



Operating Manual
Dustcom 4025



Your Partner for Mobile Surface Preparation
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Impacts® Warranty

Impacts Americas guarantees that its machines and products are without manufacturing defects. The warranty period on machines and variable speed drive is one (1) year from the date of sale. Impacts Americas will replace any part that is defective at its own cost within the warranty period. This warranty does not cover wear items or instances of abuse or neglect.



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Please note: The following safety instructions must be followed as shown in this operating manual. Failure to do so may result in hazard to health or possible death.

Chapter 1.0 Technical Data

- 1.1 Rating
- 1.2 Unit Specifications
- 1.3 Operative Range and Correct Usage
- 1.4 Stand-by Power Supply (Generator)
- 1.5 Advice for Operator of the Blast Machine

1.1 Rating

Machine: IMPACTS Blast Machine
 Machine-Type: DC4025
 Manufacturer: IMPACTS Americas
 1385 Bungalow Dr.
 Morris, IL 60450 U.S.A.

1.2 Unit Specifications

Machine: DC4025
 Machine Series: Filter
 Traction Drive: Manual
 Performance: Up to 765 C.F.M. / 1400 m³/h
 Filtration Area: 473 SF / 44 m²
 Hose Connection: Variable

Dustcom 4025	
Length	63 in. / 1620 mm
Width	31 in. / 795 mm
Height	55 in. / 1400 mm
Weight	1,014 lb. / 460 kg

Connected loads of the electrical system:

Dustcom 4025	Power Consumption	Amps
Compressor	1.5 kW	Maximum 3.2A
Blower	4.0 kW	Maximum 7.9A
Filter Total	7.5 HP / 5.5 kW	Maximum 12.0A
Filter a. Subsystem	Add subsystem	Add subsystem

1.3 Operative Range and Correct Usage



This specific filter unit has been designed to vacuum dry dust. The dust collector is exclusively designed to be used with IMPACTS machines. It can only be used to vacuum dry dust. The manufacturer will not be liable for damage resulting from incorrect usage. In these cases, the user is responsible for all risks and damages.

It is designed to vacuum dry dust specified to be Class L (E DIN IEC 61J/94 CD).

The Filter fabric FA 6176 is certified to DIN/EN DUST CLASSIFICATION CLASS L and M. Do not use this equipment on applications where you expect dust to be harmful. If you feel uncertain, ask local authorities for assistance.

1.4 Stand-by Power Supply (Generator)

If the Dustcom is used in conjunction with a generator, the generator must be operated in accordance with current VDE or further local directives. This applies especially to the protective earth conductor in order to ensure that all safety devices are functioning and to eliminate possible damage to electrical components.



During the operation of the Dustcom in combination with other equipment it may be possible to exceed the acceptable noise level of 85 dB(A). This is dependent on the different locations and the local circumstances. When the noise level is 85 dB(A) or more, the machine operator and the persons working near the machine must wear sound-insulating devices.

Do not use the Dustcom in corrosive or explosive environment.

Do not vacuum flammable liquids or other flammable media.

Do not vacuum glowing particles

Do not open the dustbin while turbines switched on.

Do not use the Dustcom without a filter cartridge fitted.

1.5 Advice for Operators

The dustbin of the filter unit needs regular dumping. Do not overfill the bin to avoid dust exposure when opening the bin.

Comply with the local waste treatment regulations considering the removed material.

Chapter 2.0 Safety Instructions

- 2.1 Explanation of Warnings and Symbols
- 2.2 Organizational Measures
- 2.3 Personnel Selection and Qualification
- 2.4 Safety Precautions Applicable to Different Operating Conditions
- 2.5 Repair Work, Maintenance Activities, and Default Repair on the Job Side
- 2.6 Definition of the Safety Off Position
- 2.7 Dangerous Aspects of the Filter
- 2.8 Electrical Engineering Regulations
- 2.9 For Special Attention

2.1 Explanation of Warnings and Symbols

The following symbols are used in the operating instructions to highlight areas of particular importance:



Operational Safety

This symbol will be shown in these Operating Instructions next to all safety precautions that are to be taken in order to ensure prevention of injury. Follow these instructions and take special care in these circumstances. In addition to these instructions, the general safety precautions and the local accident prevention guidelines also should be followed. Please check if there are special regulations for the particular job site.



Safety Goggles/ Ear Protection

Information, instructions, and restrictions with regards to possible risks of personal injury or extensive damage to materials.



Electrical Warning

Warning against dangerous voltages.

2.2 Organizational Measures



The Operating Instructions are to be kept near the filter and must be reachable all the times!

In addition to the Operating Instructions, general and legal regulations regarding accident prevention and environmental protection must be indicated every time.

Such duties may, for example, relate to the handling of hazardous substances or to the provision and wearing of personal protection equipment as well as compliance with local traffic regulations.

The Operating Instructions must be supplemented by instructions including the duty to supervise and report relating to particular local working practices; for example, work organization, work procedures, and personnel allocation.

Personnel working with the filter must read the Operating Instructions before starting the work, in particular. Chapter 2 "Safety Instructions." This must be done before starting any work with the filter. This applies to certain activities such as setting up the filter, carrying out maintenance work, or training staff to work with the filter.

From time to time, the working practices of the staff should be checked regarding awareness of safety and hazards.



Personnel must tie back long hair and not wear loose clothing or any jewelry. There is risk of injury in getting stuck or being drawn into moving machinery. Use personal protection equipment whenever necessary and required by regulations!

Take notice of all safety and hazard notices on the filter. They must be kept complete and legible.



If safety-critical changes occur to the filter or its performance, the filter must be shut down immediately! The cause of the fault must be determined immediately and be repaired before starting work again.

Changes, add-ons, or conversions which might have an influence to the safety of the filter must not be undertaken without the permission of the manufacturer. This applies in particular to the fitting and adjustment of safety devices and to welding on major and load bearing parts.

Spare parts must always comply with the technical requirements and the specification of the manufacturer. Original spare parts by the manufacturer are guaranteed compliant.

Inspection intervals and intervals for recurring checks specified in these Operating Instructions must be followed. At the same time, it is necessary to meet all legal requirements. To perform maintenance work correctly, it is important to be equipped with proper tools for the task in question.

The location and the operation of fire extinguishers must be made known at each job site. Take note of the facilities for fire reporting and fighting fires!

2.3 Personnel Selection and Qualification

Fundamental Duties



*Only trained personnel can operate and perform work on the filter. **Note the statutory minimum age!** Clearly specify the responsibilities of personnel for operation, setup, service, and maintenance work.*

Clearly define the filter operator's responsibilities regarding traffic safety regulations and empower him/her to decline instructions from third parties who are not complying with the safety requirements.

Personnel being trained or individuals testing the equipment must always be supervised by an experienced operator.



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician in accordance with the electrical engineering regulations.

2.4 Safety Precautions Applicable to Different Operating Conditions

Avoid any method of working that impairs safety! All precautions have to be taken. The filter must only be used in a safe and functional condition.



Only operate the filter when all safety devices and related safety equipment, e.g. detachable safety devices, emergency stops, and suction devices, are present and operational!

The filter has to be checked visually at least once a day for any damage and defects.

In the event of operational malfunctions the filter must be shut down immediately and secured. The error must be rectified before starting the filter again.



Secure the work area around the filter in public areas providing a safety distance of at least 7 ft./ 2m around the filter.

Default must be rectified immediately!

Start up / switch off operations and control devices have to be handled in accordance with the Operating Instructions.



All persons in the proximity of the filter must wear safety glasses with lateral protection as well as safety shoes. Ear protection may be required. The operator is required to wear close fitting protective clothing.

Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the filter following valid VDE and local guidelines.

Before starting the filter ensure that no person in the job site can be endangered when the filter starts running.



Do not switch off or remove the exhaust and ventilation devices when the filter is running!

2.5 Repair Work, Maintenance Activities, and Default Repair on the Job Site

Mechanical Service Work



These activities can only be undertaken by qualified personnel. Please follow any special safety instructions in the various chapters on servicing the filter (see chapter 7).

Before starting any servicing work on the filter, put the filter in the Safety off position (as described in Chapter 2.6) in order to prevent the filter from being switched on accidentally.

Adjustments, servicing, and inspection work and inspection intervals specified in these Operating Instructions as well as any information on the replacement on parts and systems of the filter must be undertaken and/or complied with.

The operator must be informed of any maintenance or repair work done to the filter.

Startup and shut off procedures must be done in accordance with the Operating Instructions during all work related to the use, repair, and adjustment of the filter. The repair personnel must also be aware of the safety devices during inspection, maintenance, and repair.



The filter must be shut off completely for repair or maintenance work. Please disconnect the main plug in order to prevent the filter from being switched on accidentally.

The dust collector bin must be emptied before transportation. Please handle in accordance with the regulation how to dispose the dust and make sure that you meet the local regulations. Do not use any aggressive cleaning materials! Use only lint-free cleaning cloths.

Always remember to tighten any screw connections that are undone during servicing and maintenance work!

If safety devices need to be dismantled during setting up, servicing, or repair work, these safety devices must be reinstalled and inspected immediately after completion of the service.

Make sure that process materials and replacement parts are disposed of safely and in an environmentally-friendly manner.



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician in accordance with the electrical engineering regulations.

Make sure that electrical components used for replacement purpose comply with the original parts and are correctly adjusted if necessary.

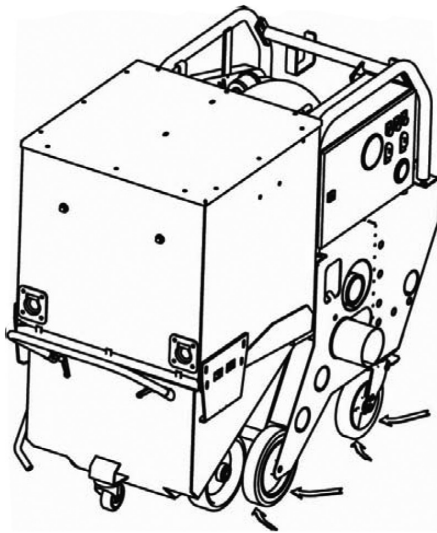
2.6 Definition of the Safety Off Position

The safety off position is the position of the machine when it cannot generate any hazard. Setting the machine in the safety off position means:

1. Switch off the blast machine that is connected to the dust collector.
2. Switch off the dust collector.
3. Wait for standstill of all drives.
4. Pull out main plugs.
5. Secure the machine and filter against accidental start up.

2.7 Particular Dangerous Aspects of the Filter

Every machine not used according to the regulations may be hazardous for personnel during operating, setting-up, and service. The operating authority is responsible for compliance with the safety regulations during operation and maintenance of safety devices supplied with the machine as well as the provision of appropriate additional safety devices.



Danger of injury!

Squeezing danger by rollers and wheels!

Squeezing danger by moving parts!

Strangers or Visitors are not allowed to stay within the working radius of the equipment without permission of the operator!

2.8 Electrical Engineering Regulations



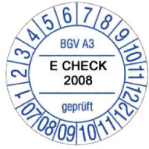
Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician in accordance with the electrical engineering regulations.



Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine. In case there is any question, ask the manufacturer or a skilled electrician.



The electrical parts of the filter must be inspected regularly. Please note in particular the specified recurring inspections according to VBG 4 or local regulations. Defects such as loose connections or scorched cables must be rectified immediately. Call a skilled electrician or the IMPACTS customer service.



