

AIR FILTER-REGULATOR WITH WATER-OIL SEPARATOR

NT10-AFR-1 / NT10-AFR-2 / NT10-AFR-3

OPERATION MANUAL



ONETECH
Tools

WARNING! BEFORE USING THE FILTER-REGULATOR (hereinafter – EQUIPMENT), CAREFULLY READ THIS INSTRUCTION.

IMPROPER OPERATION OF THE EQUIPMENT MAY LEAD TO INJURY AND/OR PROPERTY DAMAGE!

ONLY QUALIFIED AND SPECIALLY TRAINED PERSONNEL FAMILIAR WITH THIS INSTRUCTION ARE PERMITTED TO USE AND SERVICE THE EQUIPMENT.

This instruction contains a description, safety rules, and all necessary information for the correct operation of the equipment.

The safety recommendations provided in this instruction are supplementary to the general safety rules applicable in the region where the equipment is operated and do not replace them.



- Increased noise level and vibration may occur.
- Increased air dust levels may occur in the work area.



- To reduce the risk of injury, it is necessary to familiarize yourself with this instruction.



GENERAL OPERATING RULES

- When working with the equipment, always use personal protective equipment appropriate for the type of work being performed (face shield, impact-resistant goggles, hand, body, and other protection);
- The worker's appearance must comply with safety requirements;
- The compressed air flow can cause serious injury. Never direct the air flow at yourself or others. Do not use compressed air to clean clothing;
- Before starting work, check the pipeline, hoses, and compressed air supply connections for damage, wear, or other defects. If any are found, replace them immediately;
- Before starting work, check threaded connections. Tighten if necessary;
- **WARNING!** Always disconnect the equipment from the compressed air supply line before performing maintenance or adjusting parameters. Ensure there is no residual pressure in the system;
- Do not exceed the maximum compressed air inlet pressure value for the equipment;
- Do not install the equipment in a room with a temperature above the specified maximum value;
- Use only original spare parts. The use of non-original spare parts may pose danger and cause equipment malfunction;
- When installing the equipment, strictly observe the direction of compressed air flow indicated by the arrow on the housing and/or the markings – "IN" / "OUT";
- The equipment is designed to operate only with compressed air at a pressure not exceeding the specified value;
- **DO NOT** use the equipment if there are obvious signs of damage to components.

STORAGE

- Avoid storing the equipment in areas with high humidity.

DESIGN CHANGES

- It is forbidden to make changes to the design of the equipment without the manufacturer's consent.

DISPOSAL

When disposing of the equipment or individual components, follow the rules established by the regulations applicable in the equipment's operating region.

MAINTENANCE

- Disconnect the device from the compressed air source. Ensure that no residual pressure remains in the system.
- Press the latch and turn counterclockwise to detach the protective bowl housing. Unscrew the mounting nut and remove the filter element.
- Replace the filter element with an equivalent one when it becomes dirty.
- Before installation, clean the protective bowl. Use a damp cloth without chemicals.

TECHNICAL SPECIFICATIONS

Part Number	NT10-AFR-1		NT10-AFR-2		NT10-AFR-3	
Version	-T60	-T80	-T60	-T80	-T60	-T80
Inlet pressure (max), bar:	12		12		12	
Operating pressure (max), bar:	0 – 10		0 – 10		0 – 10	
Temperature range, °C:	-5 ÷ 60	-5 ÷ 80	-5 ÷ 60	-5 ÷ 80	-5 ÷ 60	-5 ÷ 80
Air flow, l/min:	4 000		4 000		4 000	
Filtration, µm:	5		5 + 0.01		5 + 0.01 + 40	
Connection (inlet/outlet):	1/2" BSP (F)		1/2" BSP (F)		1/2" BSP (F)	
Automatic drain:	+		+		+	
Dimensions (WxH), cm:	10.7 x 25.5		15.5 x 18.5		24 x 25.5	

DESCRIPTION

NT10-AFR is a line of filter-regulators for compressed air cleaning.

