MSG MS101P A/C System Flushing Machine User Manual

Contents

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PRODUCT INFORMATION

Specifications

- **Air power pressure, bar:** 2-7
- **Maximum air consumption, m3/min:** 0-3
- **Fluid flow pressure, bar:** 1-6
- **Pump performance, l/min:** 15
- **Filter element:** Polypropylene
- **Filter element size, mm (inch):** 127 (5)
- **Recommended micron range, m:** 10-50
- **Tank power volume, l:** 15
- **Recommended flushing fluids:** R141b, Super Flush, SUNAIR A/C FLUSH
- **Maximum nitrogen pressure, bar:** 10
- **Length of hoses, connected to a car, m:** 2.5
- **Dimensions, mm L*W*H:** 350*300*670
- **Weight, kg:** 36

FAQs

- **Q: What is the recommended micron range for the filter element?**
  - A: The recommended micron range for the filter element is between 10-50 microns.
- **Q: What are the recommended flushing fluids for this flushing stand?**
  - A: The recommended flushing fluids are R141b, Super Flush, and SUNAIR A/C FLUSH.

DESCRIPTION

Flushing Stand MSG MS101P is used for quality cleansing of air conditioning pipelines from contamination.

Flushing is conducted through the forced circulation of flushing fluid in the closed circuit: car – flushing stand. The equipment was designed according to the latest requirements of air conditioning system service centers. Control elements are placed, considering the easy operation of the stand. Several flushing fluids are selected and set out in the table ‘Technical Characteristics’, which do not react with parts of the pump and elements of the stand. The stand consists of a metal body, air pump, 15 l stainless steel tank, and hoses with universal holders. The stand is constructed in the following way: constant pulsating flow is generated in both the stand circuit and a car, thus, it provides quick flushing of the system.

TECHNICAL CHARACTERISTICS

Fig. 1. Stand MS101P

- power pressure, bar 2-7
- Maximum air consumption, m3/min 0-3
- Fluid flow pressure, bar 1-6
- Pump performance, l/min 15
- Filter element Polypropylene
- Filter element size, mm (inch) 127 (5”)
- Recommended micron range, μm 10-50
- Tank power volume, l 15
- Recommended flushing fluids R141b, Super Flush, SUNAIR A/C FLUSH
- Maximum nitrogen pressure, bar 10
- Length of hoses, connected to a car, m 2.5
- Dimensions, mm L*W*H 350*300*670
- Weight, kg 36

CONTROL UNITS AND INDICATORS

Fig. 2. Description of the elements, placed on the front side

1 – Valve, regulating the pump; 2 – HP valve; 3 – Filler neck cover; 4 – Manometer; 5 – N2 valve; 6 – Indicator of tank flushing fluid level; 7 – N2 nitrogen connection fitting; 8 – AIR fitting; 9 – LP fitting; 10 – HP fitting.

1. Valve, regulating the pump of the flushing stand.
2. HP valve, supplying flushing fluid from the tank of the stand to a car line.
3. Filler neck cover, filler neck, and filter element container.
4. Manometer. Flushing fluid pressure indicator in air conditioning system.
5. N2 valve, supplying nitrogen to remove the remaining flushing fluid from the air conditioning system.
    - **WARNING**! It is strictly forbidden to open the N2 valve during the operation of the pump and/or when the HP valve is open.
6. Indicator of tank flushing fluid level.
7. N2 nitrogen connection fitting.
    - **WARNING**! Use of compressed nitrogen of pressure over 10 bar in the stand is strictly forbidden.
8. AIR compressed air connection fitting.
9. Fitting of flushing fluid return to LP flushing stand tank from air conditioning system.
10. Fitting of flushing fluid supply to air conditioning system from HP flushing stand tank.

