

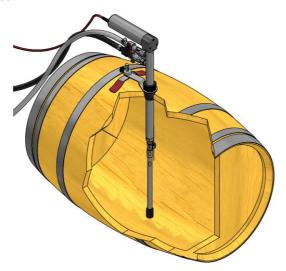
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# **Operating instructions**

Version 202106



Barrel cleaner BRA Reference PR.000.030
Barrel cleaner BRA Reference Flex PR.000.031



Please read the operating instructions carefully before using the device and keep them safe for future reference.







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## 1 Introduction / General

Thank you for choosing a quality product from MOOG Cleaning Systems®.

The data specified in this manual are only intended to describe the product. The information does not release users from making their own evaluations and inspections. It is important to note that our products are subject to natural wear and aging.

# 1.1 Purpose and Objective of this Document

This manual contains important information on how to transport, install, operate, maintain and dismantle the barrel cleaner safely and properly and how to safely eliminate any simple errors.

Please read this manual carefully <u>before starting any work!</u> It is an integral part of the product and must be kept in a known location that the operating personnel can access at any time.

It is essential that you read **Chapter 2 "Notes on Safety"** in particular before working with or on the barrel cleaner.

This barrel cleaner was built in compliance with the EC guidelines and the applicable standards and must only be operated with other devices (high pressure cleaner or a high pressure pump) that fulfil the basic requirements of the relevant EC guidelines and are marked with the CE symbol.

Make sure that all the parts used are suitable for the intended use. Under no circumstances may the nominal pressure and maximum temperature be exceeded. The instructions in this operating manual must be followed without fail.

Certain safety precautions have to be observed without fail when using this barrel cleaner in order to avoid any potential injury or damages. So please read these instructions carefully and keep them in a safe place.

The manufacturer's safety data sheets for the cleaning agent must be observed. The pressure and temperature thresholds must be maintained and must not be exceeded.

## 1.2 Additional Documentation

Please adhere to the generally applicable legal and other binding regulations of the European and/or national legislation as well as the regulations applicable in your respective country for accident prevention and environmental protection.

Note in particular the documentation for the high-pressure cleaner and the safety data sheets for the cleaning agents used.



# 1.3 Explanation of the Symbols



#### **WARNING!**

... indicates a potentially dangerous situation that could result in death or serious injury, if this is not avoided.



#### **CAUTION!**

... indicates a potentially dangerous situation that could result in minor or slight injuries, if this is not avoided.



#### WARNING!

dangerous electrical voltage



#### NOTE!

 $\dots$  highlights useful tips, recommendations and information for an efficient and trouble-free operation.



#### **WARNING!**

risk of slipping when wet



#### NOTE!

Wear hearing protection



#### NOTE!

Wear protective goggles



#### ATTENTION!

General ban sign



# 2 Safety Notes

The safety and warning instructions listed here and in the next chapter must be observed in order to avoid dangerous situations and health hazards.

The barrel cleaner has been manufactured according to the generally accepted rules of technology. However, this risk of injury or damages cannot be excluded from injury and damage, in particular if the following instructions are not observed.



#### NOTE!

Read the instructions carefully and make sure that you have understood everything before working with the barrel cleaner.

Store this manual in a place that is accessible to all users at all times. Always pass this manual on to third parties together with the barrel cleaner.

Other dangers that are not mentioned in this manual may arise when a high pressure cleaner or a high pressure pump are connected. Familiarise yourself with the instructions to make sure that you take all the safety regulations into consideration

### 2.1 Intended Use

The barrel cleaner is designed to be used with fresh water and cleaning agents that have been expressly authorised by the manufacturer in conjunction with standard high pressure cleaners or another high pressure pump.

The cleaner must only be commissioned as a whole and only in a sealed cask while respecting all the safety instructions specified in this operating manual.

A prerequisite for the intended use is the proper transport and storage, as well as the correct set up and installation of the device.

Work within the operating conditions and capacity limitations specified in the technical data.

The barrel cleaner is a technical tool and is not designed for use at home.

## 2.2 Incorrect Use

Incorrect use refers to when you use the barrel cleaner differently than as described in **Chapter 2.1 Intended Use**.



# 2.3 Limitation of Liability

All the information and instructions in this manual have been compiled taking into account the applicable standards and regulations, the state of technology and our long-standing knowledge and experience.

