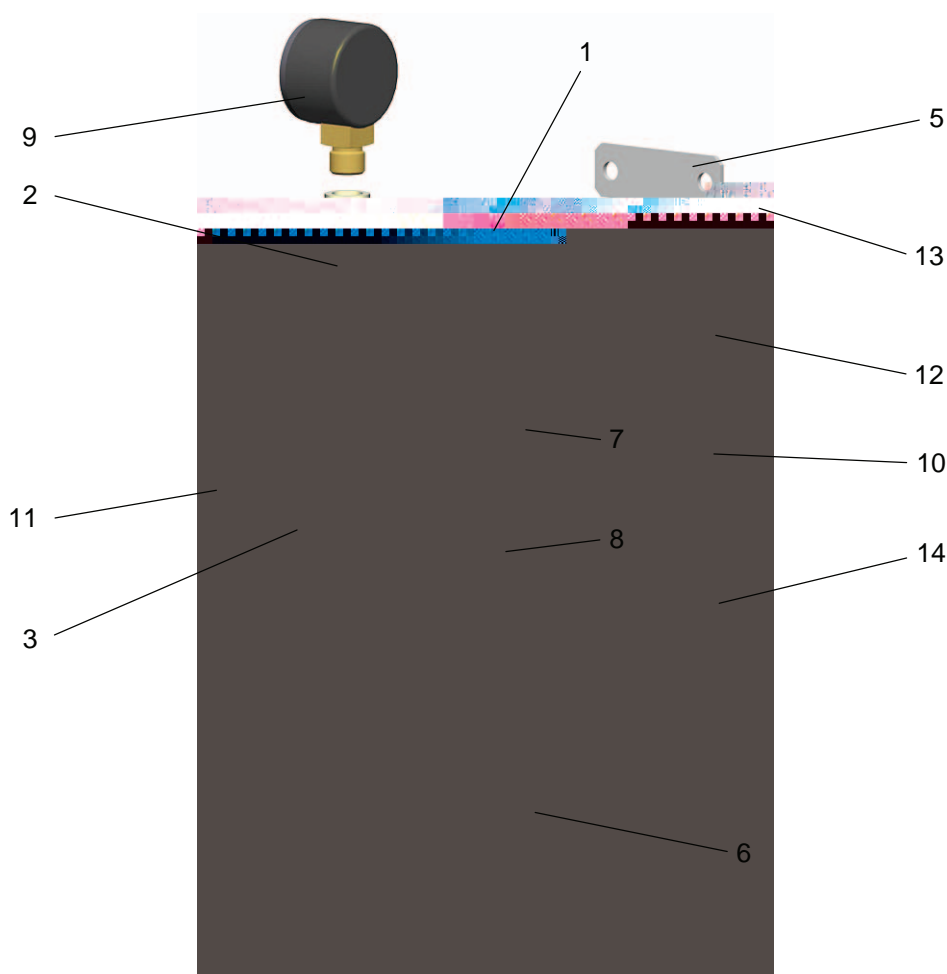
1	Bearing bush	1002 046
2	Guide socket	1002 052
3	Locknut - M48x1.5 mm, plastic	1002 051
4	Fluidizing/suction unit - Ø 40x534 mm, complete (incl. pos. 5-9)	362 425
5	Adapter nipple - 1/8"i-1/8"a	200 930
6	Bezel - Ø 0.3 mm	338 303
7	Elbow joint - 1/8"a-1/8"a	235 733
8	Connector - NW5-1/8"i	200 859
9	Fluidizing pad - 1/8"a	237 264
10	Cable bush - Ø 4/8/1.5 mm	265 276
11	Retaining bracket	1002 054
12	Quick release connection - NW5, Ø 6 mm	200 840
13	Plastic tube - Ø 6/4 mm, black	1001 973
14	Swivel arm (incl. pos. 10)	1002 045



OptiFeed B Fresh powder system - fluidizing/suction unit

OptiFeed B Fresh powder system - filter unit

	Filter unit - complete, without pos. 14	1001 147
1	Filter separator body - F14MD	1001 759
2	T-piece - 1/4"i-1/4"a-1/4"i	262 064
3	Elbow joint - 1/4"-Ø 8/3x1 mm	1002 614
5	Fixing plate	1001 758
6	Condensate container with drain valve	1001 761
7	Filter cartridge - 20 µm	1001 762
8	Cap screw - M4x60 mm	258 946
9	Pressure gauge - 1/4"a, 0-10 bar	1001 764
10	Rectus connector - NW 7.4-1/4"a	256 730
11	Plug - Ø 8 mm	238 023
12	Elbow connection - 1/4"i-1/4"a	222 674
13	Countersunk Allen screw - M4x10 mm	259 543
14	Rectus quick release coupling (for pos. 10) - NW 7.8-Ø 10 mm	239 267



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