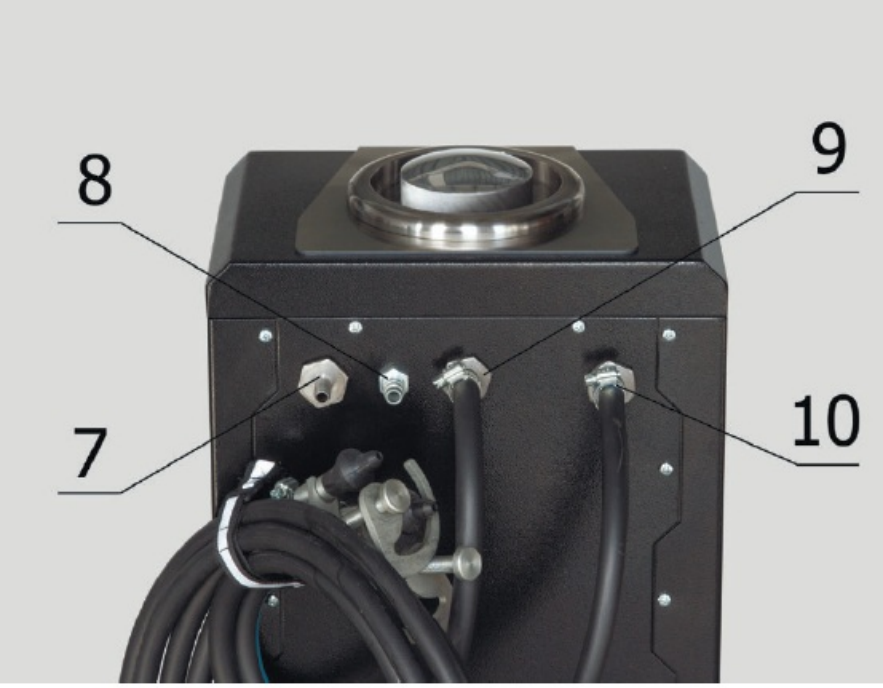

Fig. 3. Description of the elements, placed on the back side

FILTER ELEMENT

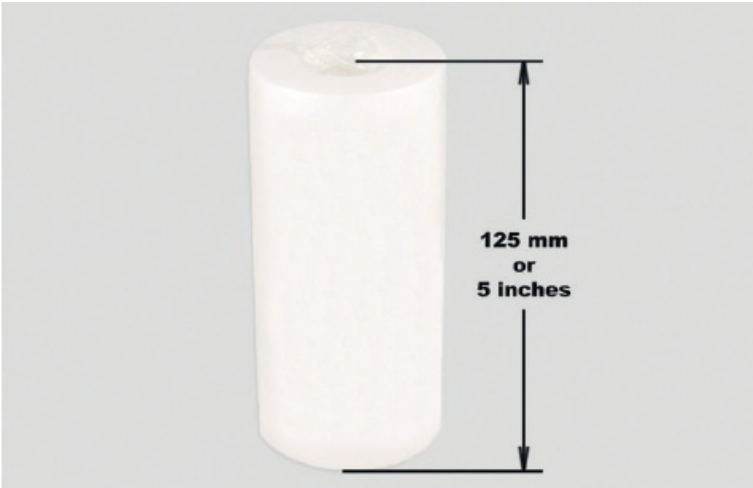

Fig. 4. Filter element front view

A regular polypropylene water filter can be used for this stand. The filter is made of polypropylene which does not react with flushing fluids, recommended for use. Filter element circulation capacity must correspond to 10-50 μm. The filter element height is 5 inches.

SETTING INTO OPERATION

Check the set received. It must contain:

- flushing stand
- 2 hoses (connected to the stand)
- 2 universal connectors (connected to the hoses)
- User Manual

Inspect the equipment for the existence of damage. If it is found, please contact either the manufacturer or trade

representative before launching the equipment.

Note: After assembling at the factory,? The ushing station has been washed with alcohol. Before using, you need to remove alcohol from the tank. Using liquid. For this operation, you can use liqui fushingshing condition systems.

WARNING! In case of obvious damage, the use of equipment is forbidden.

Safety Measures

It is strongly recommended to learn the actual User Manual before launching the equipment. The stand can be used in well-ventilated premises only. Tightening or unscrewing the nuts on N2, LP, and HP hoses in operation is strictly forbidden. Twisting of the filler neck in the process of operation of the pump is strictly forbidden. Replacement of filter element in the process of operation of the pump is strictly forbidden. Operation of the flushing station with damaged hoses is strictly forbidden. Work with the stand must be carried out in rubber gloves and safety glasses. In case of skin contact with flushing fluid, follow the instructions, described in the specifications for the particular flushing fluid.

STEP-BY-STEP INSTRUCTION

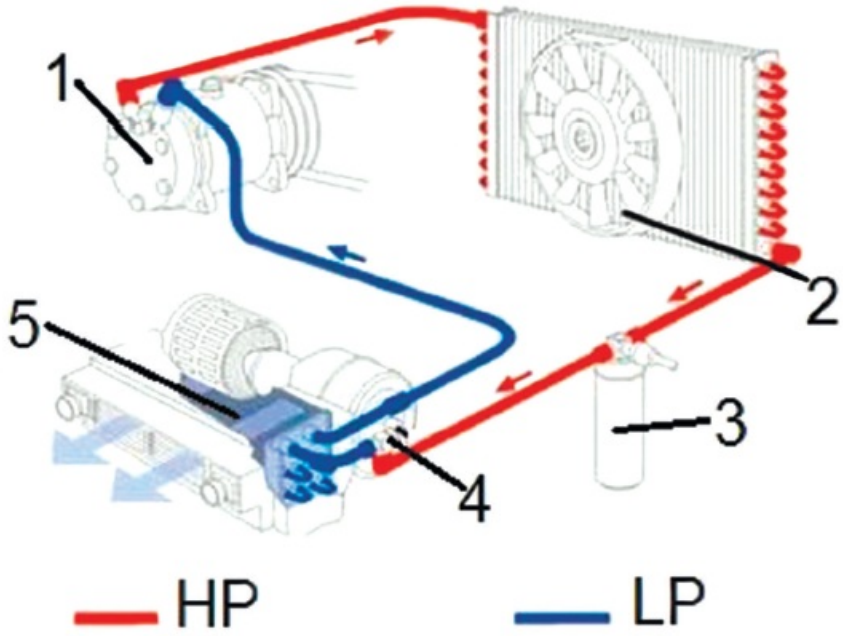

Fig. 5. Air conditioning system

1. Compressor
2. Condenser
3. Dryer
4. Expansion valve
5. Evaporator

Preparation of Flushing Stand for Operation

Connect the stand to the air-supply system. Pressure in the air-supply system must correspond to the parameters, described in ‘Technical Characteristics’. Power activation valve (1) must be switched off. Valves 2 and 5 must be switched off, and set in the position ‘-’. The tank must be filled with flushing fluid (5 to 10 l) through the filler neck 3. The polypropylene filter element is fixed in the filler neck 3, the filter element cover is twisted (3).

