

# Operating manual for Industrial exhaustion FRANK IVU 3.0 AUTOMATIC



*manual for Use and Maintenance*



**Before commissioning the manual  
Read the sucker and be aware!**

## Preface

This manual provides all the information required for the use and maintenance of your wet and dry vacuum. Correct operation and long life depend on the good maintenance and proper use of the vacuum cleaner.

This specific model has been subjected before it leaves our factory to strict acceptance inspection to ensure maximum reliability. Nevertheless, the cleaner transport damage to its structure must be checked, because these operating and safety could affect.

This manual is an important part of the nipple and needs until its decommissioning remain with him.

In case of loss or damage please ask at FRANK on a replacement manual.

The technical information in this manual are the property of FRANK and are considered to be confidential.

The total or partial reproduction of graphic design, texts and illustrations is prohibited by law.

Some details in the images in this guide may differ from your vacuum cleaner, and certain components may not appear in the illustrations for simplicity.

This manual is divided into different labeled with certain graphic symbols chapter to help the reader to consult.

The treated in the manual subjects meet the requirements of the "Machinery Directive 2006/42/EC", and specifications shown are based on information supplied by the manufacturer in the drafting.

This manual is stored in the entire staff for operation and maintenance accessible place.

Please try in doubt not to be interpreted, but contact by telephone to your service.

***The manual must stay with a sale when suckers!***

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1.1 Identifying the key components



1. suction unit
2. hook closure
3. push bar
4. Connection spigot for intake manifold
5. filter chamber
6. level indicator
7. temperature sensor
8. Solenoid valve for water supply
9. drain pump
10. Demister for splashing and filter cartridges

**1.2 Manufacturer data**

**FRANK**

Hochdruck- & Dampftechnologie GmbH

Bochumer Straße 15

57234 Wilnsdorf

Tel. +49 (0) 2739.47993.0

Fax +49 (0) 2739.47993.55

[www.frank-hdr.de](http://www.frank-hdr.de)

[info@frank-hdr.de](mailto:info@frank-hdr.de)

**1.3 Data shield**

In accordance with the **Machinery Directive 2006/42/EC** data signs are mounted with CE symbol on the suckers.

In communications to the manufacturer or distributor, please be sure to provide the data listed on the data plate of your wet and dry vacuum.

<b>motor</b>		<b>phase</b>	<b>S / N</b>	
<b>grade</b>		<b>Year</b>		
<b>Kg</b>	<b>I.Cl.</b>	<b>Duty</b>	<b>cos<math>\varphi</math></b>	<b>IP</b>
<b>volt (<math>\Delta</math>/ Y)</b>	<b>Hz</b>	<b>kW</b>	<b>A (<math>\Delta</math>/ Y)</b>	<b>rpm</b>

### 1.4 Intended use

This specific vacuum cleaner models were exclusively for vacuuming wet steam, dust and solid waste designed with the help of the provided filters, built and provided with protective devices.

#### **Attention!**



**Always use the filters specified for the dusts or waste to be absorbed**

Any other use is regarded as improper.

The vacuum cleaner is intended for professional use in industry.

### 1.5 Ambient conditions

To ensure the proper operation of the vacuum cleaner from the elements (rain, hail, snow, fog, floating dust, etc.) must be protected, are placed below 70% at an operating temperature between 5 ° C and 45 ° C and a relative humidity.

The workplace must be clean, adequately lit and free from explosive or deflagration atmosphere.

### 1.6 Noise

The measurements of the sound pressure level were carried out in accordance with the standards **2006/42/EC**. The continuous sound pressure level of this specific wet and dry vacuum model is:

**75 dB (A)**

The hand-arm vibration during operation of the vacuum cleaner is lower than 2.5 m/sec.

### 1.7 Storage

Remove and clean the filter, empty the container and store the vacuum cleaner in a place protected from atmospheric agents place with a temperature of 0° C to 40° C. Do not cover it with a nylon cloth in order to prevent dust accumulation.

**1.8 Decommissioning**

In a decommissioning, all parts of the vacuum cleaner in accordance with applicable legal provisions have to be handed over to the approved assembly. For this purpose, the plastic and rubber parts must be disconnected from electrical equipment.

Everything made entirely of plastic, aluminum, steel components can be handed over for recycling to the appropriate collection.

**1.9 Technical specification**

		FRANK IVU 3.0 AUTOMATIC
<b>power</b>	<b>kW</b>	3.0
<b>tension</b>	<b>volt</b>	400 / 50Hz
<b>number of revolutions</b>	<b>min-1</b>	2,800
<b>admission</b>	<b>A</b>	6.8
<b>protection</b>		IP55
<b>negative pressure</b>	<b>mbar max.</b>	260/340
<b>air flow</b>	<b>m<sup>3</sup> / h</b>	330
<b>SPL</b>	<b>dB (A)</b>	75
<b>filter</b>		3
<b>filter surface</b>	<b>cm<sup>2</sup></b>	3,000
<b>capacity</b>	<b>lt.</b>	100
<b>suction port</b>	<b>∅</b>	80

### 1.10 Guarantee

FRANK makes this sucker model a 12-month warranty from the purchase date shown on the invoice of the dealer.