MOOG CLEANIG SYSTEMS AG does not assume any liability for damages due to:

- Failure to observe of the operating instructions
- Incorrect use
- Use of untrained personnel
- Unauthorised modifications
- Technical changes
- Use of unauthorised spare parts
- Use of cleaning agents and / or chemicals not approved by the manufacturer.
- Non-observance of the operating and storage conditions (frost protection).

# 2.4 Fundamental Steps for Preventing Damages and Injury

The cleaner must not be started up if there is the risk that people or animals may get hit by the jets of water.

No cleaning agents other than those expressly authorised by the manufacturer may be used.

Take the appropriate measures to avoid slipping on soapy surfaces caused, for example, by the use of cleaning agents.

Prevent damages of any kind on pressure-bearing components and piping. Only use the barrel cleaner within the specified capacity range.

The cleaner must not be operated with gas-based media or steam.

Barrels that are dried out and therefore pose the risk of water jets permeating in between the slats may not be cleaned.

Only persons with the appropriate authorisation may access the immediate operating area. This applies even during the shutdown periods. The operator is responsible for all third parties in the work area.

Follow the valid environmental and safety regulations in the country of use and in the workplace.



# 2.5 Qualifications of the Operator

A basic knowledge of the respective statutory directives and regulations for high pressure cleaning devices (liquid jet) is required for the installation, commissioning, servicing (including maintenance, inspection and start-up), and dismantling procedures.

In order to ensure the operational reliability of the device, this work must only be performed by a qualified or trained individual under the supervision of a specialist.

A specialist is able to carry out the tasks assigned to them based on their technical training, knowledge and experience, as well as their knowledge of the relevant provisions, and to independently recognise possible dangers. A specialist must comply with the relevant technical regulations.

Qualified specialists are either the customer service technicians of the manufacturer (MOOG CLEANIG SYSTEMS AG) or personnel trained by the manufacturer such as customer service technicians from authorised distributors or other qualified individuals authorised by the manufacturer.



#### WARNING!

#### Risk of injury due to inadequate qualifications!

If the device is not handled correctly this can result in serious injuries or damage to property, therefore special tasks must only be carried out by the persons named in this manual. Always consult a specialist if you are in any doubt.



#### NOTE!

Nobody may use the barrel cleaner after having consumed alcohol, medication or drugs.



# 2.6 Specific Risks

#### **Electric current**



#### WARNING!

#### Risk of death from an electric current:

Contact with live parts immediately becomes a life threatening situation. Damage to the insulation or individual components can be fatal.

All live parts in the work area that do not come in direct contact with the water jet, must be protected against spray water (IP X5). Work on the electrical installation may only be carried out by qualified electricians. If the insulation is damaged disconnect the voltage supply immediately and arrange its repair. The use of a residual-current circuit breaker is expressly recommended.

#### Hydraulic energy



#### WARNING!

#### Danger from hydraulic energy!

The hydraulic forces released and the water jet emitted can cause serious iniurv.

Check hoses and components for damages after every use. Leaking components must be replaced straight away and any leaking connections must be sealed again. Always wear personal protective equipment (PPE) when using the device.

#### Risk of explosions



#### WARNING!

#### Fatal risks from explosions!

In potentially explosive zones, a spark can trigger an explosion. The barrel cleaner must not be operated in potentially explosive zones. No fluids other than water may be used with the device, in particular no flammable or corrosive liquids.

#### Risk of burns



#### **CAUTION!**

#### Risk of burning on hot parts of the system!

Piping and hose couplings that are not insulated can become hot when hot water is used in the device. Coming into contact with exposed metal parts must be prevented.

When using hot water, wear the appropriate protective equipment.



#### Risk of slipping



#### **CAUTION!**

#### Risk of slipping due to wet surfaces!

The floor may become slippery when working with water, especially in conjunction with soapy cleaning agents or under extremely cold conditions, and this leads to an increased risk of slipping.

Wear the appropriate footwear and mark up the affected area with the appropriate warning signals.

#### Risk of tripping



#### **CAUTION!**

#### Risk of tripping over hoses and piping!

Hoses and piping that lead up to the unit can become a tripping hazard. Route these hoses and pipes in such a way that they do not pose a threat to others.