NT10-AFR-1

Filter-regulator with 1-stage filtration and outlet pressure adjustment. Heavy particles and moisture settle in the plastic filter bowl and are removed automatically. Air filtration is performed by a sintered bronze filter with particle filtration down to 5 µm.

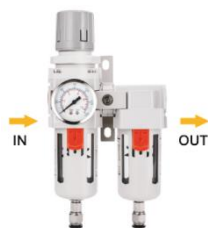
NT10-AFR-2

Filter-regulator with 2-stage compressed air filtration and outlet pressure adjustment. Heavy particles and moisture settle in the plastic filter bowl and are removed automatically. Air filtration is performed by a sintered bronze filter with particle filtration down to 5 µm (1st stage) and a fiber filter with particle filtration down to 0.01 µm (2nd stage).

NT10-AFR-3

Filter-regulator with 3-stage compressed air filtration and outlet pressure adjustment. Heavy particles and moisture settle in the plastic filter bowl and are removed automatically. Air filtration is performed by a sintered bronze filter with particle filtration down to 5 µm (1st stage), a fiber filter with particle filtration down to 0.01 µm (2nd stage), and an activated carbon filter, with particle filtration down to 40 µm (3rd stage) to absorb harmful or toxic gases.

The NT10-AFR-1-T80, NT10-AFR-2-T80 and NT10-AFR-3-T80 models can be used in rooms with ambient temperatures up to 80 °C.



Preparation

- The flow capacity of the filter-regulator must correspond to the maximum air consumption requirement of all consumers.
- Pay attention to the air flow: it must align with the arrow on the housing.



Pressure Adjustment

- Pull the knob upward to unlock.
- Turning clockwise will increase the pressure. Turning counterclockwise will decrease the pressure.
- Stop turning once the desired pressure reading is achieved and lock the knob.



Dial Gauge Readings

- Ensure the pressure gauge is securely mounted on the main body and check if the readings rise and fall smoothly when adjusting the pressure.



