Cleaning Device

PWA 1000i

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EU-Declaration of Conformity According to DIN EN ISO/IEC 17050-1

Manufacturer: B-TEC GmbH
Zunftweg 6-8
D-31303 Burgdorf / Ehlershausen

CE

Herewith, we declare that the machines and marketed models described in the following conform in conception and in design to the relevant fundamental safety and health requirements of the applicable EU directives.
All of our manufactured or assembled parts conform to the listed regulations.
If you change the machine without our explicit agreement, this declaration will be herewith invalidated.

Product type: Spraying-gun cleaning-device

Type designation: PWA 1000i

Serial-no.: _____ **Construction year: 20_ _**

The machines conform to the following regulations:

Machinery Directive **2006/42/EG**
Explosion-Protection Directive **94/9/EG** ; Registered with*:* PTB 0102 / R.Nr.: 05 ATEX D 116
as from **20.04.2016** directive **94/9/EG** is going to be replaced and conforms the directive **2014/34/EU!**

The following harmonising standards have been used:

Safety of machinery, equipment and facilities: **DIN EN ISO 12100 : 2011**
Machines for surface cleaning, aqueous and combustible liquids: **DIN EN 12921-1:2011-02**
Non-electrical equipment for use in potentially explosive atmospheres: **DIN EN 13463-1**
General rules and safety requirements for pneumatic-systems: **DIN EN ISO 4414**

Special national norms are applied:

Guidelines for facilities to clean work pieces with liquid detergents: **DGUV rule 109-010**
Safety- and health signs at workplace: **DGUV regulation 9**

Ex declaration: Ex II 2 G c II B T6

Responsibility for technical documents: Hans-Joachim Bödrich, Michael Bellroth
Address: Refer to manufacturer´s address

Location/Date/Manufacturer`s signature Hannover, 02.01.2016
Function of the signer: Managing director

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1. Important  Information

We thank you for your trust you gave to us by buying the spraying-gun cleaning-device "PWA 1000i". On the identification plate at your cleaner you can find the exact type designation and serial-number of your cleaner to ensure an uncomplicated service and shipment of spare parts.
The cleaners have been designed and manufactured to the highest quality standards for high operational safety. Due to certain operation processes, there are places and parts that can´t be protected without impairing operability and functionality. Therefore we ask you to read this document carefully before using the cleaner in order to achieve maximum operational safety and lifetime. The instructions are an integral part of the product and must be stored with the gun cleaner.

Read this document carefully before putting the gun cleaner into operation and keep it for future reference!

On the last page of this instruction book, there is a form for documenting safety inspections, which have to be conducted at regular intervals. The form has only to be filled out by qualified Person (persons with sufficient knowledge and experience or manufacture´s mechanics) or experts (e.g. engineers or Technical Control Board experts).

Safety inspections must be conducted before commissioning and at least once a year!

The devices and machines are only allowed to be used according to the intended purpose explicitly described below. A usage not according to the intended purpose as well as unauthorized modifications exclude the liability of the manufacturer for any damages resulting from this.

The devices and machines are only to be used according to the intended purpose explicitly described below!

These machines are to be used for cleaning varnish and spray paint guns as well as paint soiled parts and hand tools using solvents (A I, A II, A III) or non-combustible, aqueous cleaners for water-based paints. The Acetone content of the solvent used must be less than 65 %.
These gun cleaners must not be subjected continuous operation, such as, for instance, the serial production. Improper use of the washers can endanger the health of the operator and of others and cause damage to the cleaner itself or to other materials and assets.

Improper use of the cleaners can endanger the health of the operator!

1.1 Explanation of the Symbols

To recognize important information in this operating manual, the symbols “Caution!” and “Notice!” are been used. Please note that text passages with these symbols on need particular attention.

Caution!

You will find this symbol whenever attention is drawn to situations in which danger to life can arise due to or during incorrect or improper operation. Pay special attention to these symbols and act carefully.

Notice!

You will find this symbol in the operating manual whenever your attention shall be drawn to correct work procedures, economic ways of operation or when the machines can be damaged by incorrect operation.

2. Intended use and range of application

The spray-gun cleaner PWA 1000i may only be used for its intended purpose. This unit is not intended for purposes beyond the following terms and the manufacturer/supplier is not liable for any damages resulting from it.

Intended use:

The intended use of this device is to clean spray-guns or ink-soiled pieces/tools (e.g. stirring rods, mixing bowls etc.).

This device is suitable for:

- Solvents (former danger classes A I, A II, A III according to VbF) and
- Nonflammable, water-based cleaners for water-soluble lacquers according to chapter 4.

Not allowed are solvents that contain more than 65% of acetone.

This device may only be used for commercial use.

This device is classified as machine category 2, group II, machine type explosion group II B and can be used in zone 1.

See also device type sign: **II 2 G c II B T6**

An extended or other use of the device must be coordinated with the manufacturer in advance and approved by the manufacturer. The device must not be used in continuous operation (for example, serial production)!

In case of improper use of the cleaning device there is a risk to the health of the user or a third party as well as a deterioration of the device or other property and assets.

Requirements for the user personnel
The equipment may only be used by qualified personnel who, by virtue of their training, knowledge or experience, ensure proper handling and are aware of the dangers (for example, by reading the operating instructions).

Liability
The cleaning device is built according to the state of the art, tested and operationally safe. Liability for the functioning of the device is in any case attributable to the operator as far as the device is improperly maintained or repaired by persons who are not authorized by the manufacturer and / or supplier, or if a handling which does not correspond to the intended use is carried out. The user is obliged to operate the device only in perfect condition. The manufacturer is liable for errors or omissions - to the exclusion of further claims - only within the scope of the statutory warranty obligations. We reserve the right to make technical changes at any time with regard to the continuous development and improvement of our products. Such changes, mistakes and misprints do not constitute a claim for damages. Only original spare parts and accessories are to be used. The

manufacturer and / or supplier are not responsible for damage caused by ignoring the instructions in this operating manual. Warranty and liability conditions of the sales and delivery conditions of the manufacturer and / or supplier are not extended by the above notes.