The warranty does not apply repairs by unauthorized personnel or using non-supplied by FRANK or approved or recommended equipment or accessories. The same applies for removal or alteration of the serial number during the warranty period.

FRANK committed for the duration of the warranty period to correct manufacturing defects through repair or replacement of the defective part. Repairs are carried out exclusively at our plant or in the service center specified by us. The device is us this free deliver (transport costs to the operator's expense, unless otherwise agreed).

The warranty does not include the cleaning of the operating system.

Inconclusive attributable to materials or workmanship defects are strictly tested in our factory or one specified by us service center. If the complaint is unjustified, all costs for repair and / or replacement of parts the buyer will be charged.

Proof of purchase must be submitted to the competent technical personnel for repair or enclosed with the sent in for repair vacuum cleaners.

The warranty shall be excluded in any case: unforeseen and transport damage, damage caused by neglect, misuse or failure to observe the instructions given in this document and not with the normal use or operation of the device-related operations.

FRANK disclaims all liability for damage or injury due to improper use of the vacuum cleaner.

The manufacturer accepts no liability in the following cases:

- **Failure to follow directions**
- **Use of other than original spare parts**
- **Lack of maintenance of the appliance.**



## 1.11 CE - Declaration of Conformity



EG-Konformitätserklärung nach Maschinenrichtlinie  
2006/42/EG Anhang II 1.A



Der Hersteller/Inverkehrbringer: **Frank**  
Hochdruck- & Dampftechnologie GmbH  
Bochumer Straße 15  
57234 Wilnsdorf

erklärt hiermit, dass folgendes **Produkt**

Produktbezeichnung      Dampfabscheider      Hersteller:      EVO-Products Blankenburg GmbH  
Serien-/Typenbezeichnung:      053-0045      Dieselstraße 3, 53424 Remagen

**Beschreibung:**

Maschine zur Absaugung von Trockendampf.

Folgende weitere **EU-Richtlinien** wurden angewandt:

Maschinenrichtlinie	2006/42/EG
EMV-Richtlinie	2004/108/EG

Folgende harmonisierte **Normen** wurden angewandt:

- EN ISO 14120: 2016-05      Sicherheit von Maschinen - Trennende Schutzeinrichtungen – Allgemeine Anforderungen an Gestaltung und Bau von feststehenden und beweglichen trennenden Schutzeinrichtungen (ISO 14120:2015)
- EN 60335-2-69:2010-01:      Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-69: Besondere Anforderungen für Staub- und Wasserauger einschließlich kraftbetriebener Bürsten für den gewerblichen Gebrauch
- EN 60335-2-69/A1:      Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-69: Besondere Anforderungen für Staub- und Wasserauger einschließlich kraftbetriebener Bürsten für den gewerblichen Gebrauch
- EN ISO 3744 2011-02:      Akustik - Bestimmung der Schalleistungs- und Schallenergiepegel von Geräuschquellen aus Schalldruckmessungen - Hüllflächenverfahren der Genauigkeitsklasse 2 für ein im Wesentlichen freies Schallfeld über einer reflektierenden Ebene (ISO 3744:2010)

Name und Anschrift der Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen:  
Gojani Agron  
Bochumer Straße 15  
57234 Wilnsdorf

Ort:      57234 Wilnsdorf  
Datum:      10.04.2018

Samir El-Assal (Geschäftsführer)

### 2.1 Safety instructions

The security officer is obliged to inform the workers about the hazards associated with the use of wet and dry vacuum cleaner.

Workers must also be sufficiently adapted to their own health and to protect the other appropriate.

Ignoring the basic safety rules and precautions can lead to accidents when operating, maintenance and repair of the sucker. Accidents can often be prevented just by looking recognizing potentially hazardous situations. The operator must pay attention to potential hazards and have the necessary for correct execution of the work training, expertise and equipment.

FRANK is not liable for accidents or damage arising as a result of the cleaner use by insufficiently trained personnel, improper use or non-observance of safety rules and operating instructions in this manual.

The precautions and instructions are given in this manual and on the product, itself. If these dangers are not observed, the operator accidents with serious consequences for themselves and others may suffer.

The hazards are highlighted by the following symbols:

***Attention!***



***These notes can cause damage to the operator to non-compliance.***



***Note!***

***These notes can cause damage to the vacuum cleaner if not avoided.***

FRANK is not capable of any circumstances, which could lead to a potentially hazardous situation, foresee.