If work on live parts is necessary, a second person must be deployed who can pull out the main plug in an emergency. The working area must be sealed with a red and white safety chain and a danger sign. Use tools that are insulated against voltages.

Only start work once you are familiar with the electrical engineering regulations that apply to your area.

Only use voltage seekers that comply with the regulations when troubleshooting. From time to time, check voltage seekers to ensure that they are operationally efficient.

2.9 For Special Attention

Use only proper and default free tools for your work. Damaged tools have to be repaired immediately or be replaced.

Use safety equipment and clothing (e.g. safety glasses, safety shoes, safety gloves) during operation of the filter at all times for your safety.

Please instruct your operators and the repair personnel about the following points:

- Greasing, cleaning, and all repair work is only allowed if the filter is in the safety off position (see Section 2.6).
- No one is allowed to open or remove safety covers while the machine is running.
- Replace all safety covers and safety devices after cleaning, repair, and maintenance work.
- Do not touch moving parts or walk into the working path of the filter.
- Before start up of the filter after any cleaning, repair, or maintenance work, ensure that no person in the working area could be endangered by the filter.



When using this dust collector, you must comply with the health and safety regulations and the local waste treatment regulations considering the waste materials.

Chapter 3.0 General Information

- 3.1 Operative Range
- 3.2 Scope of Supply
- 3.3 Description of the Filter Unit
- 3.4 Care and Maintenance

3.1 Operative Range

Operative Range of the Dustcom:

- Vacuum dust out of a blast machine
- Vacuum dust out of a grinder
- Vacuum dust out of a scarifier or milling machine
- Vacuum dust from a surface with optional vacuum set

3.2 Scope of Supply

Scope of supply and options:

- Filter Unit Dustcom
- Manual Dustcom
- Dust Hose (Optional)
- Multi Hose Connector (Optional)

Based on the machine, as well as the application, the selected filter unit provides dust free working and improved service life of machine and tools. Clean air is a matter of cause and should be observed by professional associates. IMPACTS uses particularly arranged filtering material that is certified and has a very high filtration efficiency.

For the connection to the machine please select a dust hose with an inside diameter that corresponds with the conditions of the machine.

The IMPACTS filter unit DC4025 is characterized by particularly high economy and simple handling.

The IMPACTS filter unit DC4025 is a compact, efficient filtering unit to operate from middle to larger surface treatment machines.

Innovative features provide optimized operation at your work site:

- Central Lift-Lock Device for the dust bin
- Large, well balanced, and ergonomically optimally arranged dust bin

- Dust hose connector plug-in and changeable
- No Components reaching out
- Optimized proportions, with highest achievement and smallest possible weight, divisible If necessary
- Fastens and integrated crane eyes
- Electrical, pneumatic compressor controls

3.3 Description of the Filter Unit

1	Filter Housing
2	Dust Bin
3	Rear Frame
4	Blower
5	Pulse Cleaning System
6	Control Panel
7	Hose Connector
8	Multi Hose Connectors (Optional)
9	Power Supply for Subsystem
10	Lifting System for Dust Bin

Filter Housing (1)

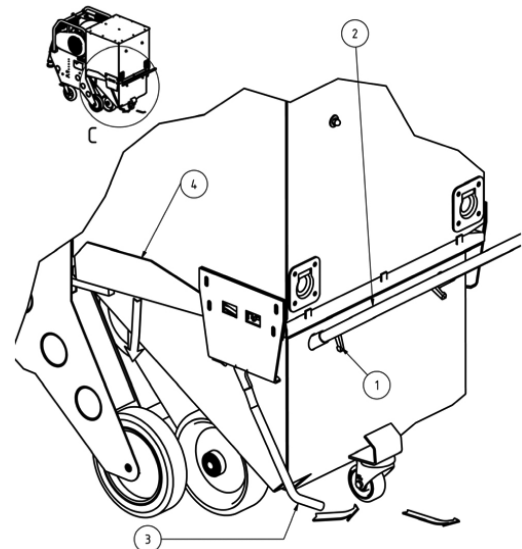
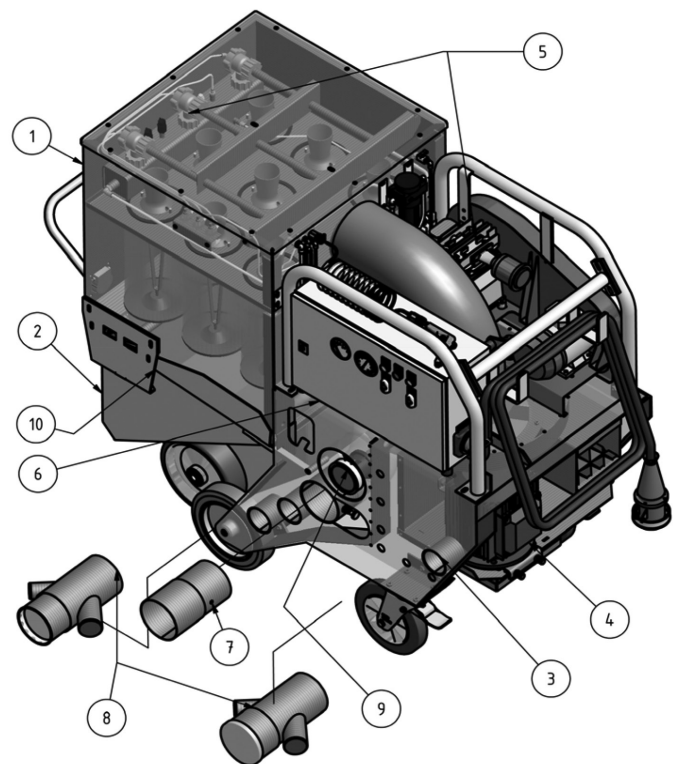
The filter cartridges as well as the automatic pulse air system are located in the filter housing. The filter cartridges separate the dust particles from air and thereby are contaminated. To clean the filter cartridges, a pulse cleaning system blows air via valves into them.

Dust Bin (2) and Lifting System (10)

Underneath the filter housing is the dust bin. The dust bin takes up the particles separated by the filter cartridges. The bin can hold approximately 53 gallons / 200 liters and is equipped with two wheels as well as a supporting swivel roller to the light procedure.

The dust bin is held with a Lifting System (4) at the filter housing and can be lowered and/or lifted over a tiltable lever (3) to bring it out, or to place it in.

Locking levers (1) on the handle of the dust bin can be adapted to suit individual needs.



Rear Frame (3) and Blower (4)

The rear framework serves as the admission of the fan and forms at the same time the main chassis. The frame's integrated fastening spots ensure safe transport. If necessary, the front and rear sections can be separated to allow easier entry into a small elevators. The fan produces the necessary negative pressure and is connected by a larger hose line with the filter housing.

Pulse Air System (5)

The Pulse Air System is used to clean the filter cartridges while the blower unit is in operation. Conventional Cleaning systems do not allow a cleaning during blower operation. The system essentially consists of three components: the compressor, the pneumatic manifold, and the electrical controlling of the pneumatic manifold. A pressure gauge integrated in the control panel and the differential pressure gauge offer required information pertaining to the functional behavior of the pulse cleaning system.

Control Panel (6)

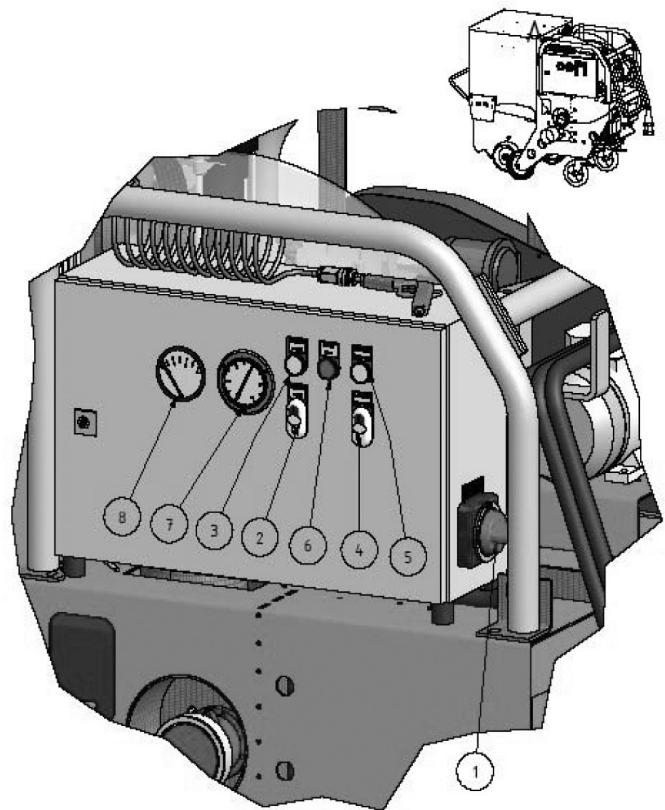
- | | |
|---|-------------------------------|
| 1 | Main Switch On/Off |
| 2 | Blower On/Off |
| 3 | Blower Control Light |
| 4 | Compressor On/Off Push Button |
| 5 | Compressor Control Light |
| 6 | Failure Indicator Light |
| 7 | Pressure Gauge |
| 8 | Differential Pressure Gauge |

In the control panel of the Dustcom, all elements are centrally combined for the operation and monitoring of the filter. The Main Switch (1) must be switched ON to start up the filter and attached machines.

Push buttons for the blower (2) as well as the compressor (4) may be switched ON/OFF. The Failure Light (6) indicates an electrical overload or an error is present.

The pressure gauge (7) indicates the current operating pressure of the Pulse Air System. The differential pressure gauge gives you information about the condition of the filter cartridges.

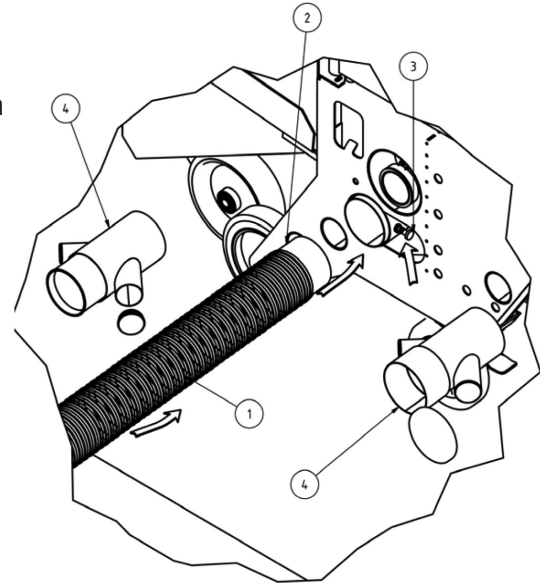
See Chapter 5 for details of the control elements and the functions as well as "Start-Up" from Chapter 6: Operation.



Hose Connectors (7)

The Dust Hose (1) is connected via a Connector (2) being pushed into the side opening and secured by a notched pin (3).

Besides the standard hose adapter, multiple hose connectors (4) are also available. Different hose diameters may be attached. The adapters permit hose connectors of 130 mm combined with 75mm and 50mm as well as 130mm combined with 75mm and 50mm.



Machine Power Supply (9)

The filter's power connection is above the hose connector. This location protects it from destruction in the rear framework. Depending on the filter type, machines with a total output admission of 45Amp can be connected. This Power Supply is additionally secured by an earth-leakage circuit breaker inside the control panel.

3.4 Care and Maintenance

Careful servicing and regular maintenance of the filter unit is essential for function and safety.