Operating instructions

The operator of the cleaning device shall draw up an operating instructions in accordance with the German Occupational Safety and Health (BetrSichV). The operating instructions must be adapted to the cleaning medium used.

A usage not according to the intended purpose as well as unauthorized modifications exclude the liability of the manufacturer for any damages resulting from this and infringes European safety standards.

Read and follow this Instruction manual and the safety instructions carefully before commissioning!

3. Safety requirements

3.1 General security

The device is built according to the state of the art and is safe to operate. However, this does not mean that the consequences of all operational failures are protected by technical measures. Dangers can arise from this cleaning device if it is used unqualified or improperly. However, additional organizational measures have to be taken into account through certain workflows, such as the removal of residual paint from the gun.

- Read and observe the operating instructions for the cleaning unit as well as the safety instructions before commissioning.
- Keep the operating instructions in the vicinity of the device accessible.
- The unit may only be operated by trained personnel. Young people under the age of 18 may be employed only under the supervision of a specialist.

For some users hazard assessment activity restrictions may result, e.g. for persons with chronic respiratory problems or allergic diseases as well as for becoming or nursing mothers.

For the operation of the cleaning device, the safety and operating instructions are valid in all cases; these must be noticed and observed!

The following occupational safety provisions, rules and information (DGUV) have to be followed while using spray gun and part cleaning systems:

DGUV Provision 1	"Principles and prevention", general rules
DGUV Provision 9	"Safety and health protection warnings at the workplace"
DGUV Rule 109-002	"Safety rules for air pollution control systems for the workplace"
DGUV Information 211-010	"Security by operating instructions"
DGUV Information 213-060	" Avoidance of ignition from electrostatic charges"
DGUV Rule 109-010	" Guidelines for facilities for cleaning parts with solvents"
DGUV Rule 112-189	" Use of protective clothing"
DGUV Rule 112-192	"Use of eye and face protection"
DGUV Rule 112-195	"Use of protective gloves"
BetrSichV	" Ordinance on Industrial Safety"

The source documents (with exception of the " Ordinance on Industrial Safety") can be obtained from: Carl Heymann Verlag KG, Luxemburger Str. 449, D-50939 Köln, Germany.

3.2 Security checks

In order to meet the requirements of the DGUV regulation 109-010, there is the necessity to check the cleaning device for "safe working condition" before initial start-up as well as annually.

In the appendix of this operating manual, the "Safety test sheet" form is available for proof of regular safety tests. The form in connection with the tests to be carried out may only be carried out by qualified persons. Qualified persons are specialists who, due to their training and experience, are technically able to assess the working condition of a work equipment. For a specific definition of a qualified person, please refer to the definition of the operational safety ordinance BetrSichV.

3.3 Operational safety

Follow warnings and warning signs!

• Fire, open light and smoking prohibited!

• Open fires and other sources of ignition (eg grinders or welding points) are not allowed within a radius of 5 meters around the device. This applies e.g. also for lighting and fans as well as the associated electrical components.

• In all cases, the local safety and operating instructions are valid for the operation of the device. Accident prevention regulations must be followed and observed.

The device may only be operated if the integrated suction device (Venturi system with flexible exhaust hose) **is connected and the evolved (solvent) fumes are safely discharged to the outside in the free air stream in order to avoid fire, explosion and health hazards.**

Should the distance to be bridged exceed the length of the supplied exhaust air hose or should local requirements exclude the previously described exhaust air guidance, we recommend the inclusion of a specialist company for ventilation construction to ensure the correct operation of the device.

• Compliance with workplace exposure limits (AGW) according to safety data sheets must be documented.
• The limit values of the TA-air and their adherence must be observed.
• In the event of a fire, immediately interrupt the compressed air supply and close the cover of the device.

• If the device is not used, the device cover must always be closed for safety reasons.

Before commissioning, the earthing must be ensured via a sufficiently dimensioned earth cable (potential equalization)! The connection must be made by a specialist.

• The user has to ensure that nobody is in the danger area of the cleaning device.
• Use only permitted solvents / cleaning media (see chapter 4). These must be free of Halogenated hydrocarbons (CKW, CFC, TRI, PER, etc.).
• If water (e.g. with additives) is used as a cleaning medium, this must not be discharged into the sewer system.
• Take into account that the chosen cleaning medium is suitable for use and does not attack surface. Suitability shall be ensured by the operator in preliminary tests. The manufacturer and / or supplier does not assume any liability for damages caused by these tests.
• The safety data sheet of the cleaning medium must be observed.
• Use personal protective and chemical resistant protective equipment, e.g. face protection, protective gloves, protective aprons etc.

• Ensure that the clothing (especially the footwear) is adequately conductive
• Do not place the protective equipment on the device.
• If clothing has been wetted with solvent / cleaning medium, do not smoke in this area. Put off the contaminated clothing immediately. Risk of skin irritation, allergies, etc.
• Persons wearing moistened clothing must not be exposed to sources of ignition (e.g. welding). Risk of fire!
• Do not fill any additional cleaning media into the unit, as this may lead to a overflow of the barrel.
• Immediately collect spilled solvent (s) with suitable binders (blinding mica, kieselguhr, etc.) and dispose it of in accordance with regulations. The water resources law must be satisfied.
• Clean your hands before eating any food or drink. Danger of poisoning!
• Avoid inhalation of fumes and contact with the solvent / cleaning medium.
• Do not add any other liquids to the cleaning medium, such as kerosene, gasoline, chlorinated hydrocarbons, acids, alkalis.
• When changing the cleaning medium, all valid regulations (e.g. wastewater-regulations) must be observed!