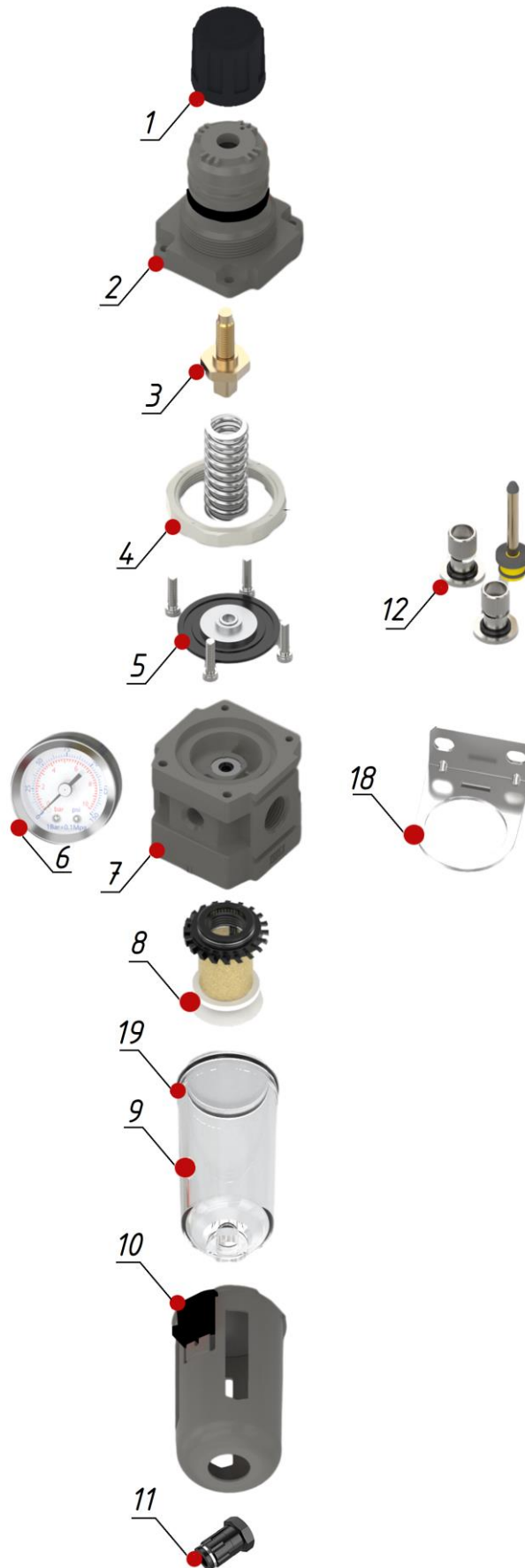
Automatic Drain

- The automatic drain discharges water when there is no pressure and closes when air flow passes. When the water level exceeds the upper limit, water must be drained; otherwise, this will lead to poor drying performance.
- The fitting on the drain head can be used to connect an air hose; you may also remove it freely according to your needs.