Consider unusual noises and examine each change of the operational behavior of the unit. Call a technician if doubts arise about the cause or a normal remedy without a technician does not appear possible.



Pay attention that no impurities or fiber arrears in the range of the intake connection remain. Check Air Intake for remaining debris and dust, remove and clean if necessary.



All junction points must be carefully sealed and the dust hose should be secured with hose clamps!

The filter housing must be well sealed, all seals in the range of the Dust Bin must be in good condition!

If dust is apparent in the area of the clean air section of the filter unit, then this is an indication that the filter cartridges are damaged or not fitted correctly. If the filter unit shows insufficient suction, check the differential pressure (see Chapter 7 Maintenance).

Chapter 4.0 Transportation

- 4.1 General Notes
- 4.2 Dimensions and Weight
- 4.3 Transport
- 4.4 Transport by Lifting Devices
- 4.5 Transport of the Filter by Vehicle
- 4.6 Transport During Machine Operation

4.1 General Notes

Before the filter used for the first time, IMPACTS authorised dealers offer a course to familiarize maintenance and operating personnel with all elements of the filter. We are not liable for damage caused by incorrect use of the filter by personnel not being trained by IMPACTS.

4.2 Dimensions and Weight

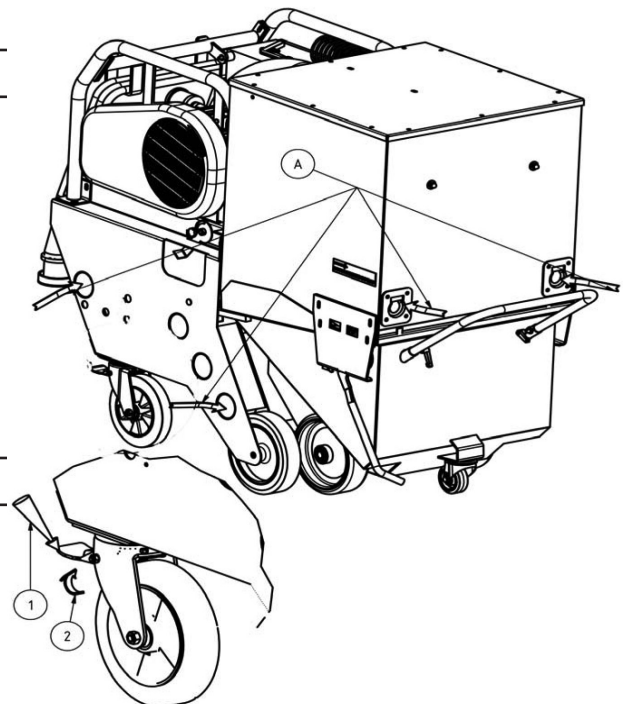
<i>Dustcom 4025</i>	
Length	64 in. / 1620 mm
Width	31 in. / 795 mm
Height	55 in. / 1400 mm
Weight	1,014 lb. / 460 kg

4.3 Transport

The bottom of the filter has four casters for easy transport. To move the filter, first check that the brakes on the rear framework are unlocked. To open the brakes you need to pull the lever (2) upward on both swivel casters. Move the filter into the desired position and lock the brakes of the swivel casters again by pushing the lever (1) downward.

4.4 Transport with Lifting Devices

When transporting the filter with hoisting equipment like a crane or a lift, check the total weight permitted (see Chapter 1: Dimensions).



Please use only appropriate, allowed, and qualified hoisting equipment as well as ropes and chains. You can find the weight of the equipment on the serial plate of the machine.

Do not fix any rope or chain to handles, fix ropes and chains only at locations (A) as shown in illustration.



The handle of the dust bin is only fixed with two fixing screws and cannot be used for transportation, to fix ropes, or hoisting equipment!

4.5 Transport of the Filter by Vehicle

When transporting the machine with vehicles, proceed in such a manner that damage due to the effects of use of force or incorrect loading and unloading is avoided. Use straps and fix them to the intended points (A) to tighten the filter to the cabin of the vehicle.

Use at least two straps, or tighten the machine with one straps to the cabin wall of the vehicle. Make sure, that all parts of the machine are fixed with special attention on the dust bin.



Remove all dust from the filter unit before transport. The additional weight of the dust can cause damage to the filter with extreme dynamic loads during transportation. The filter should only be fixed with ropes or straps in the intended locations (A).

4.6 Transport During Machine Operation

The filter unit can be moved during operation — please pay close attention to cables and dust hose length and location while doing so. Ensure cables and hoses are never brought to full expansion. Be certain that no person is obstructing the cable or hoses or that they cable or hoses are brought into the way of other vehicles.

Chapter 5.0 Start Up

5.1 Preparing Start Up

5.2 Start Up

5.1 Preparing Start Up



Before start up of the filter, operating personnel must be familiar with the safety regulations in this manual.



All persons in the proximity of the machine and filter must wear safety glasses with lateral protection as well as safety shoes. The operator is obliged to wear close fitting protective clothing.

- Bring the filter on the job side near to the machine to be connected.
- Make sure that the power connections for the blast machine and filter unit are installed. Power connections should be sufficiently secured with an earth-leakage circuit breaker. If in doubt, ask a local electrical specialist.
- Check available cable extensions on size and possible damages.
- Check the dust hose for damages.
- Check the dust bin to be empty.



If you're facing any kind of technical problem that is related to the power supply during your preparation call an electrician. Work on the electrical connections may only be performed by trained technical personnel.

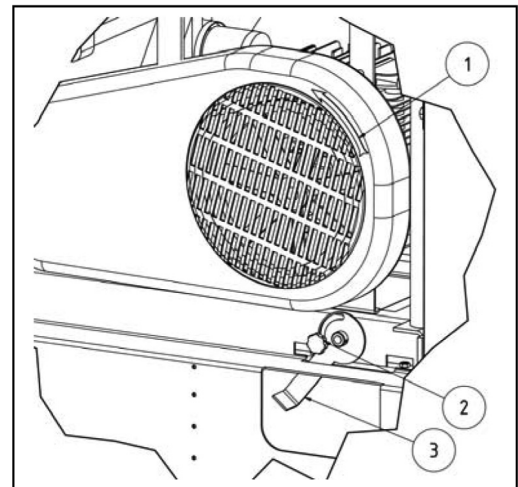
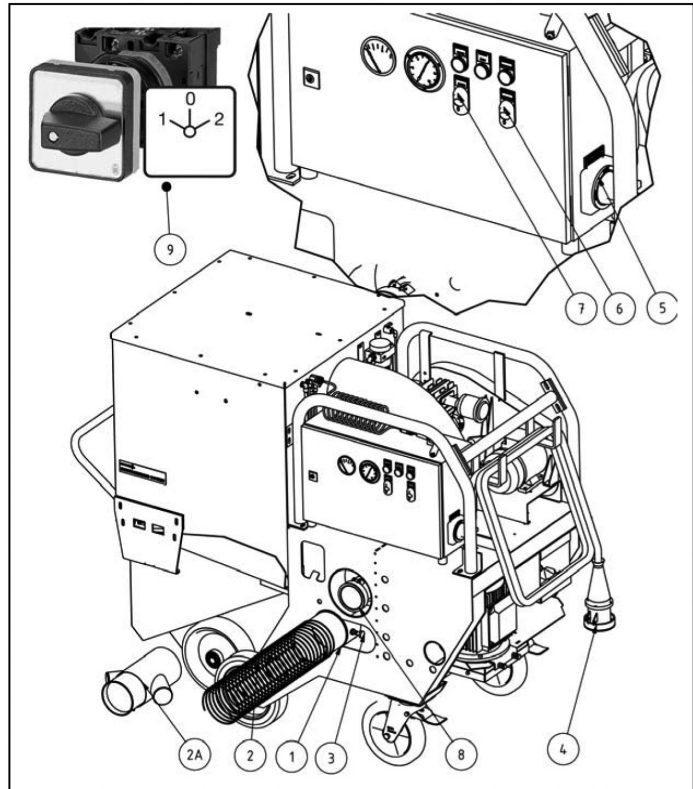


Each machine can be dangerous, if it is not used correctly, for operating, setting-up, and service staff. For the adherence of the safety regulations of operation and the maintenance of the provided protection device and/or the supply of appropriate safety devices the operator is responsible!

5.2 Start Up

After preparing start up (see 5.1), proceed as follows to start up the equipment:

1. Connect Hose Connector (1) or optional Multiple Connector (2A) with the Dust Hose (2).
2. Push the Connector (1) into the port on the filter and lock with the Notched Pin (3) that is located on the port.
3. Connect the Main Cable (4) to the Power Supply.
4. Switch ON the Main Switch (6).
5. To check the direction of rotation switch on the compressor by the Push Button (6), after the compressor starts up, switch OFF and check the direction of rotation on the Compressor Blower (1). The direction of rotation should be Counter clockwise (CCW).
6. If the direction of rotation is CW and not CCW (1) switch OFF the Main Switch. Open the Control Panel and switch the Phase Reverse Switch (9) into the opposite position (the switch is located in the upper right-hand section of the panel). Close the panel and check direction of rotation again as described before.
7. Now connect the machine to machine power supply (8) on the filter and check direction of rotation on the machine.
8. Switch ON the blower first (7). Then switch ON the compressor (6).
9. To adjust the airflow requirements for the machine that is connected, the filter is equipped with a butterfly valve. For the adjustment, loosen the retaining screw (2) and push the lever (3) to the right to throttle or to the left to increase the air flow. Tighten the retaining screw.
10. During the first minutes of operation, regularly observe the dust arising in the dust bin to analyze the filling and to prevent an overload.



IMPACTS does not recommend to operate any machine that generates dust without a filter unit. The filter should be suitable to keep the base of the machine dust free and to take up dust from the surface. (Consider dust classifications.)

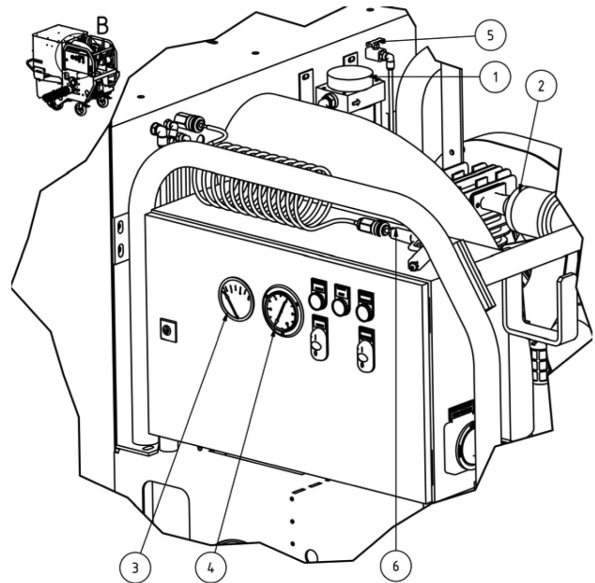
Chapter 6.0 Operation

- 6.1 Operation of the Filter Unit
- 6.2 Dust Bin Dumping
- 6.3 Switch Off the Filtering Unit
- 6.4 Behavior on Disturbances
- 6.5 Safety Switch Off
- 6.6 Start Up After Safety Switch Off
- 6.7 Measures Before and After Lengthy Downtimes

6.1 Operation of the Filter Unit

Start Up and operation of the filtering unit do not differ from the proceeding described in Chapter 5 “Start Up”. Consider however the following advice for continuous operation.