# 2.7 Personal Protective Equipment (PPE)

#### **Hearing protection**



The jets of water are emitted at great speed from the cleaning nozzle and thereby create a level of noise that should not be underestimated. This can also be amplified upon impact on the material to be cleaned, as a result of vibrations, resonance, etc. The level of noise in individual instances can even exceed 100 dB (A).

Wear suitable hearing protection to avoid any damage to your hearing.

#### Protection for the eyes and face



Face protection should be worn when using cleaning nozzles where the operator is not in full control of the direction of the jets (e.g. with tank cleaners).

#### Footwear



The floor can become very slippery from the cleaning agent used, especially those containing soap. Only wear closed shoes that have sufficient grip on the soles, which are also chemical resistant.



When cleaning outside in the open air, ice may form on the ground if the temperatures are extremely cold, in this case, the footwear should be adapted and other possible safety measures may need to be taken.

#### **Gloves**



To reduce the risk of burns during hot water operation, gloves must be worn.



# **3 Product Description**

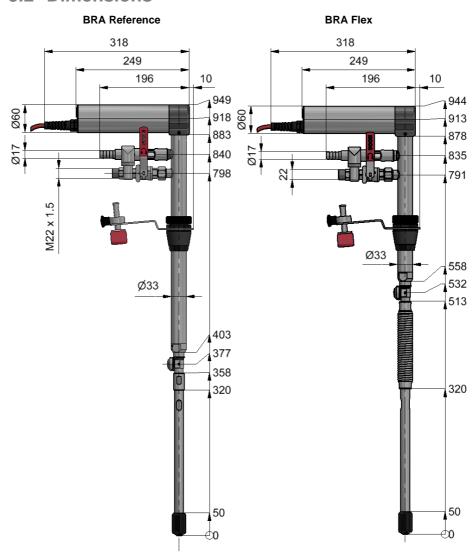
# 3.1 Technical Data

	Product		Internal barrel cleaner	
	Types	Types BRA Reference / BRA Reference Flex		A Reference Flex
	Year of manufacture		From 2019	
	Materials used		Standard	
	Metal parts		1.4301, 1.4305	
	Ball bearings Seals Slide rings		1.4310	
			FKM	
			PTFE/ Carbon	
	Pla	ain bearings	PEEK	
	Lubrication		General: With the cleaning medium (hydrodynamic bearing)	
			Ball bearings: High temperature grease (life-time lubrication)	
	Media temperature Max. 90°C			
	Surrounding temperature		+5° C to + 60°C	
	Electrical connection		100 – 240 V, 50 Hz 0,15 – 0,23A	
Barrels	Compatible bungho	le size	38 - 56mm	
	Barrel size [liter]		Belly diameter [cm]	Suction foot extension
		225-300	65-77	none
		up to 400	82-94	BG.000.070
		up to 600	100-112	BG.000.071
o e	Operating pressure	(water)	80 – 120 bar	
High pressure cleaner and suction	Water flow rate		13 – 20 l/Min	
	Cleaning agent			t be approved for the ma- e used and material to be
d dg	Connections Inlet:		M22x1.5 (High-pressure hose 200bar; 90°C)	
Ξ̈́		Suction:	Inner diamter Ø16mn	n (waste water hose 90°)

nglish



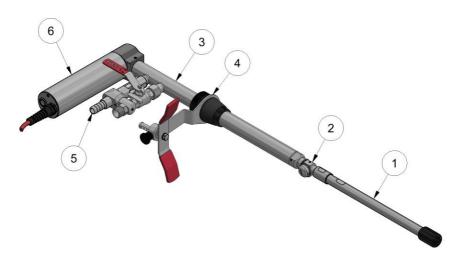
# 3.2 Dimensions



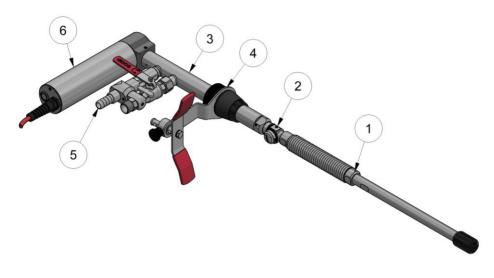


# 3.3 Overview of the Components

#### **BRA Reference**



#### **BRA Reference Flex**





1	Suction foot			
2	Spray head			
3	Connecting pipe			
4	Bunghole pin with support			
5	Injector combination			
6	Drive			

# 4 Transport and Storage

Close the packaging according to the as-delivered condition, provided it had to be opened for inspection purposes.