3.4 Hazards from pneumatic energy

Only specialists with special knowledge and experience may work on pneumatic equipment. When working on pneumatic aggregates or elements, these must be made pressureless beforehand in order to prevent injury!
Prevent disconnected not pressurized compressed air supply lines from restarting. If the systems leaks, disconnect it from air supply and then tighten the screwed connections.

3.5 Excitation for operating instructions

Operating instructions are regulations that a company creates for safe operation. These are binding instructions issued by the entrepreneur within the framework of his management right. The employees are obligated to follow these instructions.

The general obligation of the entrepreneur to create and publish operating instructions is laid down in the Occupational Safety and Health Ordinance (BetrSichV), the water resources law (WHG) and, where applicable, the Ordinance on Hazardous Substances (GefStoffV). The present operating instructions are therefore to be complemented by national regulations on accident prevention (UVV) and environmental protection.

Give information to the employee about:

- the dangers involving the handling of contaminated parts and the solvents used, the necessary protective measures and behavior, including instructions in case of danger and first aid.
- Type and scope of periodic inspection for safe working condition of the device
- Environmental Protection
- Safe handling of the pneumatic system
- By means of instructions and controls, the user has to ensure cleanliness and clarity at the workplace of the device.
- The responsibility for operation must be clearly regulated by the user and must be complied by all persons, so that no unclear competences occur under the safety aspect.
- The operator has to undertake to operate the cleaning device only in perfect condition and to immediately notify its supervisor of any changes that affect safety and environmental protection.
- Observe all warnings and warning signs.
- The user has to ensure that no unauthorized persons are at the cleaning device.

It is prohibited to open the pump case in cleaning devices!
The manufacturer is not liable for any damage and/or secondary/following damage caused by opening the pump case on purpose or negligent opening.
If you got any problems with your pump device, please contact your distributor or the MARX support.

4. Approved Cleaning Agents

Only use solvents / cleaning media that meet the following specifications:

- Highly flammable liquids, hazard symbol „F“ / R 11 flashpoint < 21°C such as lacquer solvents, but excluding all "extremely flammable" fluids with a flash point under 21°C.
  GHS/CLP H 225 flashpoint < 23°C, boiling point > 35°C.
- Flammable liquids, hazard symbol - / R 10, flashpoint 21 – 55°C.
  GHS/CLP H 226 flashpoint 23 – 60°C.
- Non-flammable, aqueous cleaning agents (neutral or slightly alkaline pH) such as distilled water for water-soluble varnishes and paints.
- The machine ud-800 are classified as machine category 2, group II,
  machine type explosion group II B and can be used in zone 1.
  See also machine rating plate: **II 2 G c II B T6**

Acids are not permitted. Paint strippers or other additives (e.g. brake cleaners etc.) may must not be used in the washing unit.

Safety data sheets relevant to the products supplied should always be available on the premises. These will contain the information about the cleaning agents that you are using.

Never alternate the use of solvents and cleaning fluids (for water-based paints) in the same machine as this will damage it and void the warranty. Follow the manufacturer’s instructions at all times. Alternating the two types of cleaning agents can cause gas build up and explosions!

When changing from solvents to cleaning fluids for water-based paints (or vice-versa) the paint gun washer must be completely cleaned of paint, water and fluid residues.

Recommendation to reduce solvent consumption:
If the unit shall be connected to a continuously running exhaust when using solvent, we recommend the pneumatic exhaust damper to reduce solvent consumption.
See catalog no.: 10000348 / ATEX version.

5. Technical Description of the Cleaner

The universal washer "PWA 1000i" is produced for automatically cleaning spray paint guns. The automatic wash cycle is activated by a timer. In addition, there is a brush and a fresh solvent jet in the wash enclosure for cleaning objects or spray guns manually.

All models have a strong exhaust system that switches on and off automatically as soon as the hatch is opened or closed. All models are operated exclusively by pneumatic parts.