The facts in this manual and on the product indications are therefore not exhaustive. If not used explicitly recommended by FRANK equipment or techniques, the operator must ensure that no danger to themselves or others is.

***Please use only original spare parts for FRANK.***

***FRANK disclaims any liability for the use of other than original spare parts.***

## 2.2 Safety

### **Attention!**

**The following information can not completely against all possible dangers that may arise when using the wet and dry vacuum cleaner, protect. The operator must bring especially reason and experience, the only indispensable measures for accident prevention. In all the chapters, more specific safety requirements for the various tasks to be performed.**



**Before any maintenance operation the plug out of the socket must be deducted.**

The employer is obliged to inform the operator in accordance with applicable laws and regulations, train and instruct.

Prepare yourself sufficiently before you start to work with this machine. Read this manual carefully. Not trained or unauthorized persons are prohibited from using this machine.

Absorbing toxic substances is strictly prohibited unless the machine is not equipped with special filters to be requested for the specific type of dust.

Suck on any flammable or explosive substances (fuels, solvents, etc.). To record these materials, the machine must be built with an explicitly be requested Explosion protection for motors and electrical equipment.

Do not use corrosive substances to the extent that the machine does not have container has (AISI 304).

We advise against the use of the device without the included filters necessarily from.

With proper filter assembly, cannot come to the ejected objects.

If the machine is used for picking up toxic / harmful substances, the emptying of the container and clean the filter using an adequate personal protective equipment must be carried out, which is to be determined by the operator based on the treated fabrics.

Do not place anything on top of the protective casing.

## ***Chapter safety***

The engine cover that contains moving parts, must not be removed by the operator.

When use on third persons and particularly children.

Move the machine carefully on slopes and ramps. Do not turn on slopes.

Make sure that the machine remains parked in a stable position by activating the wheel brake.

During the cleaning, maintenance and replacement of parts of the start switch must be issued and the machine to be separated by removing the power plug from the mains.

Repairs may only be performed by professionals.

When use it, not to squeeze the cord or tearing.

Regularly inspect the cord for damage.

If the cable is damaged, the machine must not be used.

Ensure the replacement of cables, connectors, connections to protect against splashes of water and mechanical resistance.

It is forbidden to move the machine by pulling on the electrical cable or the suction tube.

Replacing the motor brushes or blown fuses must be done by FRANK or authorized service centers using original spare parts.

The disposal of the substances included is up to the operator and should be in accordance with the applicable rules.

Should the customer at the suction mount a not supplied by FRANK device is to check if the safety requirements are met in accordance with the Machinery Directive 2006/42 / EC FRANK accepts in such cases, any liability for accidents due to the use of such accessory.

The vacuum cleaner must not be used in corrosive or explosive environment.

## **Chapter safety**

Keep foreign objects such as dirt, oil, working tools and other counter-employed from the sucker away, as they interfere with its operation and could cause personal injury.

Avoid prolonged contact with solvents and inhaling its vapors. Avoid the use of these agents in the vicinity of open flame or heat source.

Use the vacuum cleaner never without filter.

Suck on any burning cigarette butts. You could damage the filter.

Suck on petrol or flammable liquids in general.

Ensure that all protective covers are in place and all safety devices are present and functional.

Do not wear torn, open or loose items of clothing such as neckties and scarves, catch or could be drawn from the teat.

Do not open the collection with running vacuum cleaner.

The manual must be always at hand to consult it in case of doubt, to check the correct working process can.

Should this manual be lost or damaged, please apply to FRANK to spare.

Structural damage, modification, tampering or improper repairs may affect the safety of the sucker!

Change operations must be carried out by technicians of the company FRANK.

"MACHINE MAINTENANCE - NOT START" during maintenance operations on the sucker a sign with the words must be attached.

The upgrade to the vacuum cleaner is prohibited.

Do not touch any electrical cables, switches, buttons, etc. with wet hands.

Before making the electrical connection, make sure that terminal voltage and - match frequency with the specifications on the data plate of the machine.

Connect the device to a network with effective grounding.

If you are using an extension ensures that this is provided in perfect condition and with the CE mark and has a value suitable for the current drawn by the suction section.

When restoring the original operating conditions the staff after the work has to verify that the normal security features of the cleaner are given again. This is especially true for affected from engaging guards and covers.

The use of the vacuum cleaner is only adults allowed.

Block the suction during use always use the provided wheel lock.

### 2.3 Signs and symbols

On sucker signs with symbols and / or warnings are attached.