In any event, adhere to the storage conditions during storage and only remove the packaging immediately prior to installing.

## 4.1 Transport



#### WARNING!

#### Danger from hydraulic energy!

Pressurised components or components required for a function can be damaged if the device is not transported correctly. This can result in severe injury or even fatal danger if there is uncontrolled water leaking under high pressure or malfunctions in the operation.

When transporting the device, use the original packaging and make sure that any mechanical damages are not possible whilst it is being transported.

## 4.2 Storage

Store the device in a dry state and protect it against dust.

Protect the exposed mechanical elements against damages, particularly the gearing and the connecting thread.

Prevent dust or foreign particles from getting into the device by taking the appropriate measures.

The device should not be left under an unvarying external mechanical loading for a long period of time otherwise the device will distort especially in the area of the connecting tube.

BRA Reference Flex models with a spring in the suction cup must not be placed on this, because otherwise the spring will be permanently deformed.



# 5 Start-up

# 5.1 Preparation for the Initial Commissioning

Take the device out of the packaging and check it for any damages. If part of the device has been damaged during transport, you must not use the device.

All the screw connections must be tight and you must not be able to loosen them by hand.

Check the functioning of all moving parts. These must not stick or be damaged in any way. Do not turn either the spray head or the suction pipe, otherwise there is the risk that the screw connections may loosen.

All parts must be correctly installed and fulfil all the safety conditions in order to guarantee that the device will work without any problems.

Check that the exposed bevel gears on the spray head are neither dirty, nor that they may be blocked when the unit passes over in its cleaning cycle.

The size of the jet nozzle must correspond to the capacity (pressure and quantity of water) of the high pressure pump.

With a high pressure cleaner with a pressure switch, a pressure control combination must be installed between the high pressure cleaners and the barrel cleaner. If you use a high pressure cleaner without a pressure setting unit, a pressure control combination should likewise be used (this is available from the manufacturer under part number 016.0207.0).

The cleaning pressure must not exceed 120 bar, otherwise the surface of the wood in the barrel can be damaged by the hard jets of water.

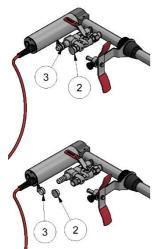
The dirty water in the barrel can be extracted via the suction cup with the help of the injector combination according to the Venturi principle. The flow of high pressure feed stream is used to create a vacuum. It is therefore essential that there is sufficient water flow for a good extraction.

Only use a high pressure cleaner with a minimal flow rate of 13 litres/minute (780 litres/hour). If there is less water, this will have a significant impact on the efficacy of the suction and negatively affect the cleaning results.

Remove the yellow stopper 1 on the suction cup and store it together with the packaging.







Remove stopper 2 on the M22 x 1.5 male thread and store it safely, in order to protect the thread again after using the cleaner.

Loosen the hose clip **3** on the hose connection and slide it over a suitable suction hose **4** with an internal diameter of 16 mm.

The suction hose must be at least 1 metre long, and should be able to extend to a suitable drain.

# 5.2 Connection of the Feed and Discharge Hoses

#### 5.2.1 Extraction



#### **CAUTION!**

#### Risk of slipping due to wet surfaces!

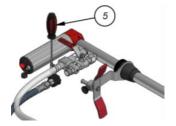
Discharge the dirty water down a suitable drain. Pools of water on the ground increase the risk of accidents and must be avoided at all times.



#### ATTENTION!

The device must never be started without suction hose 4!





Pull the suction hose over the hose connection on the injector combination and tighten the hose clip with a suitable screwdriver **5**.



#### NOTE!

The hose clip must not bend when it is being tightened, otherwise a safe operation can no longer be guaranteed. Hose clips that have been stripped must be replaced without exception

Check whether this is firmly in position after the suction hose has been assembled. Try to pull the hose away from the hose clip. This should not be possible, otherwise the hose has to be secured more firmly or the hose is not suitable for the respective hose being used. In this instance, the hose must be replaced with one that fits.