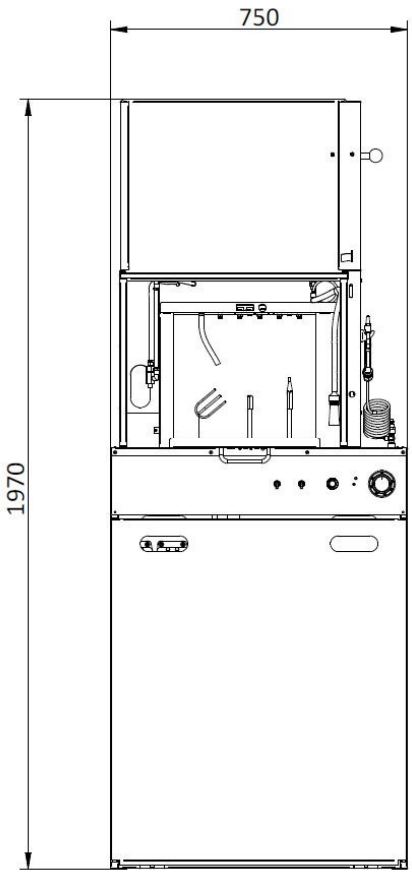
5.1 Technical Information

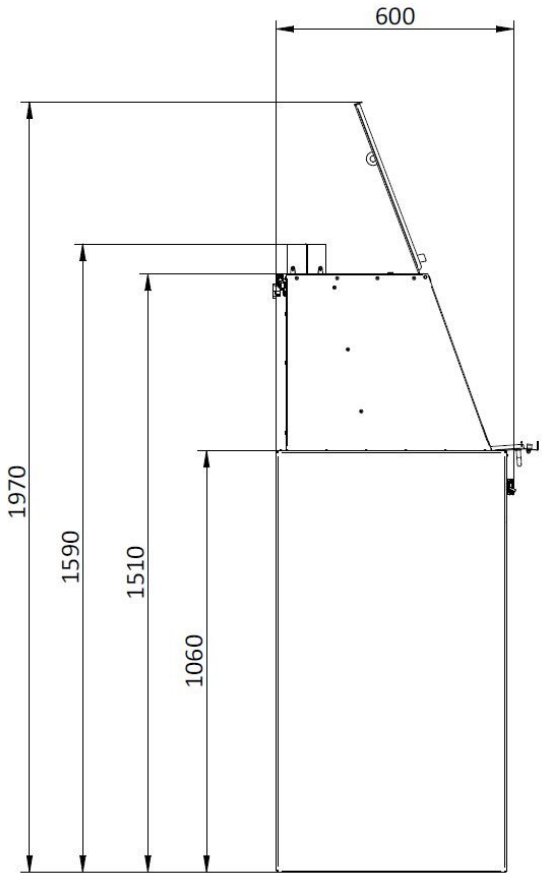
Compressed-air connection
Operating pressure*:* max. 6 bar

Acoustic emission
Average level of acoustic emission: 76 dB(A)

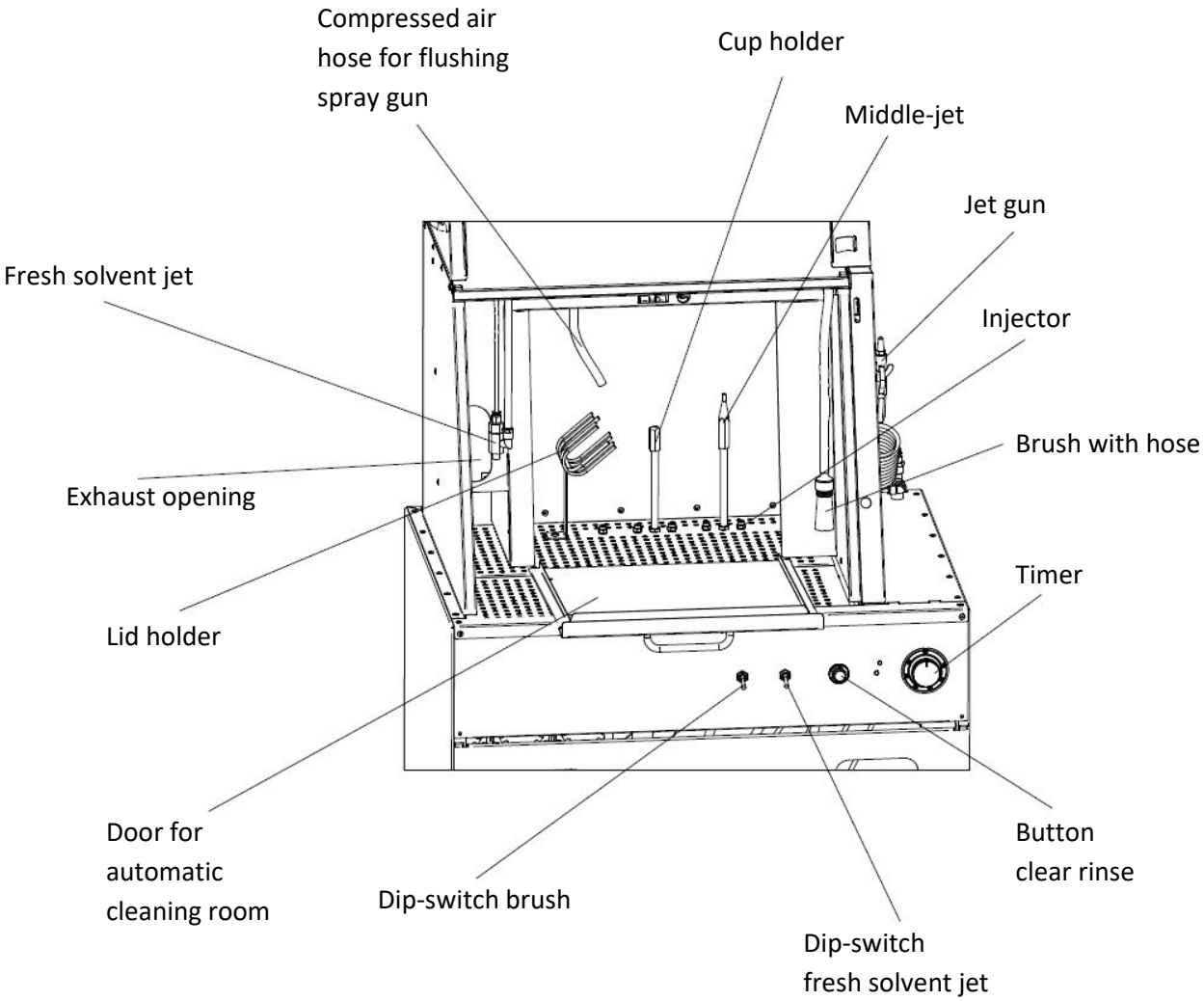
Total exhaust air flow rate:
At 6 bar 211 m³/h

Max. container size per side under the cleaning device:
Container size max. 60 l 1 pc. circulating solvent
Container size max. 30 l 1 pc. clean solvent





5.2 Details


Compressed air hose for flushing spray gun
Cup holder
Middle-jet
Jet gun
Fresh solvent jet
Injector
Brush with hose
Exhaust opening
Timer
Lid holder
Door for automatic cleaning room
Dip-switch brush
Button clear rinse
Dip-switch fresh solvent jet