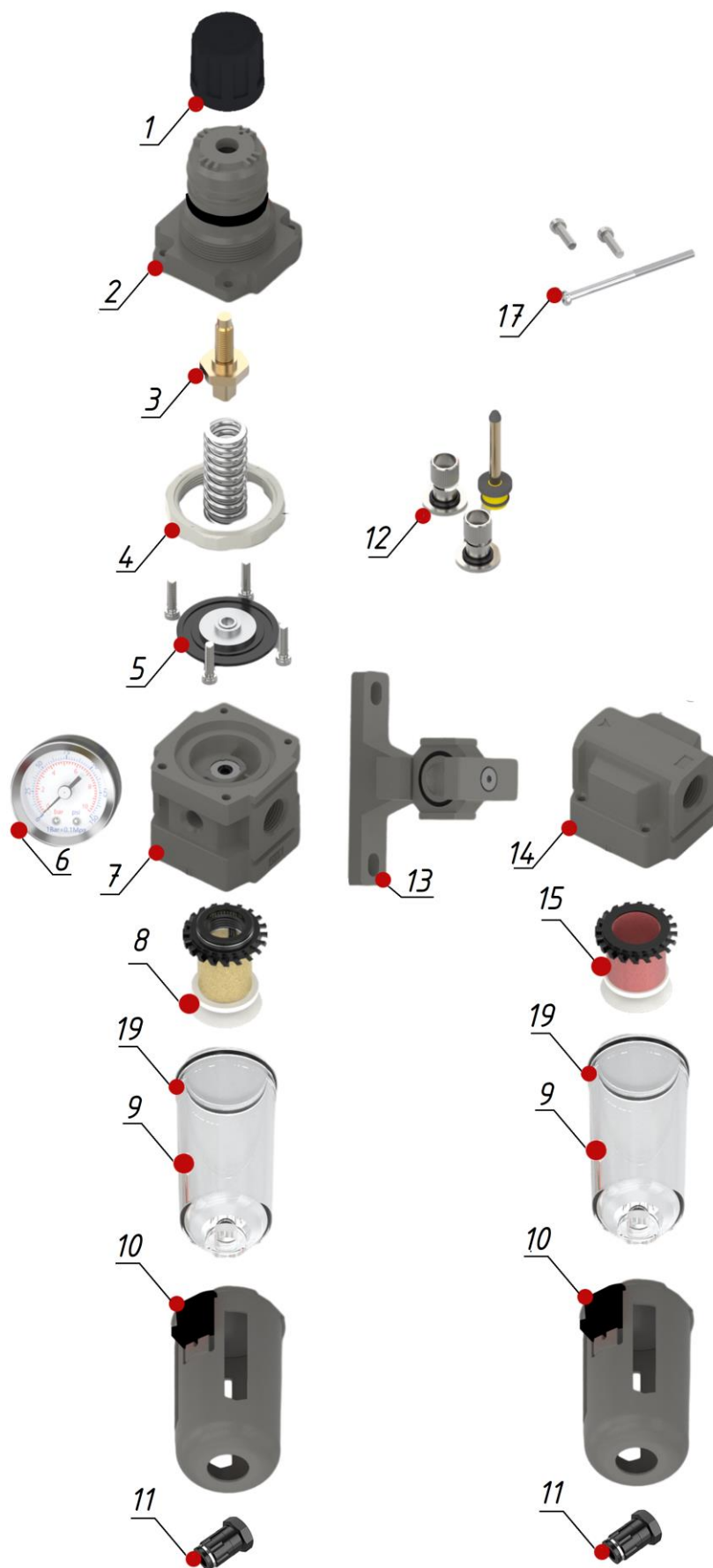
TROUBLESHOOTING. POSSIBLE CAUSES AND SOLUTIONS

PRESSURE NOT REGULATING	
Issue description	Solution
Insufficient inlet pressure.	Increase the inlet pressure.
Regulator is defective.	Replace diaphragm (pos. 5).
OIL AND/OR LIQUID PRESENT IN THE COMPRESSED AIR AT THE EQUIPMENT OUTLET	
Issue description	Solution
Excessive amount of oil in the compressed air at the inlet.	Check the compressor and air dryer. Drain condensate manually.
Filter element(s) are dirty.	Replace the filter elements. Perform filter maintenance.
CONDENSATE DOES NOT DRAIN OR DOES NOT DRAIN COMPLETELY.	
Issue description	Solution
Automatic drain valve is stuck.	Clean and/or replace the automatic drain valve.
Automatic drain valve is damaged.	Replace the automatic drain valve.
AUTOMATIC DRAIN VALVE CONSTANTLY RELEASES AIR	
Issue description	Solution
Automatic drain valve is damaged.	Replace the automatic drain valve.
Inlet pressure ≤ 1 bar.	Increase the compressed air inlet pressure.
Filter is not installed in a vertical position.	Install the filter in vertical position
Automatic drain valve is stuck.	Clean and/or replace the automatic drain valve.