### 5.2.2 High pressure supply

Connect the device to the high pressure cleaner using a suitable high pressure hose.

If a hose with an M22 × 1.5 connection part is not available, the necessary adapters can be sourced from the manufacturer.



#### **WARNING!**

#### Danger from hydraulic energy!

The high pressure hose used must be approved for the pressure and temperature values!



The high pressure hose must also be checked for damages before each use and damaged hoses must be replaced with new ones without fail.





#### **WARNING!**

#### Danger from hydraulic energy!

The ball valve must be placed outside of a barrel at the ON position (horizontal).



Make sure that the lever **6** of the ball valve is in the OFF position (vertical).

## 5.3 Electrical Connection of the Cleaner

The drive motor of the drum interior cleaner must be connected to the power supply via the supplied cable. It is recommended to operate the device only at a socket outlet with a residual current circuit breaker (RCD).

#### WARNING!



#### Risk of electric shock!

Make sure that the connection cable is not damaged. If it is damaged, it must be replaced without exception.

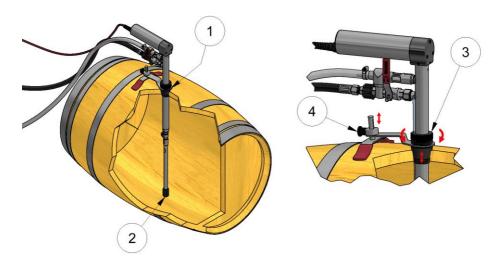
Also, before connecting the power cord, check that the input voltage of the device matches that of the mains voltage.



# 5.4 Adjusting the Cleaner to the Size of the Barrel

MOOG barrel cleaners are fitted with a patented three-point support frame to prevent the device from slipping during use. The cleaner is securely fixed on the suction cup, the bunghole pin and barrel support.

Guide the barrel cleanser carefully through the bunghole 1 in the barrel, until the suction cup 2 rests on the bottom of the barrel. You may need to adjust the bunghole pin and barrel support. To adjust the bunghole pin, loosen the knurled nut 3 by approximately one turn and push the pin towards injector component. Pull the locking bolt 4 and move the support so that it rests on the barrel. Release the locking bolt again and make sure that the bolt is locked in place. Then the knurled nut of the bung hole pin must be tightened again.





#### **WARNING!**

#### Danger from hydraulic energy!

The suction cup must stand up on the bottom of the barrel otherwise the barrel cleaner cannot be started.

If the suction cup cannot be inserted sufficiently into the barrel even though the support and the bunghole pins are in the correct position, you can obtain a long suction tube from your dealer or the manufacturer of the device.

With the BRA Reference Flex 5 model, if the space is restricted, the spring **5** at the suction cup can be bent before it is inserted. Make sure that the spring is not bent by more than 90°, otherwise the spring will be permanently deformed, and the cleaner will no longer be in the correct position during the cleaning process.

If the spring is overstretched, it must be replaced by a service centre.



After the cleaner has been inserted into the barrel, it is positioned into the centre of the barrel by moving the bunghole pin. Slide the pin in the bunghole. Make sure that the cleaner is straight and once the bunghole pin is firmly in the bunghole, tighten the knurled nut by turning it clockwise.

By moving the barrel support frame, position the barrel cleaner in such a way as to prevent the cleaner from falling over during use. Turn the hexagonal component clockwise until the support frame rests on the barrel. Now turn the wing nut clockwise downwards in order to secure the barrel support against coming loose.

With different barrels, these adjustments must be made again for every barrel.

The device can only be used safely once the cleaner rests securely on all three points on the barrel.

# 6 Operating the Device

The barrel can be cleaned either with cold water or with hot water up to 90°C.

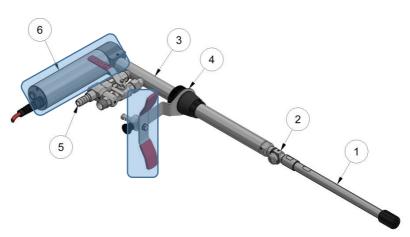


#### **CAUTION!**

#### Danger of burns from hot system parts!!

The intended contact is provided at the support of position 4 and at the drive (position 6). As the remaining parts can become hot, gloves must be worn to prevent burns..