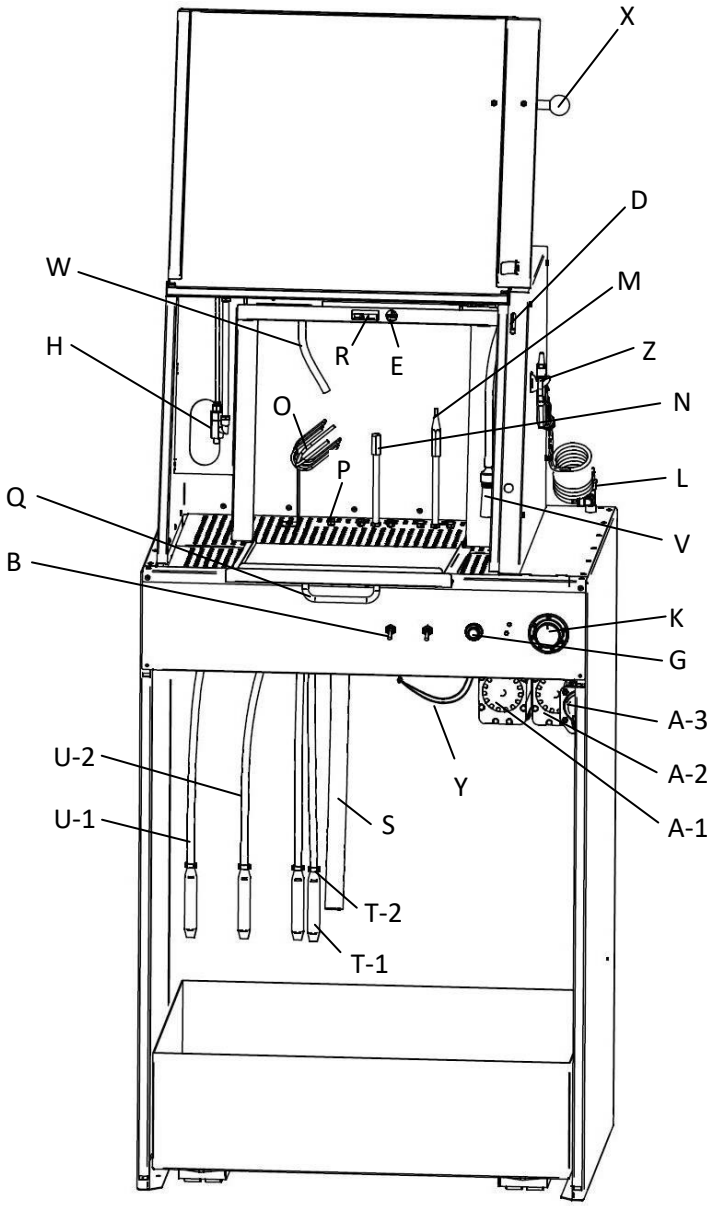
Flap

Clamp for spray gun

Clean solvent (transparent hose)

Circulating solvent (Grey and black hoses)