#### **Attention!**

***Make sure that all safety precautions are legible.  
Clean them with a cloth, water and soap. Avoid the use of  
solvents, petroleum or gasoline.***



#### **Attention!**

***Read the manual for use and maintenance instructions  
carefully before using the vacuum cleaner or perform  
maintenance operations***



#### **Attention!**

***During insertion and locking of the waste at the sucker trap  
your upper limbs.***

***Run when locking a never hands between waste container  
and teat.***

***Never perform when locking hands in the sides of the  
container close to the guide pin a.***

***Lock the container WITH BOTH HANDS to the side-mounted  
levers!***

## **2.4 Residual hazards**

The manufacturer recommends the unconditional and precise compliance with the instructions, procedures and instructions contained in this document and the applicable safety regulations, including the use of personal protective equipment and safety devices of the sucker.

Possible hazards arising from the suction residual hazards could be:

### ***Risk of misuse at presence of deflagration or flammable substances.***

The vacuum cleaner must not be used in environments containing liquid substances which can evaporate at ambient temperature, as well as inflammatory dusts or gases.

### ***Danger operation in a humid environment.***

Note the limit values set out in this manual in section 1.6 Permitted ambient conditions.

### ***Danger of false interpretation of safety pictograms.***

Due to the existing risks, the manufacturer has installed on the suction hazards in accordance with the requirements of the graphic symbols to be used. The operator is obliged to replace worn or damaged illegible hazards immediately.



#### ***Attention!***

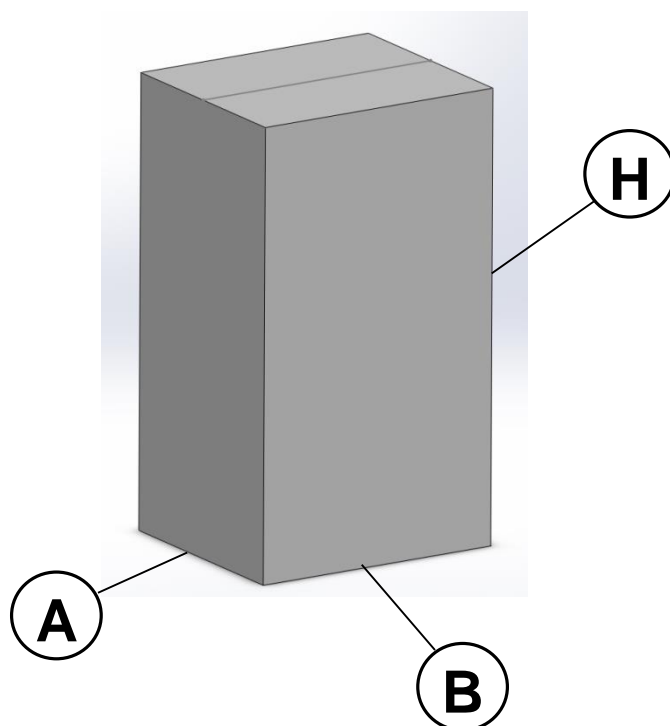
***It is strictly forbidden to remove the hazards from the sucker. The manufacturer disclaims any responsibility for the safety of the sucker to non-compliance with this prohibition.***

## **2.5 Applicable standards**

The wet and dry vacuum described in this manual conforms to the requirements of the following guidelines:

- **2006/42 / EC**                    **Machinery Directive**
- **2004/108 / EC**                **Directive on the electromechanical compatibility**
- **2006/95 / EC**                 **Low Voltage Directive**

3.1 Handling



FRANK IVU 3.0 AUTOMATIC			
A (cm)	B (cm)	H (cm)	Weight (with packaging) kg
85	125	180	125

The machine is supplied in a strong secured with strapping cardboard.

Transporting the packaging with a pallet with appropriate carrying capacity. Check stability and position of the weight on the forks.

Keep the load during the movement for greater stability and security as low as possible.

Use for converting the teat after its commissioning the supplied wheels.

It is explicitly forbidden to implement the device with the aid of a lift truck or other lifting by lifting from the floor.



Should it be necessary for any reason to raise the suction and transport, this work is carried out under the responsibility of the executive staff. The load should therefore be secured appropriately to perform the work safely.

### 3.2 Installation



**Attention!**  
**Before you begin the installation of the nipple, is to carry out a thorough visual inspection to determine possible transport damage.**

Should one or more parts have damage, observe the installation should be discontinued and the manufacturer will be informed of any irregularities. It is then concluded an agreement for the further procedure.