- Daily, open the exhaust valve (5) of the compressed air system to discharge condensation. In hot and moist climates, do this at least two times a day.
- Daily, control the sediment bowl filter separator (1) of the compressed air system.
- Weekly, check the condition of the intake filter insert (2) of the compressor (2). This is strongly recommended. If the insert shows dirt and dust, it must be cleaned or replaced.
- During operation always observe the differential pressure (4) of the filter cartridges. The pressure should not rise over 1.5 kPa. If the differential pressure does not adjust durably by the additional cleaning of the cartridges under 1,5 kPa the cartridges must be exchanged.
- The pressure (3) of the compressed air system should reach 6 bar again during the pulse cycles. (Range 0-6 and 6-1)



Ensure that no vehicles, as fork-lift trucks and other devices can drive over the electrical cable and the dust hose.

6.2 Dust Bin Dumping

The dust bin of the filter unit should be checked regularly for its level. The time intervals depend on the attached machine as well as the surface to be treated.

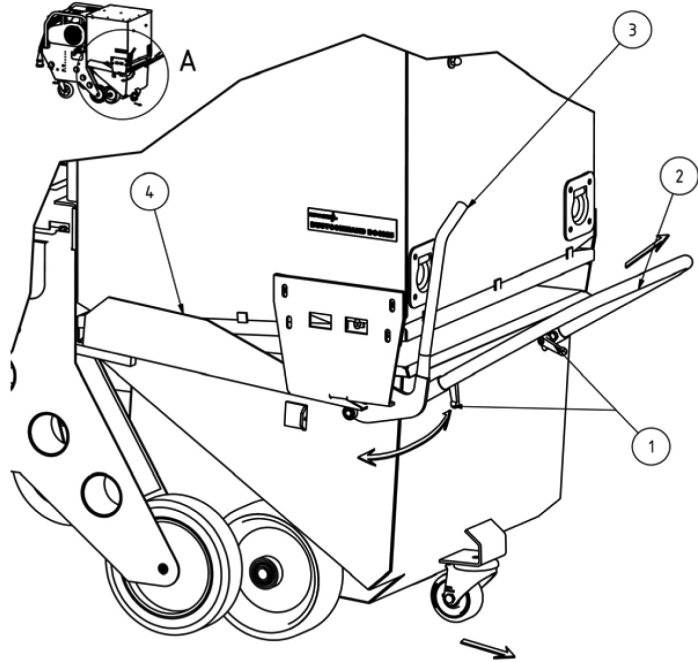
To empty the Dust Bin, place the handle (2) into the desired position. Loosen the locking levers (1) and pull the handle (2) up to the desired height.

Fix the handle firmly by the locking levers (1). Lower the dust bin and pull it away from the filter turn up lever (3) until it stands vertical.

The Lifting Device (4) lowers itself thereby. Pull the Dust Bin out of the Lifting Device and empty into available containers.

Paying attention that the lever (3) is still in a vertical position, push the Dust Bin in the angles of the Lifting Device to a complete stop.

Finally, move the lever (3) downward into its starting position.



When opening the Lifting Device of the dust bin, consider the increased weight. Swivel the lever (3) carefully upward! Consider your local disposal regulations.

6.3 Switch off the Filtering Unit

Allow the filter unit, after completion of the work, to run still some time with throttled fan to cool down the unit. This will also clean out the filter cartridges better. This is recommended especially with high air humidity and if the treated surface had moisture.

1. Once the cooling and cleaning minutes are completed (see above), push the Button Compressor OFF and the Blower OFF.
2. Set the Main Switch into the OFF position.
3. Set the Butterfly Valve back into the most used position.



Make sure that all turning parts of the filter unit have stopped before any inspection or maintenance work is made.

If the filter unit will be unused for a longer period of time, proceed as follows:

1. Disconnect unit from power supply.
2. Empty the dust bin completely.
3. Cover the filter with a tarp.

6.4 Behavior on Disturbances

Independent of the procedures outlined in this manual, all local safety regulations must be applied to the operation of the filter unit in every case. In principle, only a filter unit in a secured, complied condition can allow error tracing procedures to begin.

6.5 Safety Switch Off



After an emergency, switch off the unit. Prior to any kind of repair, bring the equipment into the safety off position (see Section 2.6). Make sure that all turning parts of the filter unit have stopped, before any inspection or maintenance work is made.

6.6 Start Up After Safety Switch Off

See Chapter 5.0 Start Up.

6.7 Measures Before and After Lengthy Downtimes

Before lengthy downtimes:

- Clean the filter cartridges thoroughly starting with a fan completely throttled and the compressor running.
- Switch off the filter unit (see Section 6.3).
- Empty the dust bin and clean it.
- Clean the filter unit.
- Treat bright parts of the filtering unit with rust preventive covering or a similar preservative.
- Protect electric motors from humidity, heat, and dust.
- Cover the filter unit with a tarp.

After lengthy downtimes:

See Chapter 5.0 Start Up.

Chapter 7.0 Maintenance

- 7.1 Notice to the Dust Collector
- 7.2 Maintenance and Inspection List
- 7.3 Corrective maintenance
- 7.4 Belts
- 7.5 Dismantle and mounting of belts
- 7.6 Belt-tension
- 7.7 Taper-Lock Bushes
- 7.8 Changing Filter Cartridges
- 7.9 Drive Motors
- 7.10 Spare Parts Stock

7.1 Notice to the Dust Collector



Prior to any repair work on the machine and its drives, secure the machine against unintentional switch-on. Put the machine to its Safety Off Position as described in Chapter 2



Failures due to inadequate or incorrect maintenance may generate very high repair costs and long stoppage periods of the machine. Regular maintenance is essential.

Safety and service life of the machine depend, among other things, on proper maintenance.

The following table will show recommendations about time, inspection, and maintenance for the normal use of the machine.

The time indications are based on uninterrupted operation. When the indicated number of working hours is not achieved during the corresponding period, the period can be extended. However a full overhaul must be carried out at least yearly.

Due to different working conditions it cannot be foreseen how frequently inspections for wear checks, inspection, maintenance, and repair works ought to be carried out. Prepare a suitable inspection schedule considering your own working conditions.

Our specialists will be pleased to assist you with more advice.



Sub-supplier's operating and maintenance instructions should be followed during service and maintenance. Highest attention should be paid when replacing electric parts and components.

7.2 Maintenance and Inspection List

<i>Operating Hours / Time Period</i>	<i>Inspection Points & Maintenance Instructions</i>
12 hours — after repairing	<p>Check function of all safety devices.</p> <p>Check all accessible screw connections for tight seat.</p>
Daily — prior to operation	<p>Check Ground-failure Protection Switches functions</p> <p>Check all Dust Hose Connections to be gas tight and secured fitting.</p> <p>Check condition of Dust Hoses</p> <p>Check Dust Bin to be empty</p> <p>Check all electrical connections to be tight clean and free of any contamination</p> <p>Check all drive Motors to be free of contamination</p> <p>Check differential-pressure not to exceed a max. of 1.5 kPa</p> <p>Check pulse cleaning pressure range to run within 1-6 Bar</p> <p>Check pulse cleaning cycle times and pressure drop</p>
After Work	<p>Check Dust Hoses for sediment</p> <p>Drain Pressure Reservoir ¹</p>
Weekly	<p>Apply Oil and clean all moving Elements</p> <p>Check Oil level of the compressor</p>
Monthly	Check condition off compressor suction filter
100-200 hours	Replace Compressor oil (use API CC/SC SAE40)
Yearly	<p>Full cleaning and checking of all functions</p> <p>Clean-out control panel</p> <p>Replace line-filter off the differential pressure gauge</p> <p>Replace compressor oil ²</p> <p>Replace seals of dust bin and filter cover</p>

¹ In hot and moist environment, drain every 2-4 hours.

² In hot and moist environment, replace every 6 months.

7.3 Corrective Maintenance

As already mentioned in Chapter 5 “Initial operation,” we recommend you make your first repair work on the machine with the help of an IMPACTS personnel. Using this recommendation, your maintenance personnel will have the opportunity to get an extensive training.

Only those repair works are described which occur within the context of maintenance or which are required to replace wear parts.



If you replace parts yourself for specific reasons, the following instructions and work sequence have to be observed:

- You should also stock all spare or wear parts that cannot be supplied quickly. As a rule, production standstill periods are more expensive than the cost for the corresponding spare part.
- Screws that have been removed must be replaced with those of the same quality (strength, material) and design.



Prior to any repair work on the machine and its drives, secure the machine against unintentional switching-on. Pull out the main plug in order to do this. Store the plug near the machine to avoid accidents.

7.4 Belts

The V-belt is designed for the installed drive power. Forcing the drive to grant a higher output by over tensioning the V-belt results in belt breaks, bearing damage, and thus to lower efficiency. A low V-belt tension results in slippage causing an increased belt temperature and thus to premature destruction of the V-belts.

Temperatures exceeding 158°F / 70°C for a long period of time will reduce the service life and performance of the V-belts. The grooves of the V-belt pulleys have to be free from rust, grease, dirt, and damages.



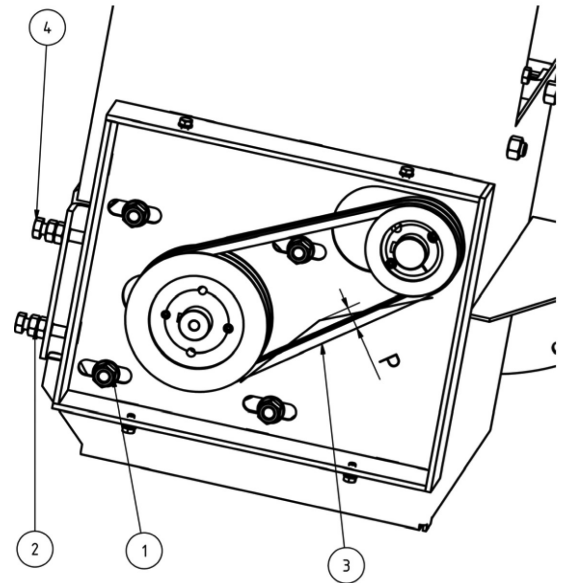
The use of belt wax or similar substance to increase the friction coefficient is unnecessary and damages the V-belts. Avoid any contaminations by oil, grease or chemicals. In order to grant a perfect output transmission, the V-belt drive needs continuous observation.

7.5 Dismantle and Mounting of Belts



Please remove the belt guard only after the drive motor is at a standstill, the main switch of the filter is OFF, and the machine is in the Safety Off Position as described in Chapter 2.

1. Remove the belt guard.
2. Slacken nuts (1), locknuts (2) and straining screws (4) so the distance between motor and bearing unit axle is reduced so the belt can be taken out of the pulley grooves without any constraining force.
3. Put on 2 new belts and tighten up the straining screws (4) so the distance between motor and bearing unit axle is getting to a point so the belt tension is set as described at Section 7.6.
4. Secure the belt guard.



7.6 Belt-tension

To achieve a maximum power transfer and life time of the belt, the correct setting of the belt tension is essential. Often belts are set with the wrong tension and fail before normal service time. Belts that are set with too much tension cause bearing problems on motors or bearing units.

Check the correct pre-tension in accordance by pressing down the belt as shown in the illustration. The distance (P), that the belt can be pressed down (3-4 kg) should be 3-4 mm.