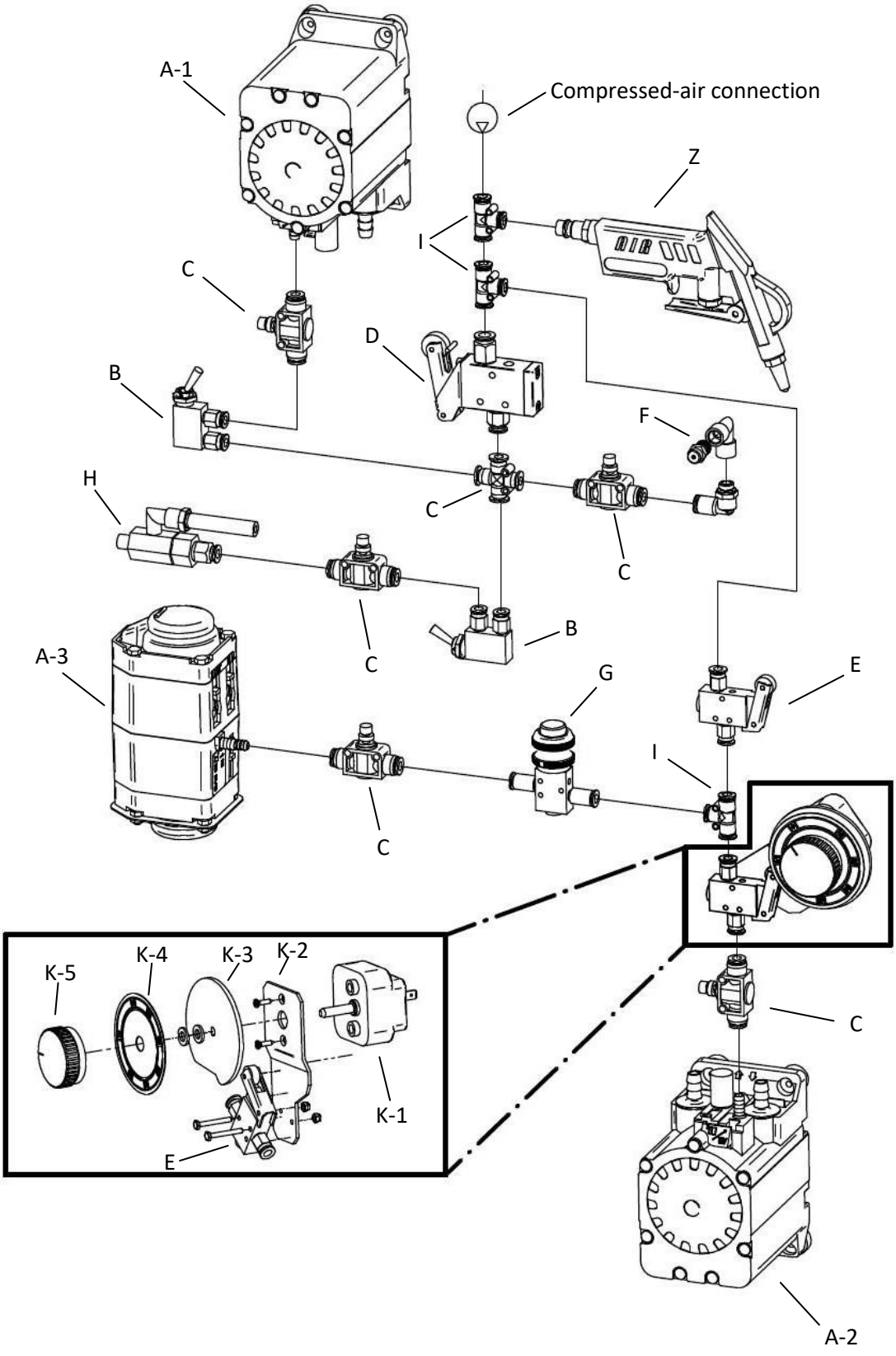
5.3 Part Names



A-1	-	Pump brush
A-2	-	Pump jet automatic
A-3	-	Pump rinse
B	-	Dip-switch
D	-	Role valve with connections
E	-	Role valve
G	-	Rinse button
H	-	Fresh solvent jet
K	-	Timer
L	-	Connecting plug compressed air
M	-	Middle-jet
N	-	Cup holder
O	-	Lid holder
P	-	Injector
Q	-	Chromed hand grip
R	-	Two ball snapper
S	-	Discharge hose
T-1	-	Intake-strainer
T-2	-	Strainer connecting clamp
U-1	-	Transparent intake hose clean solvent
U-2	-	Grey intake hose circulating solvent
V	-	Brush with hose
W	-	Compressed air hose for flushing spray gun
X	-	Ball knob
Y	-	Grounding cable
Z	-	Jet gun with short tube

- Spare parts ordering numbers on page 8 -

5.4 Pneumatic Plan



5.5 Spare Parts Ordering Numbers

A-1/2	-	Pump 1/4"	10000554
A-3	-	Clean rinse pump 1/8", with connctors	10000565
B	-	Dip-switch	10000589
C	-	Throttle valve	10000582
D	-	Roller valve, G1/8", for activation	10000620
E	-	Roller valve 3/2 ways M5, for timer, lifts, PWA 1000i flap	10000579
F	-	Draw-jet	10000415
G	-	Push button for automatic clean rinse, completely assembled incl. Connectors	10000414
H	-	Fresh solvent jet	10000419
I	-	T-connector	10000845
J	-	Cross connector	10000893
K-1	-	Timer, 6 min	10000444
K-2	-	Bracket	10000327
K-3	-	Switch-plate	10000328
K-4	-	Scale for timer	10000445
K-5	-	Timer knob	10000443
L	-	Connecting plug compressed air	10000908
M	-	Middle jet	10000420
N	-	Cup holder	10000418
O	-	Lid holder	10000439
P	-	Injector	10000429
Q	-	Chromed hand grip	10000461
R	-	Two ball snapper	10000467
S	-	Corrugated hose 25 x 28, black	10000658
T-1	-	Filter, stainless steel	10000473
T-2	-	Strainer connecting clamp	10000663
U-1	-	Corrugated hose 13 x 10, transparent	10000656
U-2	-	Corrugated hose 13 x 10, grey	10000655
V	-	Brush with hose	10000417
W	-	Corrugated hose 15 x 12, black	10000657
X	-	Ball knob	10000466
Y	-	Grounding cable	10000391
Z	-	Jet gun with short tube	10000446

6. Requirements for the Installation Site

This device is classified as machine category 2, group II, machine type explosion group II B and can be used in zone 1.

See also device type sign: **II 2 G c II B T6**

Safety regulations for the installation site of devices

The risk zoning around the cleaning machine and the possible creation of an explosion protection document is, in accordance with legal requirements, the operator´s obligation, because this division is inter alia depending on the solvents used and various conditions such as the ventilation. However, at this point the operator should be supported with general advice to comply with the obligation. Helpful advice can also be read at DGUV rule 113-001, DGUV rule 109-010 and also DIN EN 12921-1 and -3.

For example, in many cases the classification of the zones looks like this:

Zone 1 => The interior of the machine
Zone 2 => In periphery of 1,0 – 1,5 m

Identify the different zones with appropriate warning and prohibition signs. Marks at the floor can be helpful. In the area surrounding the unit, open flames and other ignition sources (e.g. welding or grinding equipment places) are not allowed. Similarly, smoking is prohibited. Temporary work with ignition must be approved in writing and appropriate additional safety precautions must be adhered to (remove all combustible materials, classification of a fire station,...).

Foundation, building

- Dry and protected from frost.
- Very well ventilated and means of ducting the exhaust fumes to an approved area.
- Follow the safety instructions about the site.
- Maintain the ambient temperatures (5° - 35°C / 41°F - 95°F) and do not expose the machine to direct sunlight, as this carries a risk of overheating.

Space requirement for operation and maintenance

The device can be placed or be mounted on a wall. In front of the device, there should be space of 1,5m.

- Horizontal and industrial floor
- Conductive industrial floor (max. conductive resistance 10^8 Ohm).
- Follow the safety instructions according to the zone designations (chapter 6.).

7. Transport and Installation

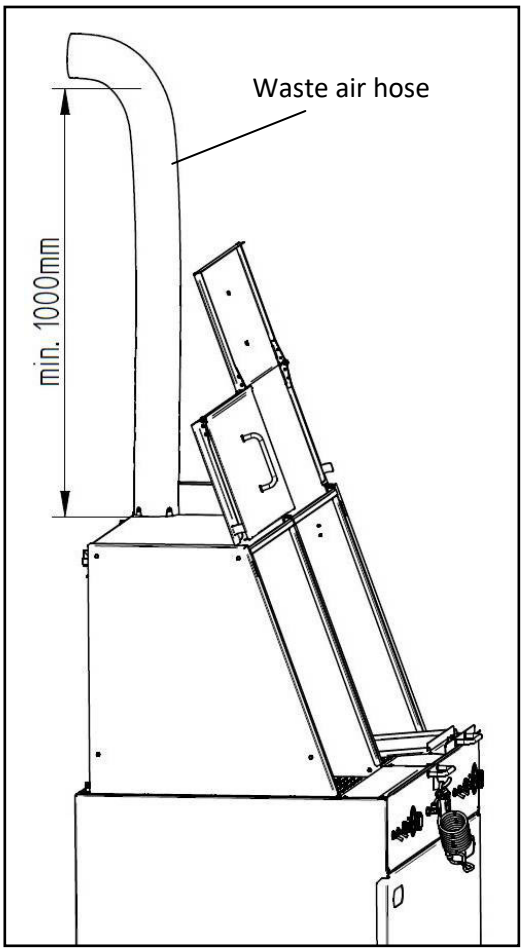
- The machine is delivered in carton.
- Take the machine out of the carton and bring it to the installation site.