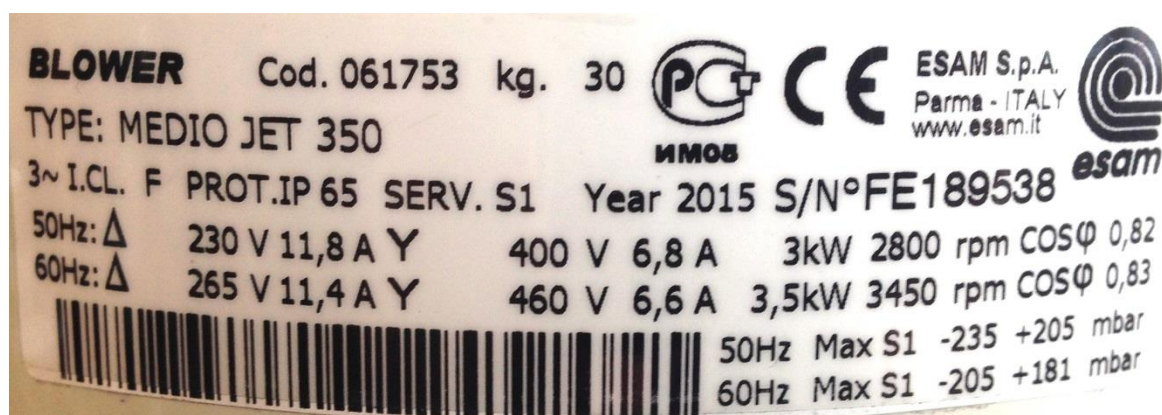
On Sucker an intake filter is already mounted.

Plug the supplied connector into the socket.



## Chapter installation

Verify that the power cable of the listed on the data plate of the cleaner voltage and frequency.

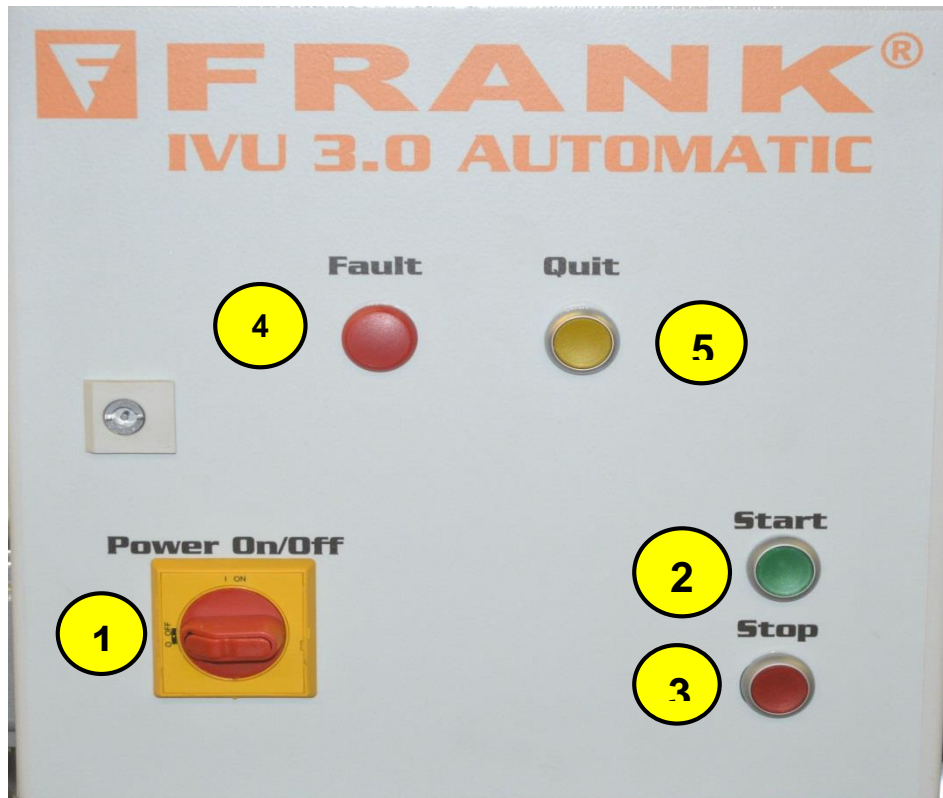


**Attention!**  
**Do not plug in the power cord with wet hands.**

If you are using an extension ensures that this is provided in perfect condition and with the CE mark and has a value suitable for the current drawn by the suction section.