7.7 Taper-Lock Bushes

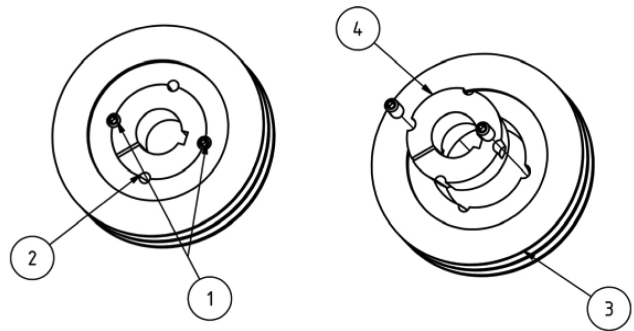
Taper locks are used to shrink-fit hubs on shafts. Mounting and demounting only requires a screw driver DIN 911 (Allen key). Tightening and loosening is effected with the same threaded pins or screws.

Taper locks are cylindrical on the inside, tapered on the outside, and slit longitudinally. The smaller bushes 2 and 3 have in the large face their cylindrical blind holes in parallel to the axis, which however, are only placed half in the bush material. The other half of these blind holes are threaded and are placed inside the hub.

Threaded pins or screws are screwed to the stop in the bore holes using an Allen key. When the screws are tightened further using a certain amount of force the hub is drawn up to the tapered bush which is pressed onto the shaft with great force.

Demount:

1. Demount the screws (1) in the belt pulley. Lubricate the thread and the tip of the screw and turn it into the bore (2) as shown.
2. Turn the screw until the taper lock (4) gets loose inside the pulley (3) and, thus, the assembly is loose on the shaft. Take the pulley and the taper lock from the shaft.

**Mount:**

1. Assure that all contact surfaces are free from dirt and oil. Place the taper lock into the pulley. Slightly lubricate the screws (1) and insert them into the respecting threaded holes.
2. Clean the shaft, shift the pulley with the taper lock, as one unit, onto the shaft, and position the assembly. Note, that first the taper lock (4) is fixed on the shaft before the pulley (3) reaches its final position on the bush.
3. Slightly tighten screws (1). Knock the frontal face of the bush lightly with a plastic-hammer to ensure sure that the bush is seated in the centre of the pulley (use a mandrel to avoid any damages). Now tighten the screws. Repeat the alternating hammering and tightening until all screws fully tightened.

7.8 Changing Filter Cartridges

Before you start changing the cartridges you should clean the dust bin as described in Chapter 6.2, afterwards remove the dust bin.

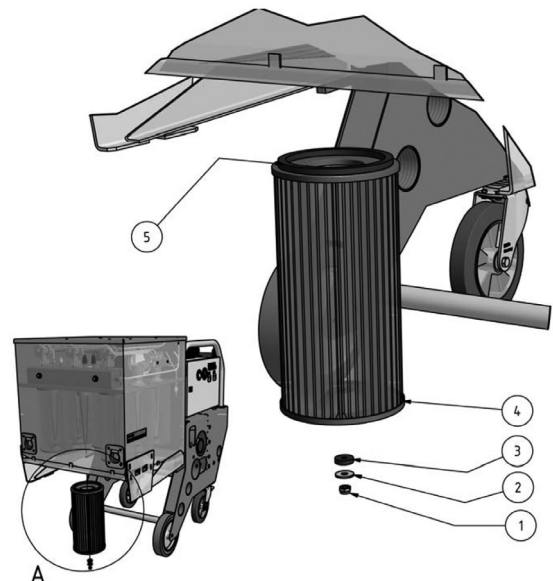
Unpack the new cartridges and place them at the side. Reuse the packaging for dust free transport and storing of the older cartridges.

Remove the locknut (1), steel-washer (2), and rubber seal (3) under the cartridge and pull down the cartridge (4). Place the old cartridge in the packing and seal it.

Place a new cartridge on the holder and push on the rubber seal to avoid the cartridge falling down again. Afterward, place the steel washer (2) and nut, and tighten up the nut (1).

Ensure the cartridge centered to the Venturi on top and the seal (5) should not be fully compressed when tightening up the nut (1). Tighten it too much will damage the cartridge. Leave at least 5mm between Metal TOP of the cartridge and the upper plate of the filter housing.

Ensure the cartridge is vertical and the distances within the group of cartridges are nearly the same.



7.9 Drive Motors

All drive motors are built for a long life span. Damages of the motors are perceptible by unusual noises or malfunctions. Keep the driving motor always free by excessive contamination. Avoid overheating of the engine coil by overloading. With malfunctions of the motor, please call an electrical specialist for help. If the malfunction cannot be repaired, inform IMPACTS Americas.

7.10 Spare Parts Stock

To avoid longer down time of the dust collector, IMPACTS recommends to stock the following parts and quantities:

Part Name	Quantity	Stock Numbers
Filter Cartridge	8	306000002
Suction Filter	1	3140000051

Chapter 8.0 Electrical System

8.1 Hints for the Electronics

8.2 Circuit Diagram DC4025

8.1 Hints for the Electronics



Shut off the machine completely for repair or maintenance work. All plugs have to be disconnected keep all cables and plugs near the machine in order to prevent the machine from being switched on accidentally.

Electric spares need to be ordered with reference to the electric circuit diagram within this chapter. If there is any doubt, please call your local IMPACTS service technician.

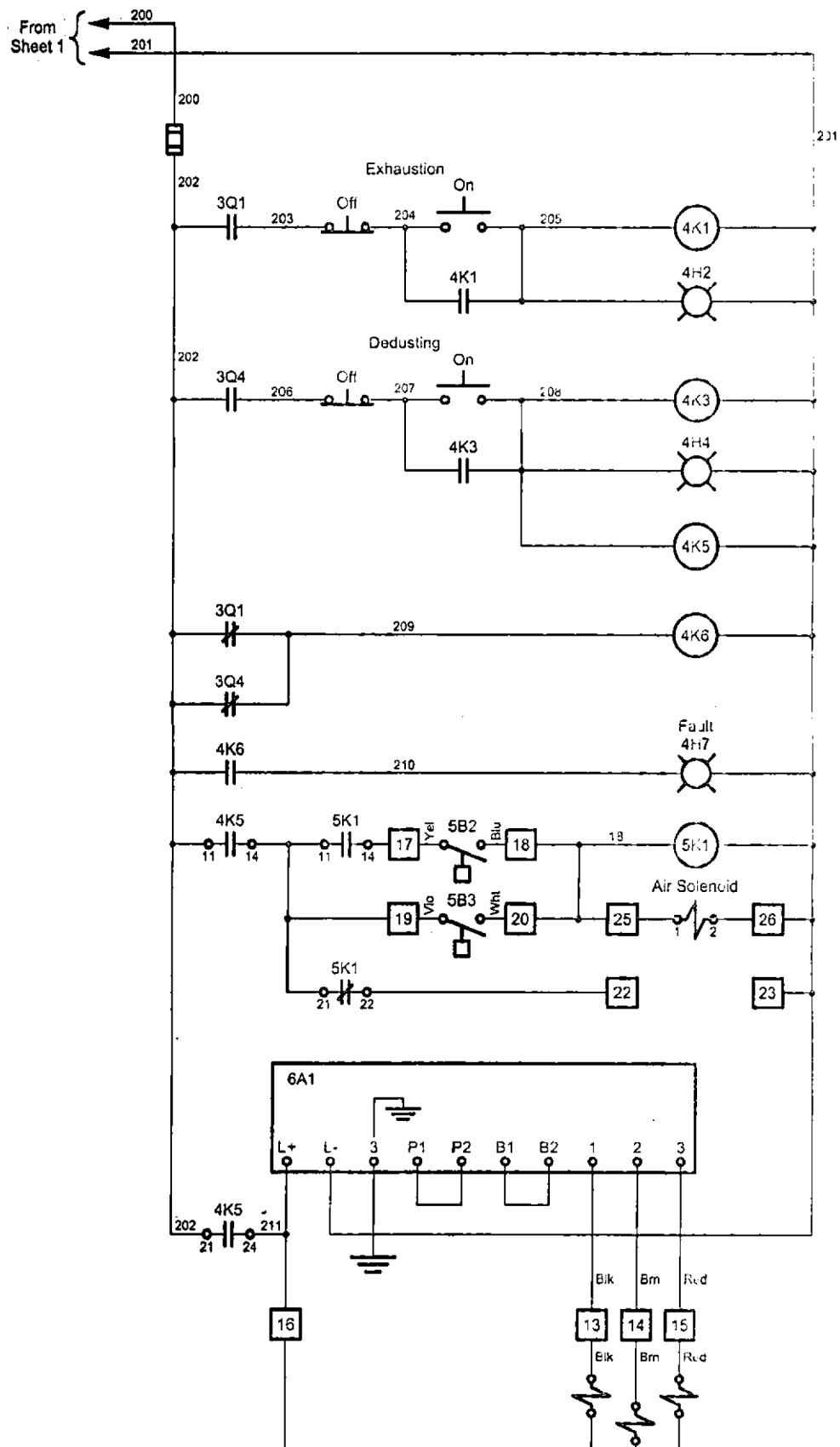


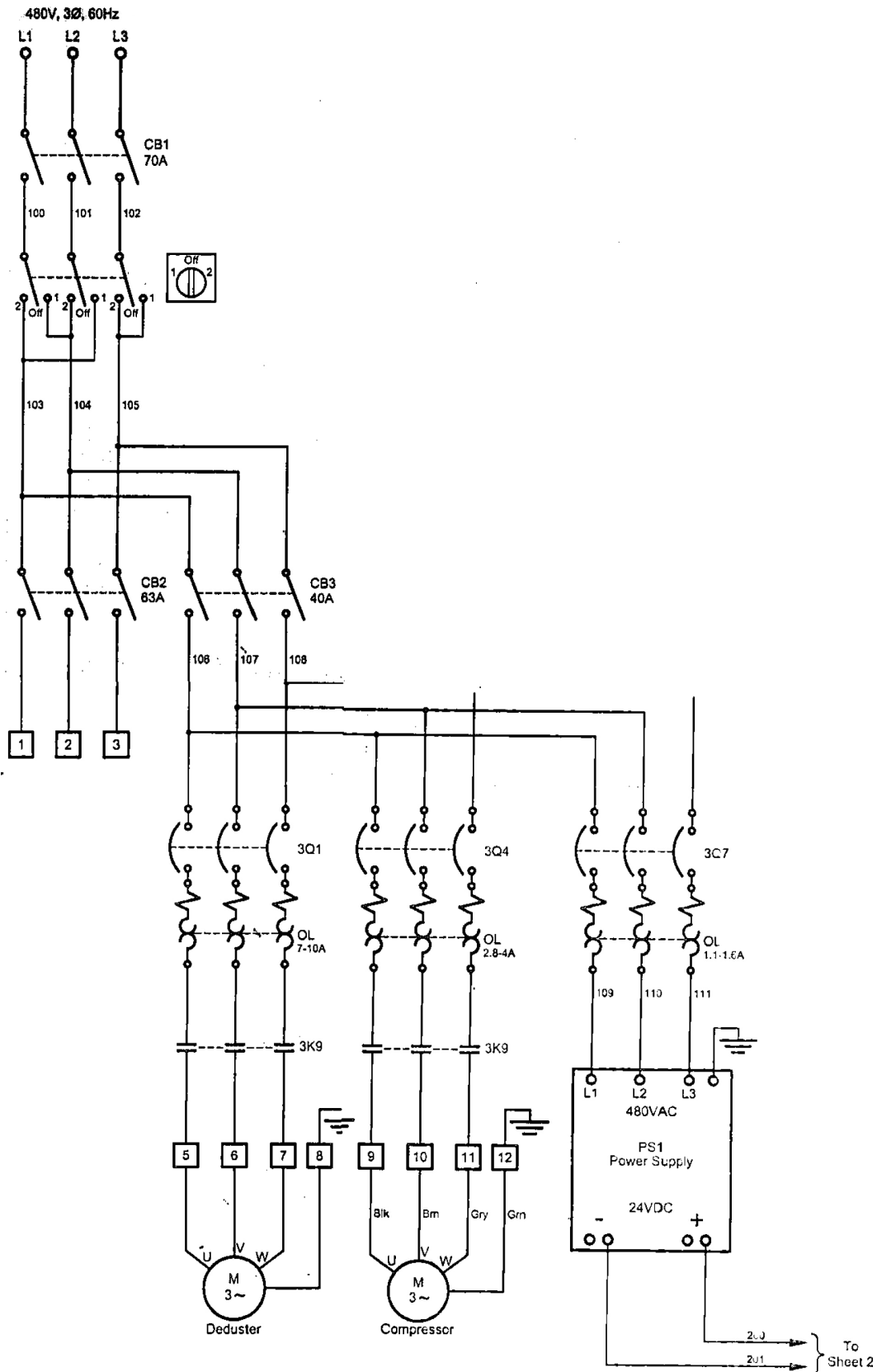
The electrical parts of the machine must be inspected regularly. Please note in particular the specified recurring inspections according VBG 4 or other local regulations. Defects such as loose connections or scorched cables must be rectified immediately. Call a skilled electrician or an IMPACTS customer service representative.