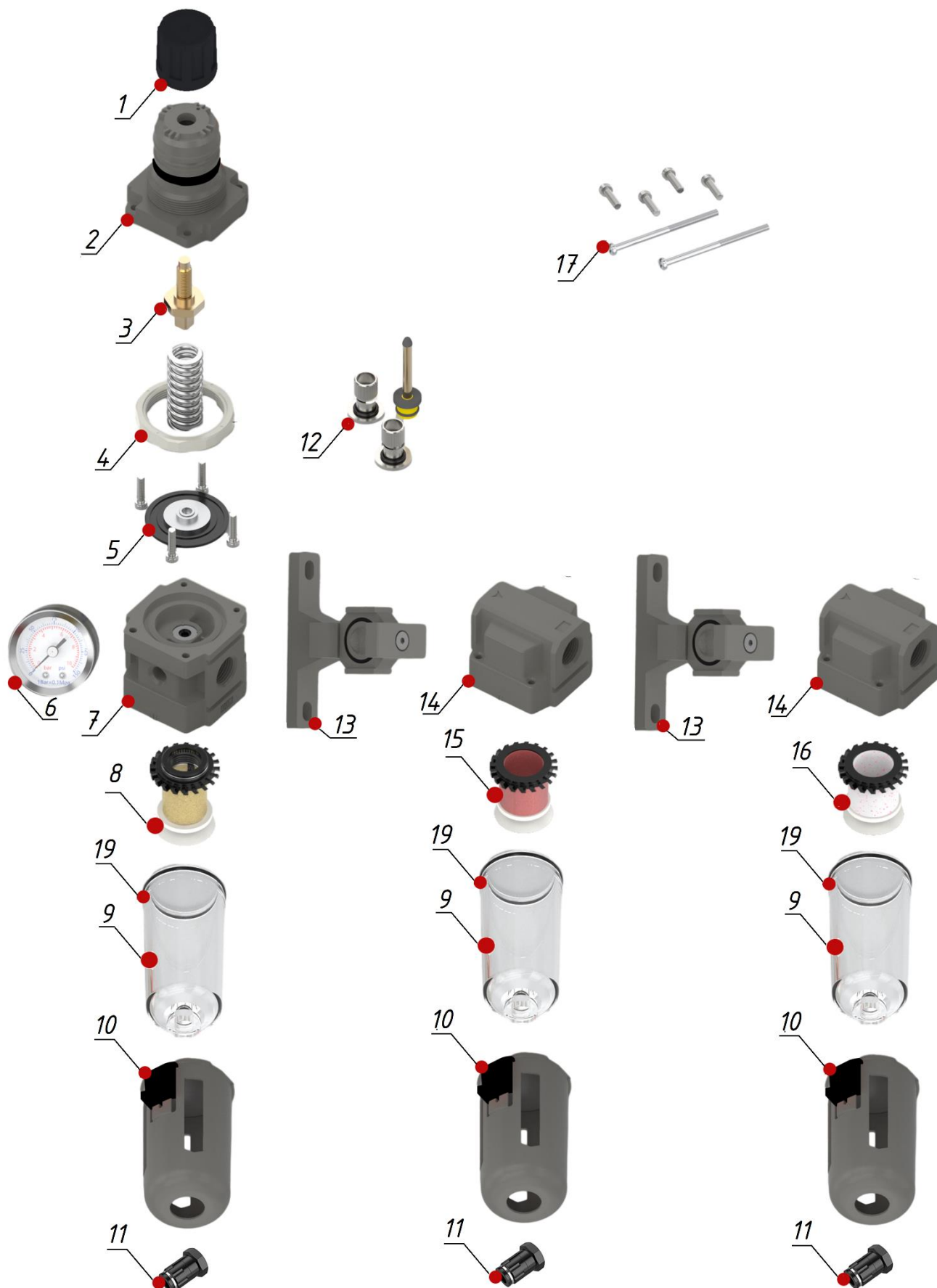
Model: NT10-AFR-1



Model: NT10-AFR-2



Model: NT10-AFR-3



SPARE PARTS

No.	Name	Part No.	Quantity, pcs.		
			NT10-AFR-1	NT10-AFR-2	NT10-AFR-3
1	Adjustment knob	NT10S-560	1	1	1
2	Cap	NT10S-561	1	1	1
3	Adjusting screw assembly	NT10S-562	1	1	1
4	Regulating spring	NT10S-563	1	1	1
5	Diaphragm for -T60	NT10S-564	1	1	1
	Diaphragm for -T80	NT10S-581			
6	Pressure gauge	NT10S-565	1	1	1
7	Regulator body	NT10S-566	1	1	1
8	Filter element (5 µm, sintered bronze)	NT10S-AF-001	1	1	1
9	Plastic filter bowl	NT10S-568	1	2	3
10	Bowl guard	NT10S-569	1	2	3
11	Automatic drain valve	NT10S-570	1	2	3
12	Valve assembly	NT10S-571	1	1	1
13	Connector	NT10S-572	–	1	2
14	Filter housing	NT10S-573	–	1	2
15	Filter element (0.01 µm, fiber)	NT10S-AF-002	–	1	1
16	Filter element (40 µm, activated carbon)	NT10S-AF-003	–	–	1
17	Screw	NT10S-576	–	3	6
18	Bracket	NT10S-577	1	–	–
19	O-ring for -T60	NT10S-578	1	2	3
	O-ring for -T80	NT10S-581			

Note: If you wish to order spare parts for -T80 models, please contact the ONETECH representative in your region.

ADDITIONAL ACCESSORIES

	NT10S-AFR-004	Inlet fitting. SHUT-OFF VALVE – Inlet: 1/2" BSP (F) – Outlet: 1/2" BSP (M)
	NT10S-AFR-005	Distributor for 2 consumers. – Inlet: 1/2" BSP (M) – Outlet x2: 1/4" BSP (M)

NOTE:

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NOTE:

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Other languages:



info@onetech-tools.com



www.onetech-auto.com

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