Connection to Air Conditioning Sys temand Work with Flushing Stand

The following actions must be conducted before the connection of the flushing stand to the air conditioning system:

- Remove coolant from the air conditioning system with a special tool for gathering coolant.
- dismount parts of the air conditioning system, which are not to be flushed (expansion valve (EV), compressor, dryer, condenser). Connect HP and LP hoses through specialized connectors to high-pressure and low-pressure lines of the air conditioning system. To provide circulation of flushing fluid, activate HP valve (2) on the stand (set in position '+').

To supply flushing fluid to the air conditioning system, activate the pump with valve 1. Pump performance is regulated by the same valve, if necessary. The air conditioning system goes through several cycles of flushing. The first cycle is the quickest one: activate the stand for 10 minutes, then deactivate and check its filter element for contamination, gathered on it. If large dispersing parts of contamination (aluminum chip) are observed, replace the filter element and continue flushing. The quantity of cycles depends on the contamination degree of the system, but not less than 2. If necessary, change the flushing flui nd h lt element and repeat flushing. Quantity of cycles can be set by the user personally, as far as the pump can operate during a long
period of time. Remove the remainings of flushing fluid from air conditioning system when flushing is finished. It is done in the following way: – connect nitrogen line to the stand fitting 7 (N2), deactivate the valve HP (2), activate the valve N2 (5) smoothly, thus, supplying nitrogen to air conditioning line. Nitrogen purge is done until total removal of flushing fluid from air conditioning system. Removal of flushing fluid from the tank is done in the following way:

- pull HP hose into the container
- activate HP valve
- activate the pump with the valve 1

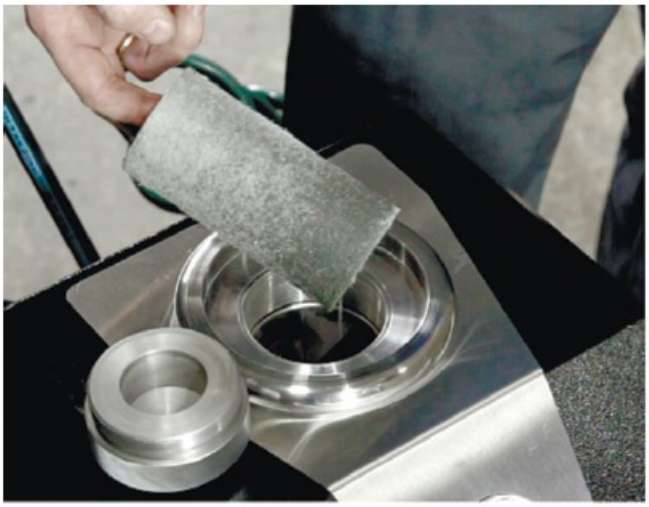

Fig. 6. Filter element after the first flushing cycle.

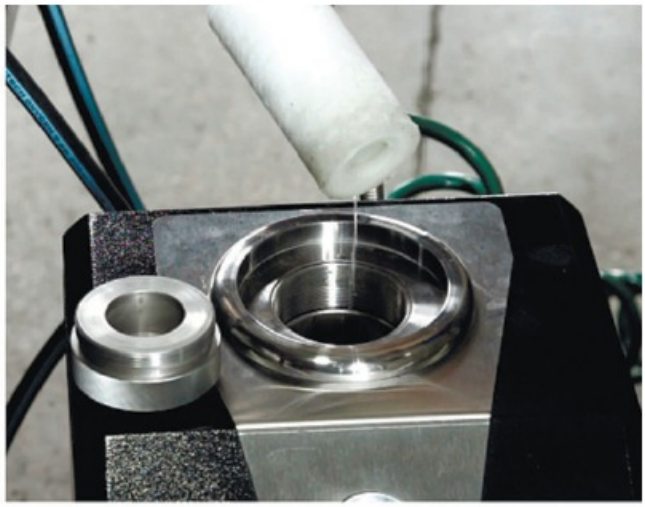

Fig. 7. Filter element after the last flushing cycle.

STORAGE AND CARE

To keep the stand in storage, it is recommended to clean it with flushing fluid and drain the remains.

CONTACT INFORMATION

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Documents / Resources

	**MSG MS101P A/C System Flushing Machine** [pdf] User Manual MS101P AC System Flushing Machine, MS101P, AC System Flushing Machine, System Flushing Machine, Flushing Machine, Machine

References

- **User Manual**