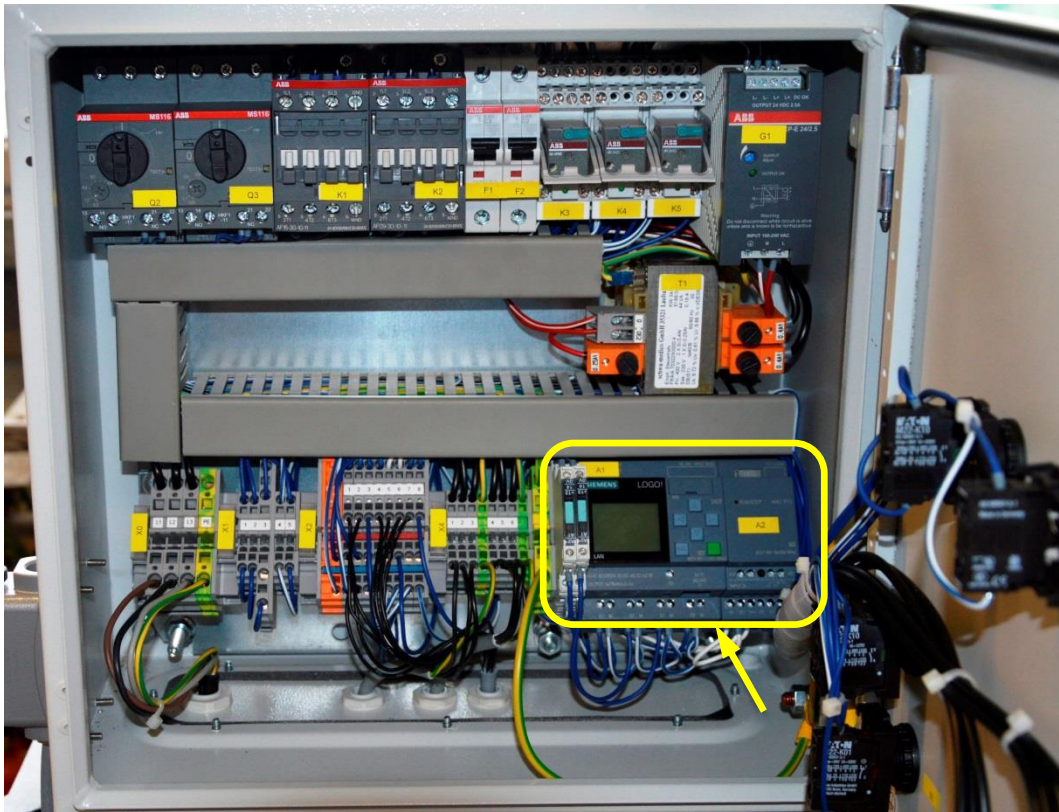
4.1 Description of control

Arrangement on the control panel:



1. Main ON / OFF switch (power on / off)
2. Start (turn on the vacuum cleaner)
3. Stop (off the sucker)
4. Indicator light fault (fault indication)
5. Acknowledge fault (acknowledge an error processed)

***Pedestal Interior and setting option in the PLC:***



In the PLC, can by the operator of the test, the threshold for the Temperature of the water supply set in the container and the Emptying the pump to be started manually.

A notebook has a to configure the PLC be connected network cable.

Thereafter, any Internet - browser open.

In address bar the following IP - Enter address:

**//192.168.0.2**

## 1. Log in the PLC menu:



Password: **Frank**

Then in the left navigation LOGO! Select BM when the plant is in operation (suction ON), the following screen displayed:

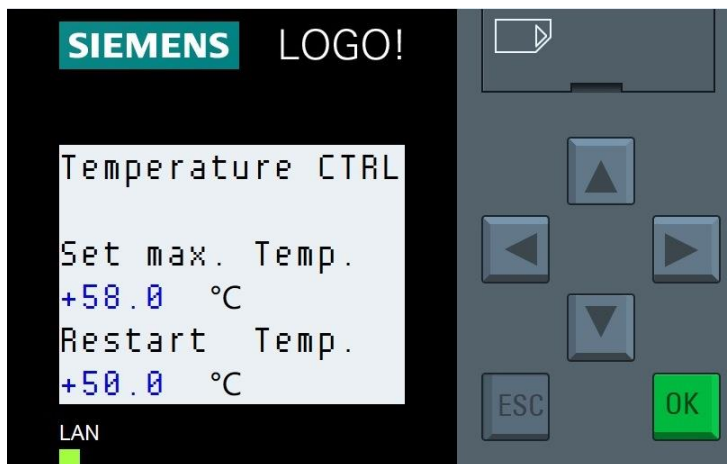


to order but perform parameter changes must its operating status to STOP (OFF sucker).

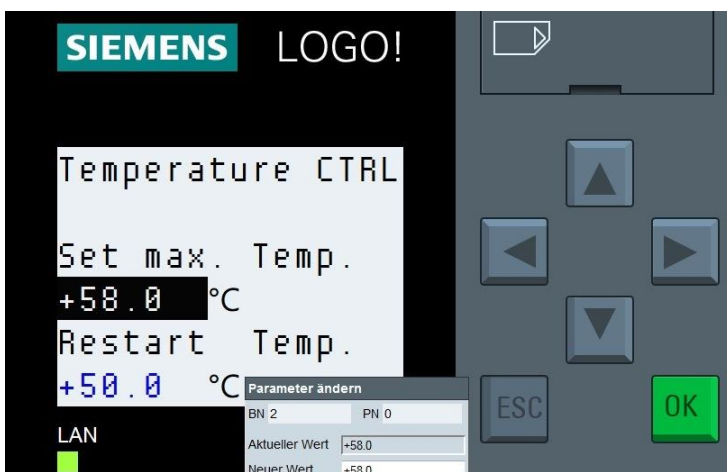
## 2. Getting into the temperature setting menu:



To activate the cursor keys out the ESC - button Tap, then by clicking on the left cursor (left arrow) one reaches the temperature setting.