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician in accordance with the electrical engineering regulations.

8.2 Circuit Diagram DC4025





Chapter 9.0 Error Diagnostics

9.1 Fault Diagnosis Dust Collector

9.2 Fault Diagnosis Electrical System

9.1 Fault Diagnosis Dust Collector



Prior to any repair work on the machine and its drives, secure the machine against unintentional switching-on. Pull out the main plug in order to do this. Store the plug near the machine to avoid accidents.

Fault	Possible Cause	Failure Corrective Actions
Filter gives off dust (Silencer Section Outlet)	Filter cartridge damaged	Check clean gas section and replace damaged cartridge
Filter gives off dust (Dirt Gas Side)	No depression	Check Belt tension and direction of rotation
	Throttle closed	Open Throttle
	Filter cartridge clogged	Check Differential Pressure not exceeding a max. 1.5 kPa.
	No Pulse Cleaning	Check function of Pilot valves, Pulse valves and Timer card
	Wrong direction of rotation	Check direction and switch
	Dust Bin	Check Dust Bin Seal and replace when compressed or broken
	Overload	Clean out Dust Bin
	External Dust Hose	Replace if worn or broken
	Internal Suction hose	Replace if worn or broken
High Vibrations	Unbalance of Fan Blade caused by dust	Remove Dust Hose on the blower Inlet check and remove dust sticking to the blower blades.
	Loose screws with the blower or compressor drive sections	Check for loose screws and tighten up
Unusual noise	Bearing damaged	Check drive bearing unit and locate bearing being damaged
	Wrong Belt tension	Check Belt tension, adjust, or replace older belt showing cracks
	Motor Bearing damaged	Replace Motor Bearings

9.2 Fault Diagnosis Electrical System



Prior to any repair work on the machine and its drives, secure the machine against unintentional switching-on. Pull out the main plug in order to do this. Store the plug near the machine to avoid accidents.



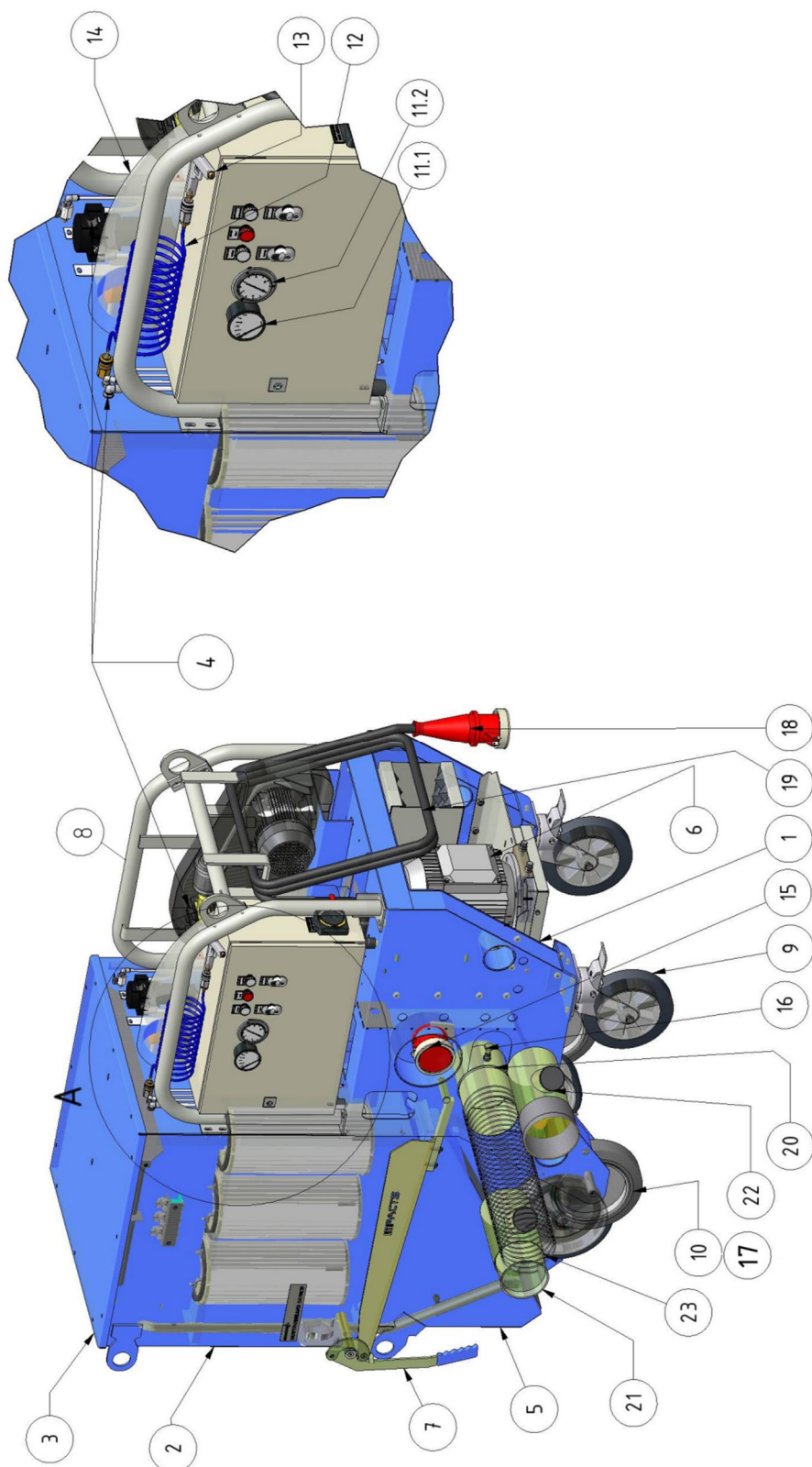
Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician in accordance with the electrical engineering regulations.

Fault	Possible Cause	Failure Corrective Actions
Motor does not start	Power supply failure	Check power supply showing all
Blower Motor does not start up	Main cable is broken or damaged	Disconnect from Power supply and measure cable wires
	Missing Phase (LEAD)	Check power supply
Timer board doesn't work	Faulty Switch or relays	Diagnosis and replacement by electrician
	No Control Voltage	Check Transformer Secondary Side
	No Control Voltage	Transformer or Fuse of of transformer damaged
Timer board works but differential pressure is too high	Pulse time out or pulse time misadjusted	Onboard Fuse broken
		Readjust Pulse Time Out to 15-20 sec. max.
		Readjust Pulse Time so differential pressure of pulse system is at 2-3 Bar Max.
Motor stops during operation	Current too high power supply circuit breaker disengaged	Disconnect plug
		Reset circuit breaker or replace fuse
		In cold environment
	Motor is damaged	Check Motor

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Dust bin assembly	PAGE	4
Fan assembly	PAGE	5
Air system	PAGE	8
Dust bin lifting device	PAGE	11
Pipe bar assembly	PAGE	12

Spare Parts

Overview:

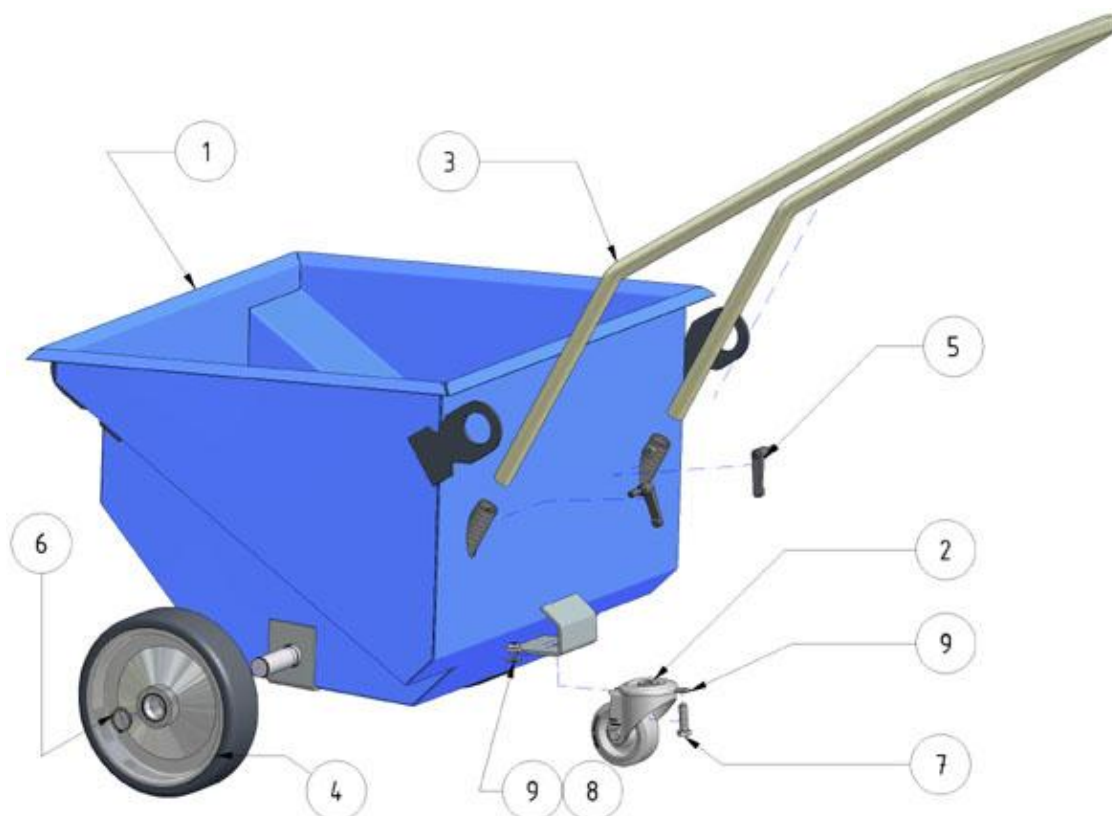


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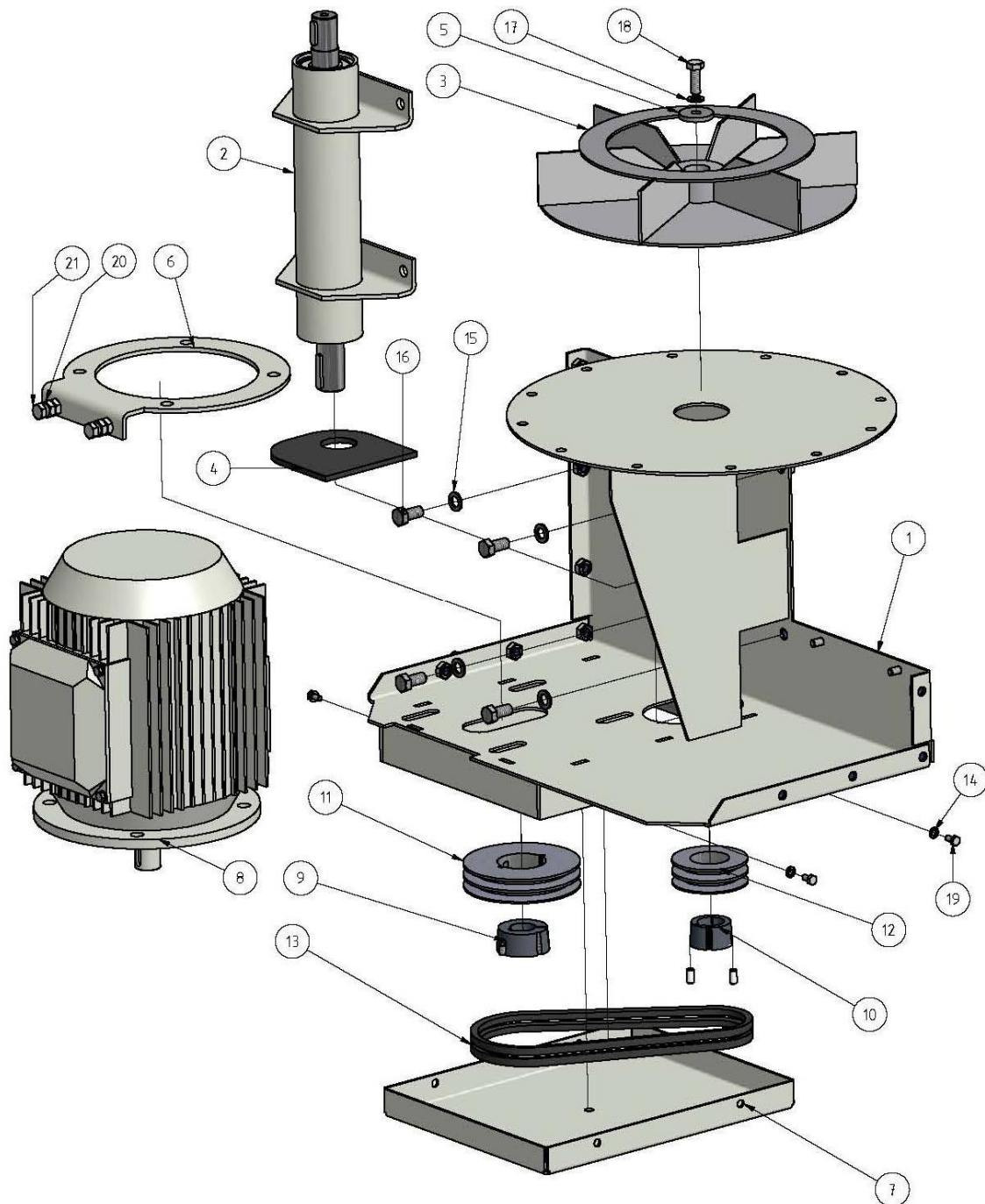
POS	QTY	Description	Part No
1	1	Rear frame section	---
2	1	Filter housing front section	---
3	1	Cover filter housing	---
4	1	Air system	---
5	1	Dust bin assembly	204 000 136
	1	Dust bin seal	204 000 201
6	1	Fan assembly	---
7	1	Dust bin lifting device	---
8	1	Pipe bar assembly	---
9	2	Swivel caster with brake	304 000 021
10	2	Wheel	304 000 007
11.1	1	Differential pressure gauge	314 000 041
11.2	1	Pressure gauge	314 000 059
12	1	Compressed air hose (coil)	307 000 019
13	1	Air gun	314 000 064
14	1	Suction hose	307 000 014
15	1	Socket	603 000 012
16	1	Lock bolt	311 000 022
17	2	Wheel bolt	204 000 060
18	1	Main cable plug	603 000 007
19	1	Main supply cable	602 000 009
20	1	Hose connector	204 000 045
	1	V-Ring	314 000 010
21		Hose connector 130x50x75	204 000 032
22		Hose connector 150x50x75	204 000 031
23	1	Dust hose 150 mm	307 000 004
		Dust hose 130 mm	307 000 003
		Dust hose 75 mm	307 000 011
		Dust hose 50 mm	307 000 001

Spare Parts

Dust bin assembly:

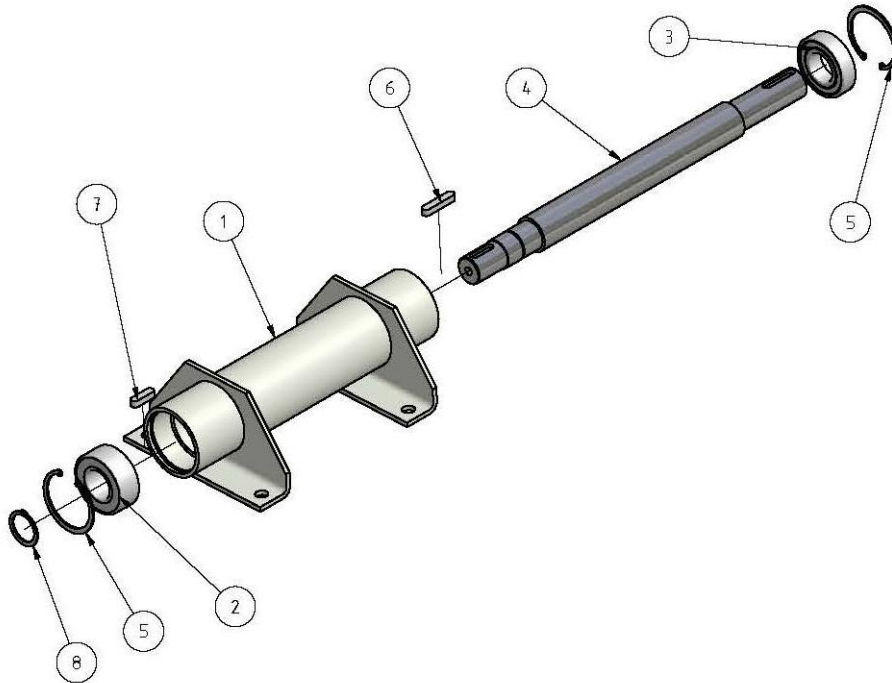


POS	QTY	Description	Part No
1	1	Dust bin	204 000 120
2	1	Swivel caster	304 000 020
3	1	Handle for dust bin	204 000 121
4	2	Wheel	304 000 019
5	2	Adjustable clamp lever	311 000 021
6	4	Shaft lock ring	400 471 003
7	1	Hex head bolt	EN 24018 M12x40
8	1	Lock nut	DIN 985 M12
9	2	Washer	DIN 125-1 B13
1-9		Dust bin assembly	204 000 136

Fan assembly:

Spare Parts

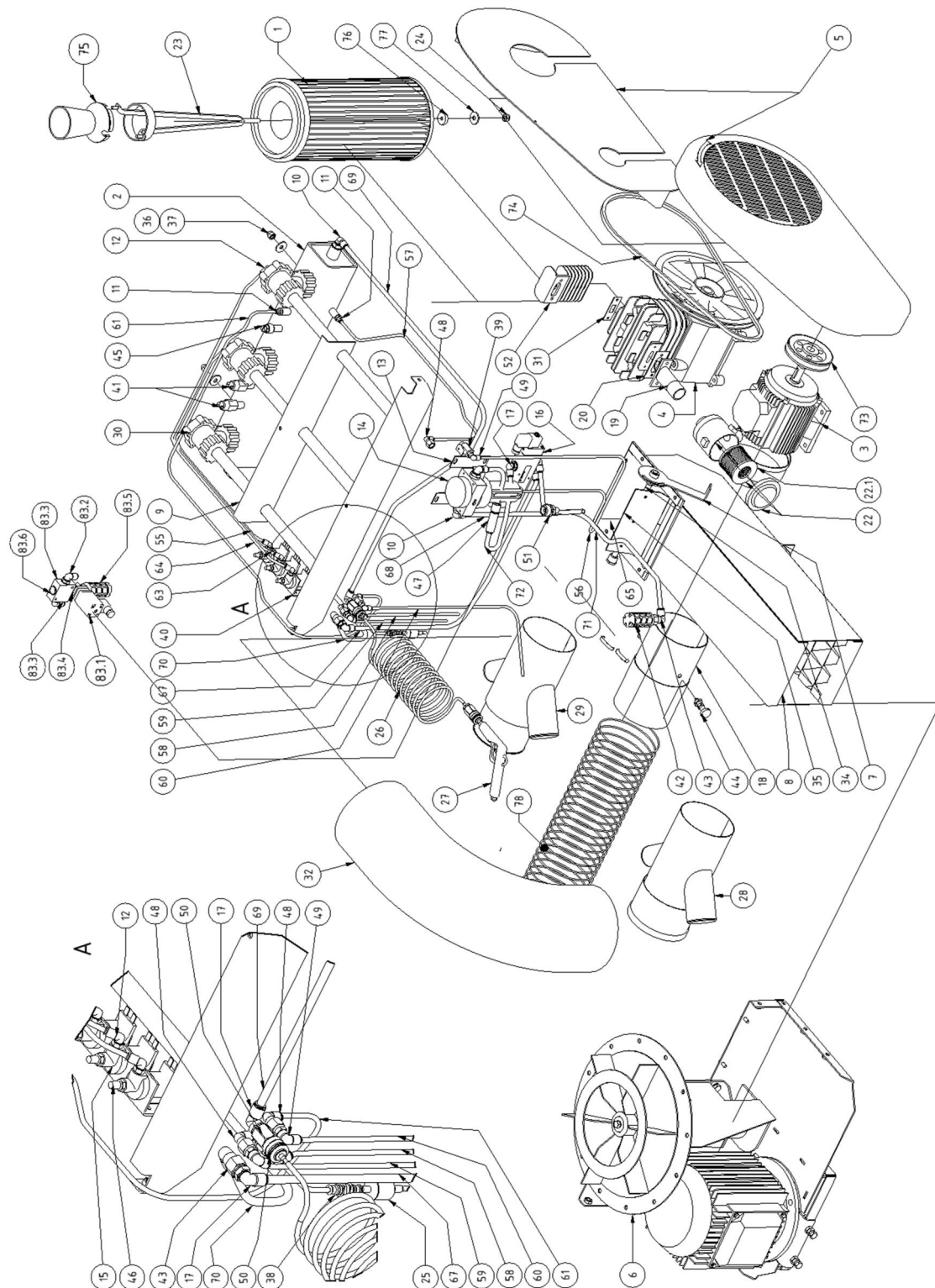
POS	QTY	Description	Part No
1	1	Fan main bracket	---
2	1	Fan bearing unit	204 000 103
3	1	Fan blade assembly	204 000 266
4	1	Seal plate	204 000 042
5	1	Washer fan blade	204 000 098
6	1	Tensioning plate motor	---
7	1	Belt cover	204 000 612
8	1	Motor	601 000 038
9	1	Taper-Lock bush	303 000 010
10	1	Taper-Lock bush 50 Hz	303 000 011
	1	Taper-Lock bush 60 Hz	303 000 012
11	1	Pulley 50 Hz	302 000 015
	1	Pulley 60 Hz	302 000 019
12	1	Pulley 50 Hz	302 000 016
		Pulley 60 Hz	302 000 020
13	2	Belt 50 Hz	301 000 009
	2	Belt 60 Hz	301 000 017
14	4	Washer	DIN 125-1 B6,4
15	4	Lock washer	DIN 128 A12
16	4	Hex head bolt	EN 24018 M12x15
17	1	Lock washer	DIN 128 A10
18	1	Hex head bolt	EN 24018 M10x30
19	1	Hex head bolt	EN 24018 M6x12
20	4	Hex nut	DIN 934 M10
21	2	Hex head bolt	EN 24018 M10x40