7.1 Requirements to the Installation Site

- Dry and frost-free.
- Very well ventilated, force-ventilated, both supply and exhaust.
- Don´t position the machine close to heat sources.
- Follow the safety instructions about the site.
- Follow the safety instructions according to the zone designations (Page 12).
- Maintain the ambient temperatures (5° - 35°C / 41°F - 95°F) and do not expose the machine into direct sunlight, as this carries a risk of overheating.
- Horizontal, conductive industrial floor (max. discharge resistance 10^8 Ohm).

7.2 Connecting Exhaust

The waste air hose must lead outdoors or to an approved and tested extract system and the fumes discharged safely. Make absolutely sure that the exhaust hose is completely extended and runs at least 1m vertically so that the flow cross-section is not restricted. Ensure that the fumes are not led into areas where people are likely to be, into chimneys of furnaces or fireplaces and not into exhaust ducts of spraying and drying cabinets. Stretch the hose as far as possible in order to avoid a reduced flow cross-section. This is necessary in order to ensure that the exhaust system works well.
Connect the waste air hose with the hose clamp on the air exhaust connecting piece as shown in the adjacent figure.



Attention! Only use original B-TEC waste air hoses. Risk of fire if other hoses are used.

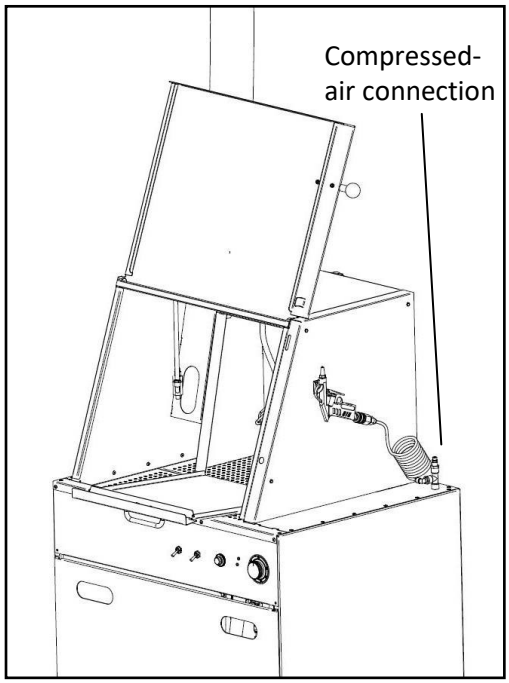
You can adjust the exhaust air flow at the throttles as needed for the length of the waste air hose.

7.3 Connecting Compressed-Air

One compressed air connection has to be provided by the plant, depending on the machine:

Operating pressure max. : 600 kPa (6 bar ; 87 psi)

Operating pressure min. : 500 kPa (5 bar ; 73 psi)



A pressure-regulating valve has to be used if the compressed air connections do not have the required operating pressures. **Use only dry and oil-free air!!**

7.5 Grounding/equipotential bonding

This machine should be earthed in accordance with appropriate local regulations using a separate earth cable.

There is an earth cable adjacent to the pump for the purpose of electrostatic earthing, for example to a metal water pipe. The cable must be grounded safely by a qualified person (e.g. electricians). **Customer-provided solvent tanks must be grounded separately!**

After proper installation as described above, the machine can be put into operation.

8. Operating Instructions

To use this cleaning device, you have to read the operating manual first! A commissioning without attention of the operation manual can cause damage to persons, objects and the environment. Please wear personal protective equipment → 3.3 Safety Precautions

- Fire and ignition sources are not allowed in an area of 5m around the device (such as grinding machines or welding plates). Smoking is also forbidden!
- Please mark areas which are vulnerable to flames with appropriate signs.
- Compressed air supply has to be guaranteed.

The following solvent drums are required:
1 x 60 liters drum filled with 30 liters and 1 x 30 liters drum filled with 30 liters.

8.1 Commissioning

1. Remove the front cover of the machine and position the drums as shown on page 5.
2. Insert the black discharge hose (∅ 23) and grey intake hose into the 60 l drum, which is provided for contaminant dilution and circulating material. Insert the transparent intake hoses into the 30 l drum provided for fresh thinner and material.
3. Replace the front cover of the machine.
   Now, the cleaning device is ready to work.

8.2 Operational Procedure

Working with the manual side of the machine (cf. pages 4f)
Open the door. The exhaust starts automatically. Activate the pump of the brush with the toggle switch labeled **„Brush“**. Circulating solvent flows out of the brush. The output can be adjusted with a pressure reducing regulator that is located in front of the pump. Activate the pump of the spray jet with the **toggle switch labeled „fresh Jet“.** Fresh solvent flows out of the spray jet (30 liters drum). You can adjust the output at the throttles as needed with the black throttle valve behind the operating panel.

When the manual cleaning area is not longer in use, switch it off and close the door. The exhaust stops automatically.

With the jet gun, positioned at the front of the machine, you can dry objects or spray guns. If you unclamp the compressed-air quick connect, you can substitute the jet gun by the cleaned spray gun and exhaust it in the exhaust opening.