Double-click on the displayed values, you can change this.



newly entered value Enter / Return confirm!

Start the system again on START - button on the control panel!

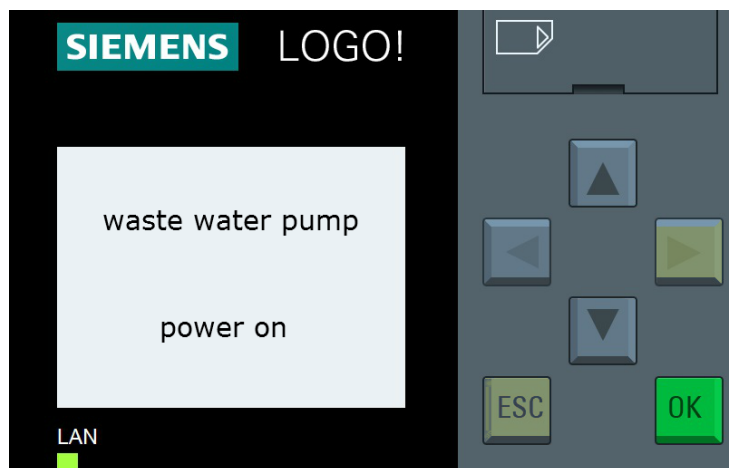
3. Manual emptying of the water tank:

For this function the vacuum cleaner is in STOP mode must be (suction from)!

Displayed on the display of the PLC, the date and time, reached one by pressing the cursor left - button (left arrow) the last Hand menu. Here the cursors are virtually displayed.

By holding down the ESC - key + right Left Cursor - button (right arrow) activated

If the clearance work of the water automatically to the bottom level



## 4.2 Work process



**Attention!**

**Make sure before plugging the power cord, that the supply voltage corresponds to the specifications on the data plate CE.**

- Make sure that the power plug is properly seated in the socket.
- Make sure is that the hose plugged in and locked in the provided spigots.
- Make sure that the power cord and the extension may be used in perfect condition and fully functional are.
- Block the suction using the provided hard disk.





Help yourself to move the sucker provided strap.



**Attention!**  
**Avoid while sucking a rolling or bending of the tube.**

### 4.3 Release and removal of the container

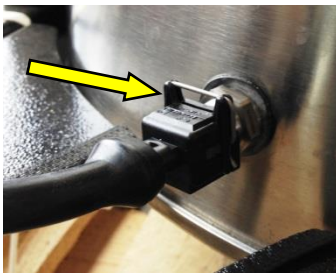
Turn the suction motor on the control panel with the stop switch off.



**Attention!**  
**Disconnect the power plug from the socket.**

**Before removing the container you should disconnect the connecting cable from the temperature sensor and level indicators. Unscrew the hose of the water supply to the solenoid valve and remove the hose from the drain pump!**

Temperature sensor:



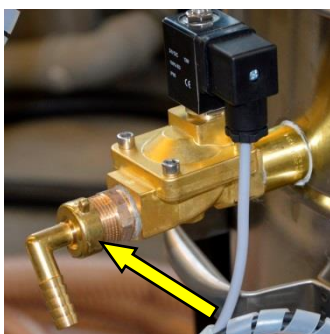
Before removing the plug of the sensor, pull the clamp on the plug on

Level indicator:



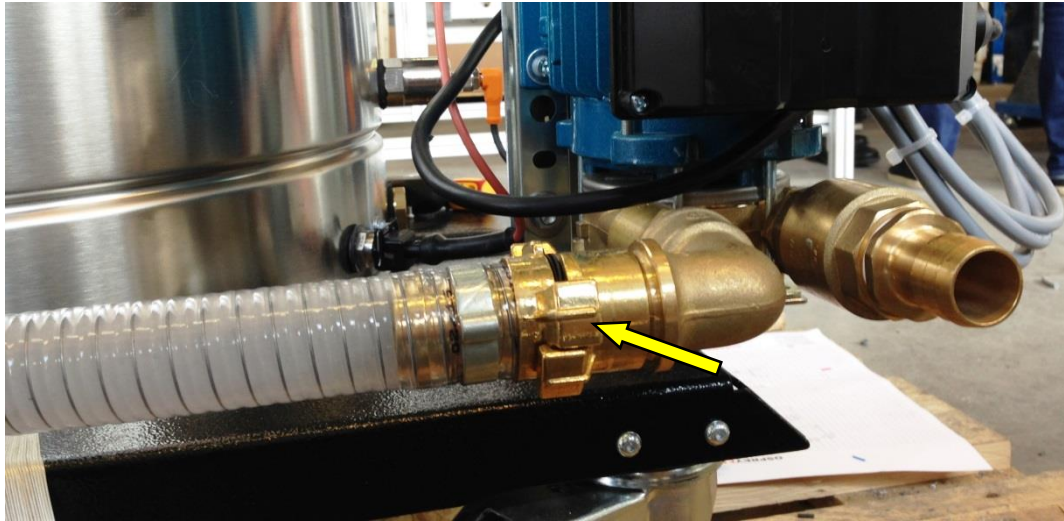
Before removing the plug, press the yellow part to knurled screw and then untight the knurled screw.