# 6.1 Switching on the Barrel Cleaner

Make sure that the bunghole of the barrel is aligned upwards and that the barrel cleaner is correctly positioned in the barrel.

- First start the high-pressure cleaner, making sure that the settings for the pressure and temperature are correct.
- 2. Then switch on the drive of the barrel cleaner using the switch on the front of the motor.
- 3. Finally, open the ball valve by pushing the lever into the horizontal position (ON).

The gear wheels guide the nozzle of the barrel cleaner three-dimensionally so that the jet of the cleaning medium deliberately covers the entire interior in full after 35 revolutions. A cleaning cycle lasts approx. 3 minutes. This time should be adhered to as a minimum, otherwise all of the area inside the barrel will not have been cleaned.

# 6.2 Switching off the Barrel Cleaner

After the cleaning cycle is finished, proceed as follows:

- Close the ball valve by turning the lever to the vertical position (OFF), the residual water in the barrel will then be sucked out.
- 2. Switch off the drive motor of the barrel cleaner using the switch at the front.
- 3. After approx. 30 seconds, all residual water in the barrel has been sucked out. Now switch off the pressure washer and pull the barrel cleaner out of the barrel.
  - If you want to clean another barrel, mount the barrel cleaner into this one and repeat the steps from position 6.1.
- 4. If Iyou do not want to clean another barrel immediately, disconnect the device from the power supply by pulling out the power plug.





# 6.3 Troubleshooting

Disturbance	Cause	Corrective action
Spray head does not turn (water discharge from the nozzle)	No power to the device	Connect the cables to the power source, turn on with the red switch
,	Contamination in the mitre gear of the spray head	Clean the mitre gear
	Defective bearing in the spray head	Have the service centre replace the bearing
	Mechanical damage to the spray head or drive motor	Take the device to a service centre to be checked.
No outflow of water from the nozzle	There is no cleaning medium	Check to see if the pump and/or the feed line are working properly. Open the ball valve.
	The cleaning nozzles are clogged	Clean the nozzles or replace them
Insufficient suction	Suction cup clogged by large particles	Remove any contamination or dirt
	The injector nozzle is clogged	Clean the injector nozzle (see instructions below)
	There is no cleaning medium	Check to see if the pump and/or the feed line are working properly.
	The pressure of the medium or the flow rate is too low	Increase the pressure of the medium or the flow rate
Heavy discharge of water at points where it is not supposed to	Defective seals	Have a service centre replace the seals.
The device does not clean or there is not enough power	The media pressure of the cleaning nozzles used is too low	Adjust the pressure or use nozzles that correspond to the pressure of the medium
	The flow rate does not concur with the cleaning nozzles used	Adjust the flow rate or use the corresponding nozzles
	The nozzles are clogged up	Clean the nozzles or replace them



# 7 Decommissioning and Cleaning the Device



#### WARNING!

#### Danger due to electrical voltage!!



Make absolutely sure that the power cable is not connected to the electrical power supply when servicing the device.

Rinse the tank out thoroughly with cold water, without cleaning agents.

Remove the pressure hose from the barrel cleaner.

Clean the device with water and make sure that the gearing is also thoroughly cleaned.

Thoroughly rinse out the suction side of the device; ideally the water is guided through the device by the suction hose.



# 8 Maintenance



#### WARNING!

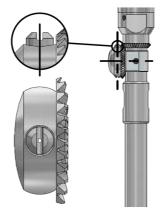
#### Danger due to electrical voltage!!



Make absolutely sure that the power cable is not connected to the electrical power supply when servicing the device.

# 8.1 Aligning the Cleaning Nozzles

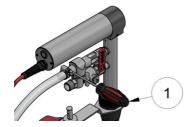
When both of the cleaning nozzles on the spray head are replaced, it must be ensured that the new ones are properly aligned





# 8.2 Cleaning the Injector Nozzle

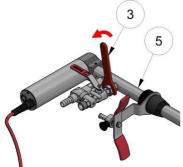
If the suction power decreases during use, the injector nozzle may be clogged. In this event, the nozzle must be removed and cleaned according to the following instructions.



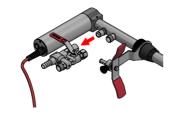
Remove the pressure hose from the device and then loosen the clip of the suction hose using a suitable screwdriver 1.