Working with the automatic side of the machine (cf. pages 4f)

Open the hinged door. The exhaust system starts automatically. Then install the gun as described below:

1. Remove the lid of spray gun and place it in the lid holder. Make certain that the paint-soiled inner surface faces downwards → towards the interior of the washer.

2. Place the spray gun, with the cup, on the center nozzle upside down with the paint channel. If a strainer is used in the spray gun, then the cup needs to be unscrewed. Place the cup upside down on the cup holder. Remove the screen filter from the spray gun, and place on one of the tines of the cover holder. Next, place the spray gun upside down on the center nozzle.

3. The spray gun trigger is pulled back with the trigger clamp located in the washing chamber. This ensures that solvent flows through the paint channel of the spray gun. In addition, it is necessary to ensure that the set screw is in "opened"-position so that the air flow is possible.

4. Connect black compressed air hose to the connection on the spray gun.
This ensures that air is forced into the air channels of the spray gun during the cleaning process and that solvent and paint residues are prevented from entering.

5. Close the hinged door from the gun-cleaner. **Do not allow the doors or hatches on the machine to fall shut. All machine doors and hatches must be operated with appropriate care and caution by the user.**

Do not open the door while automatic washing cycle is running. If necessary, turn the timer to "0".

6. Set timer for 2-3 minutes. The main cleaning cycle is activated. Solvent is drawn from the 60 liters drum and circulates. The timer can be reset to zero by hand. When the set time is over, open the hinged door slowly and check the cleaning result.

7. Since the solvent is circulated when the timer is used, it will be heavily contaminated after a certain period. If a paint film remains on the spray gun after the main cleaning cycle, the gun has to be cleaned manually using the fresh solvent jet.

8. For automatic rinsing, close the door again and press and hold the rinse button (red button) for 3-4 seconds. Thinner is drawn from the 30 l drum on the left side. The spray gun is rinsed on the inside and outside with fresh thinner.

9. Open the door to the automatic cleaning chamber and dry the spray gun with the cup and cover in their mounting brackets. Use the jet gun for this procedure.

10. The spray gun is clean. Reassemble and bring it back into production.

Clean the spray gun as soon as possible after the painting process.

Before insert the spray gun, unscrew the cover from the cup and empty out the remaining paint into a collecting container. For example the residue collecting station RST-01.
The more thoroughly the cup is emptied, the longer the solvent or cleaner can be used.

If you follow these process steps, you will have an optimal cleaning result.

8.3 Adjusting Facilities

Slightly above the pumps are color-coded throttle-valves for following adjusting:

- Green: Brush
- Blue: Clear rinse
- Red: Jet automatic (After Y-connector explicitly adjusting of the hose for flushing spray guns.)

On the right side inside the housing, there is one more throttle valve to adjust the fresh solvent jet.

The brush may only be used as intended.
It shall never face towards the operator.

Unnecessary dry-run oft the pumps should be avoided!

Do not open the device cover while it is running in automatic mode! If necessary move the timer to “0”.

Following these steps will ensure optimal cleaning results and long machine life.

9. Care and Maintenance

The machine hast to be disconnected from the compressed air supply during cleaning and maintenance!

9.1 Maintenance of the Machine

- We recommend cleaning the stainless steel filter on the intake hose at regular intervals (at least at every solvent/fluid change.) → if the filter is defective, it must be replaced immediately. Defective filters either have heavy paint buildup, causing clogging of the filter surface, or, the filter has a breach that allows contaminated solvent to be drawn in by the pump, which can damage the pump or clog the washing nozzle.
- Clean the perforated stainless steel grates and the interior walls of the machine at regular intervals. Remove any residues from the drain pans under the grids to ensure rapid solvent run-off.
- It is recommended to use each function of the device shortly at least once a day in order to avoid drying of the membranes inside the pumps and keeping the jets clean.
- **When the machines are not to be operated for a longer period of time (for example during vacations) a clear rinse should be used after the final cleaning cycle so that the jets will not be clogged with heavily contaminated solvent. In the unlikely event that the cleaning jets do become blocked, then they can be easily unscrewed from the machine and cleaned separately in neat solvent or cleaning solution and then re-fitted to the machine. Replacement jets are available as spare parts.**
- The operating permission will expire, if other than original B-TEC spare parts are used.

Customer service: Contact your dealer, or directly:

Uwe Marx Oberflächentechnik GmbH
Friedrichsgaber Weg 390
D-22846 Norderstedt
Tel.: ++49(0)40-5281159
Fax: ++49(0)40-5231959
Email: info@marx-spritzgeraete.de
www.marx-spritzgeraete.de

9.2 Disposal

- If the machine shall be disposed of, please contact Fa. MARX or your dealer and request an appropriate quotation or the requirements for proper disposal.

- The machine must not be disposed of as standard household waste. Depending on the level of contamination, it has to be handled as hazardous waste. Consult your local authorities as needed.

10. Safety Inspection Checklist

Please make copies before filling out for the first time!

Safety inspections must be conducted at least once a year!
Audit according to § 14 paragraph 2+3 Betriebssicherheitsverordnung (BetrSichV) in correlation to DGUV 109-010

Model: _____
Serial-no.:_____
Construction year:_____
Location determination: _____

Item checked	OK	Missing or faulty	Rechecked
1. Operating instruction			
2. Identification plate			
3. Warning signs			
4. Condition of fluid hoses*			
5. Condition of compressed air hoses*			
6. Clean intake filters			
7. Check washer cabinet for leaks			
8. Function test of all control elements			
9. Grounding of the gun cleaner			
10. Function test of exhaust			

* Check for brittleness etc.

Result of the safety inspection

☐ No faults, can be operated without restrictions.

☐ Restricted operation, faults to be fixed by _____.

☐ Operation not permitted, Re-inspection necessary.

_____ _____

Signed by qualified person Signed by operator