Water supply:



Unscrew the hose for water supply from the solenoid valve.

Hose for drain pump:



Disconnect the hose by bayonet connection of pump and secure to mount the container.

Lift the release and pull the container from the two levers on the lateral part of the machine.



The container is lowered and can be pulled out from under the sucker.



**4.4 Setting the suction pressure by means of manual valve**

There is a manual valve on which the suction pressure can be set manually to the filter chamber at the top of the nipple.



1. Valve closed (no side air; high suction pressure)
2. Valve open (much secondary air; less suction pressure)

### **5.1 General information**

This chapter describes the inspection and ordinary maintenance operations are described, which are necessary to ensure the proper vacuum cleaner operation.

Any intervention should be needed to troubleshoot malfunctions must be explicitly authorized by the manufacturer.

In such cases, always adhere to the identification data of the nipple.

For major repairs, you should contact your dealer who has the professional staff with the necessary technical knowledge of the original factory production, is always accessible and can intervene quickly.

### **5.2 General Security provisions**

The maintenance must be carried out by professionals with specific training in the various fields that are in this machine:

- Mechanical maintenance
- Electrical maintenance

The safety officer must ensure professionalism and competence of the aforementioned maintenance technicians.

Before the start of the maintenance operations the security officer must:

- be removed from the work area accessed by unauthorized persons;
- Ensure that the necessary tools for the maintenance technician at hand and are in good condition;
- Make sure the lighting is sufficient and, where appropriate, provide portable lamps with 24 V connection available;
- Ensure that the maintenance technician is equipped with the necessary and approved personal protective equipment for specific interventions (gloves, goggles, safety shoes, etc.);
- Make sure that the service technician has read the instructions contained in this manual and the operation of the sucker knows exactly.

Before the start of the maintenance operations, the maintenance engineer must:

- Disconnect the plug from the socket.

Work on motors or other electrical devices may only be performed by professionals for electrical maintenance that have been authorized by the security officer to do so.

Use only for the work to be performed certain tool in perfect condition. Use of unsuitable or ineffective instruments can cause serious damage.

### 5.3 Maintenance operations



***Attention!***

***All the operations described must be performed when unplugged.***

***Wear with any cleaning or maintenance work suitable protective clothing such as goggles and / or gloves.***

For the correct operation of the vacuum cleaner, it is advisable to perform regular inspections:

- The electrical material (plugs, switches, cables, etc.) must not show any damage.
- Nuts and bolts must always be well dressed.



***Note!***

***All other maintenance or repair work must be carried out directly by the company FRANK or authorized dealers.***

5.4 In case of failure

<b>disorder</b>	<b>Possible causes</b>	<b>remedying</b>
	<i>interrupted power supply</i>	<i>Check the voltage of the outlet. Check plug and power supply for damage</i>
<i>The vacuum cleaner does not start</i>	<i>LED is not lit when the printer is plugged: Blown fuses</i>	<i>Replace fuses.</i>
	<i>LED is lit, plugged power plug, switch activated: worn motor brushes</i>	<i>Replace brushes</i>
<i>Leakage of liquid or steam</i>	<i>punctured hose</i>	<i>Replace hose</i>
	<i>punctured or clogged hose</i>	<i>Check hose and replace if necessary.</i>
<i>The vacuum cleaner does not have enough suction power</i>	<i>container full</i>	<i>Empty container.</i>
	<i>open hand valve for suction</i>	<i>close manual valve</i>
	<i>worn seals</i>	<i>Check the seals and replace if necessary.</i>
	<i>air loss</i>	<i>Locks, locking bolts, check tank, filter chamber for leaks.</i>
<i>Engine noise too loud</i>	<i>Notify FRANK sales service</i>	



**Note!**  
**In any kind of problem OTHERWISE please contact FRANK-sales service.**

## 6.1 Filter change recommendation and spare parts



### Attention!

To permanently achieve a good suction and particle separation, the condition of the filter should be checked periodically.

### Exchange recommendation:

Once a year, possibly - depending on the degree - earlier

### Order numbers for replacement cartridge filters

Dust class M Filter area 0,3m<sup>2</sup> per piece

VA and polyester, antistatic

**130-9580**



### Order numbers for replacement demister

Stainless steel, Ø 250mm x 50mm

**130-9581**