Pull the suction hose from the hose connection on the injector component.

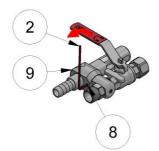


Using a wrench size 27 3 completely loosen the union nut on the connecting tube 5 so that you can loosen the injector combination from the device.



Pull the injector combination from the device.

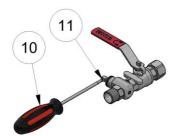




Using an internal hexagon wrench 2 size 2.5 loosen the stud screw 8 on the injector component 9 a few turns, so that the injector component can be removed from the injector combination.



Pull the injector component together with the injector tube of the injector combination.



Using a suitable screwdriver **10**, unscrew the injector nozzle.

The nozzle can be blown out with compressed air or rinsed out under running water. If this does not remove the contamination, tweezers can be used. However, you must proceed with caution so as not to damage the nozzle opening.

If the nozzle is damaged at the opening, it must be replaced with a new nozzle without fail.

The unit is assembled in reverse order taking care that the nuts and bolts are not overly tightened because otherwise the device will be damaged, and it will be necessary to replace the damaged parts.

If water leaks from the screw after the nozzle unit has been assembled, it must be tightened before any further work is carried out to ensure the device functions correctly.



### 8.3 Maintenance Intervals

The maintenance intervals vary depending on the pressure range, media temperature and the cleaning agent used.

Maintenance must be performed approximately every 300 hours of operation. All seals must be replaced.

The maintenance work may only be carried out by the manufacturer or service centres that are expressly authorised by the manufacturer.

The filter screen should be checked after 30 operating hours at the latest, and cleaned or replaced if necessary.

# 8.4 Warranty Conditions for Barrel Cleaners

Our warranty extends from the day of delivery and covers all defects that appear within 24 (twenty-four) months and are demonstrably caused by material faults or faulty production.

Compensation claims for direct or indirect consequential losses are excluded.

There is **no warranty cover** in the following cases:

- if unauthorised changes have been made to the construction
- if the device has not been repaired correctly
- frost damages
- with the use of non-original spare parts
- mechanical disturbances

# 9 Disposal

The packaging made from cardboard can be disposed of at your local recycling station.

The packaging made from plastic can be disposed of at your local waste facilities in accordance with the local regulations.

Devices that were used in environments that did not present a health hazard can be recycled through a melting process.

If the device was used with harmful or radioactive substances, in a contaminated area, then the relevant standards and guidelines for the corresponding measures must be specifically complied with during its disposal, in order to exclude possible injuries.



## **EC Declaration of Conformity**





#### EU Declaration of Conformity according machinery directive 2006/42/EC annex II A

Product designation: BRA Reference / BRA Reference Flex

Machine: Interchangeable equipment; [according MD Article 1b&2b]

Function: Handheld device for the 360° interior cleaning of barrels

Type designation: BRAR BRARF

 Serial number:
 BRAR-XXXXX-YY
 BRARF-XXXXX-YY

 XXXXX [36000 - 40000]
 XXXXX [36000 - 40000]

Year of manufacture: 20YY 20YY

MOOG Cleaning Systems AG as manufacturer of the interchangeable equipment declares that:

- the machine designated above complies with the essential requirements of Directive 2006/42/EC, and, if applicable, with other directives and standards
- . the technical documentation has been drawn up in accordance with annex VII. Part A
- this technical documentation shall, on reasoned request, be submitted to the national authorities in printed or in electronic form (pdf)

Manufacturer: MOOG Cleaning Systems AG

Neufeldstrasse 11 CH-3076 Worb Switzerland

Authorized person: Andreas Suter

Directive Designation Remark

2006/42/CE Machinery directive

Is conform to the provisions of the following harmonised standards:

Norm Designation Remark
EN ISO 12100:2010 Safety of machinery - General principles for

design - Risk assessment and risk reduction
ISO 4413:2010 Hydraulic fluid power - General rules and safety

requirements for systems and their components

Ergonomics of the thermal environment -Methods for the assessment of human

responses to contact with surfaces

EN 60204-1:2006 Safety of machinery -

Electrical equipment of machines

Worb, 23.06.2021

EN 13732-1:2008

Place, date Andrews Suter, Executive President

MOOG Cleaning Systems AG

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EU Conformity BRARF EN



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