POS	QTY	Description	Part No
1	1	Housing fan bearing unit	204 000 112
2	1	Angular ball bearing double row	400 628 002
3	1	Ball bearing	400 625 004
4	1	Fan shaft	204 000 113
5	2	Lock ring housing	400 472 002
6	1	Shaft key	DIN 6885 A8x7x40
7	1	Shaft key	DIN 6885 A8x7x28
8	1	Lock ring shaft	400 471 003

Spare Parts

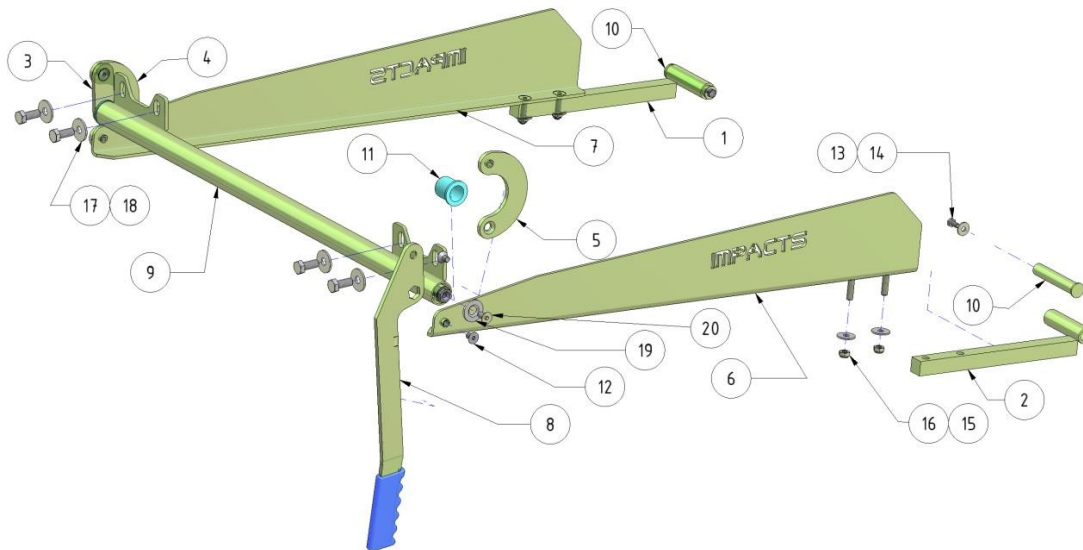
Air system:



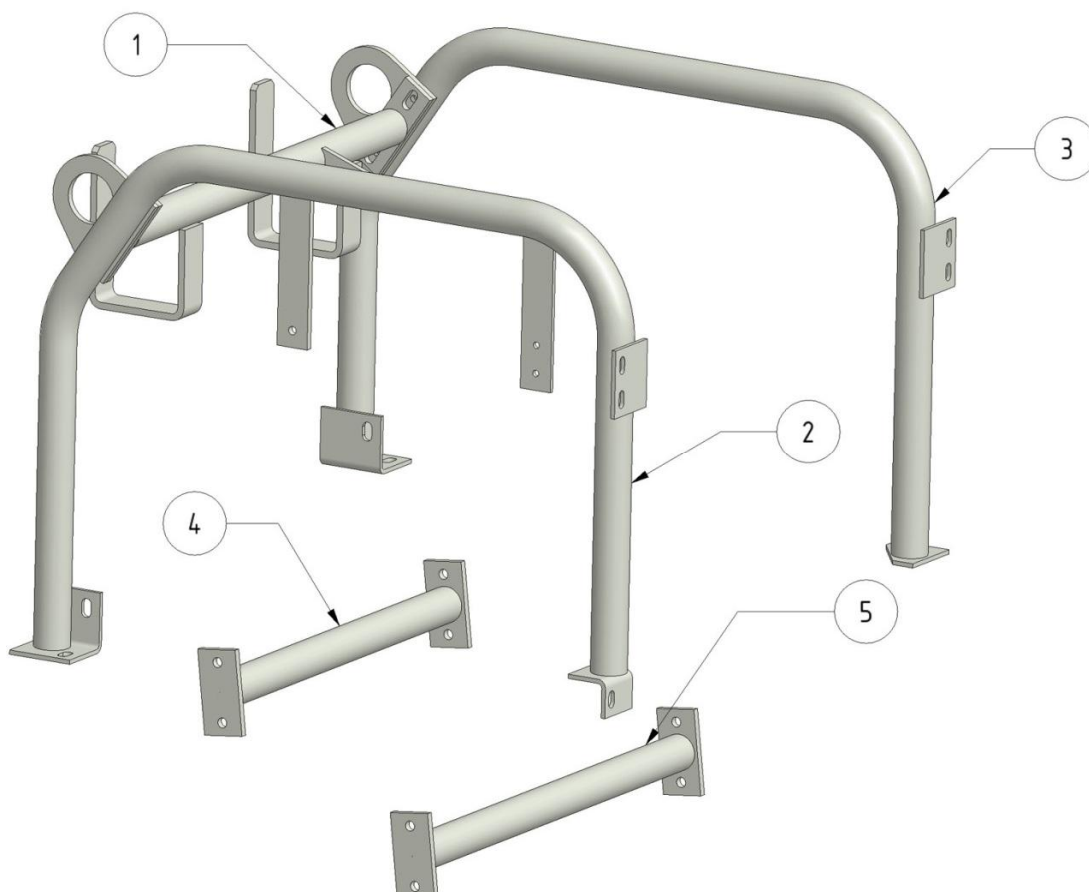
POS	QTY	Description	Part No
1	8	Filter cartridge	306 000 001
2	1	Air manifold	204 000 097
3	1	Motor	601 000 020
4	1	Compressor	305 000 005
5	1	Belt guard complete	204 000 303
6	1	Fan unit	BM N300107
7	1	Adjust lever throttle	N300127
8	1	Air outlet	N300128
9	1	Air pulse system	N300137
10	5	Elbow connector	314 000 046
11	3	Straight connector	314 000 044
12	6	Elbow connector	314 000 013
13	1	BRKT water separator	314 000 090
14	1	Water separator	314 000 050
15	3	DC pilot valve	612 000 040
16	1	Air valve (until 2008)	314 000 068
17	5	Elbow connector	314 000 035
18	1	Hose connector	204 000 045
19	1	Intake manifold compressor	204 000 100
20	1	Seal intake manifold	314 000 115
22	1	Suction filter complete	314 000 026
22.1	1	Filter element	314 000 061
23	8	Cartridge bracket	204 000 061A
24	8	Lock nut	DIN 985 M10 Zn
25	1	Line filter	306 000 010
26	1	Compressed air hose (coil)	307 000 019
27	1	Air gun	314 000 064
28	1	Hose connector 150x50x75	204 000 031
29	1	Hose connector 130x50x75	204 000 032
30	3	RC air valve	314 000 057
31	1	Seal aftercooler	314 000 116
32	1	Suction hose	307 000 014
33	2	Reducer	N300123
34	1	Throttle valve shaft	204 000 167
35	1	Throttle plate	N300126
36	2	Washer	DIN 9021 10,5
37	2	Cap nut	M10

Spare Parts

POS	QTY	Description	Part No
38	1	Bulk HD. connector	314 000 043
39	1	Ball valve	314 000 058
40	1	RC valve BRKT	N300153
41	2	Pressure switch	314 000 055
42	1	Pneumatic silencer	314 000 060
43	2	Elbow connector	314 000 036
44	1	Lock bolt	311 000 022
45	1	Safety valve	314 000 052
46	3	Air silencer	314 000 008
47	1	Check valve	314 000 027
48	4	Elbow connector	314 000 045
49	6	Elbow connector	314 000 030
50	1	Air supply socket	314 000 065
51	1	Reducer	314 000 063
52	1	Aftercooler	314 000 049
53	2	Plug	N300241
54	2	Hex nut flat	ISO 8675 G1/4
55-65	1	Hose 6 (specify length)	307 000 005
66-72	1	Hose 10 (specify length)	307 000 007
73	1	Motor pulley 50 Hz	302 000 029
	1	Taper-Lock bush 50 Hz	303 000 033
	1	Motor pulley 60 Hz	302 000 021
74	1	Belt	301 000 014
75	8	Venturi	204 000 057
76	8	Rubber washer	314 000 114
77	8	Washer	DIN 9021 10 Zn
78	1	Dust hose 150 mm	307 000 004
83	1	Magnetic valve conversion 2008	---
83.1	1	Air control valve	314 000 073
83.2	2	Elbow connector	314 000 035
83.3	1	3 Way air splitter	314 000 074
83.4	1	Pipe connector	314 000 099
83.5	1	Pneumatic silencer	314 000 060
83.6	1	Plug	314 000 070

Dust bin lifting device:

POS	QTY	Description	Part No
1	1	Lifting hub LH	204 000 190
2	1	Lifting hub RH	204 000 189
3	1	Shaft lifting lever	204 000 375
4	1	Curved lever LH	204 000 093
5	1	Curved lever RH	204 000 092
6	1	Lifting angle RH	204 000 116
7	1	Lifting angle LH	204 000 115
8	1	Lifting lever	204 000 118
	1	Rubber grip	310 000 012
9	1	Lifting swivel support	204 000 117
10	2	Lifting arm bolt LH/RH	204 000 166
11	2	Bushing	314 000 034
12	4	C. Sink hex HD. bolt	DIN 7991 M8x12 Zn
13	2	Washer	DIN 9021 6,4 Zn
14	2	Hex head bolt	DIN EN 24018 M6x12
15	4	Washer	DIN 9021 8,4 Zn
16	4	Lock nut	ISO 7040 M8 Zn
17	4	Washer	ISO 7093 ST 10
18	4	Hex head bolt	EN 24018 M10x25
19	1	Washer	ISO 7093 ST 10
20	2	C. Sink hex HD. bolt	DIN 7991 M8x16 Zn

Spare Parts
Pipe bar assembly:


POS	QTY	Description	Part No
1	1	Combined cross bar hanger	204 000 145
2	1	Pipe cross bar RH	204 000 146
3	1	Pipe cross bar LH	204 000 147
4	1	Rear cross bar	N300139
5	1	Front cross bar	N300140

Impacts® Warranty

Impacts Americas guarantees that its machines and products are without manufacturing defects. The warranty period on machines and variable speed drive is one (1) year from the date of sale. Impacts Americas will replace any part that is defective at its own cost within the warranty period. This warranty does not cover wear items or instances of abuse or neglect.



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