Sheet P.30

## Filtration with filter media

### BRAVOFCA

Automatic activated carbon filter for drinking and industrial water

Rev. 0 - 03/24



### **CHARACTERISTICS**

The water that is drawn can often contain organic substances capable of imparting bad odors and flavors to the water.

Some of these substances, such as herbicides, pesticides and chlorinated organic substances, are also potentially dangerous to human health. Furthermore, in water purification processes, massive doses of chlorine-based products are used which are capable of reacting with the organic substance naturally present in the water (for example, humic acids and fulvic acids) forming chlorinated organic substances, called DBP (disinfection by products), which are also potentially dangerous.

In all these cases, it is possible to intervene by installing activated carbon filters from the series. BravoFCA systems are capable of both absorbing organic substances dissolved in the water and destroying any chlorine present. The filter mass (of the semi-permeable type) is subject to saturation and it is therefore necessary not only to provide for periodic backwashing, but also for its replacement with a frequency that depends on the working needs, but which generally should never be more than 6- 12 months.

If the dechlorinator filters are installed for drinking use, it is necessary to maintain a certain degree of post-chlorination protection downstream of the filter. This can be achieved by installing a partial by-pass valve on the filter or by installing a proportional chlorine dosing station at the outlet of the dechlorinator filter itself. BravoFCA systems consist of: glass fiber reinforced polypropylene cylinder, control valve, charcoal

#### **TECHNICAL DATA**

Code	FCA80	FCA100
Quantity of coal present Kg	BRAVOFCA 80	BRAVOFCA 100
Connection fittings	20	50
Working flow m3/h *	1" 1⁄4	1" 1⁄4
Maximum flow m3/h **	0,4	0,9
Water backwash flow rate m3/h	0,7	1,6
Minmax. water temperature °C	0,7	1,6
MINMAX. AMBIENT TEMPERATURE °C	5 - 30	
ALLOWABLE PRESSURE DROP BAR	5 - 40	
Minmax. pressure Bar	0,5	
Pressione min-max Bar	1,5 - 6,0	

\*The nominal flow rate value refers to continuous operation of the filter.

\*\*The peak flow rate value can only be obtained for discontinuous use of the filter (peak duration: max. 5 minutes).





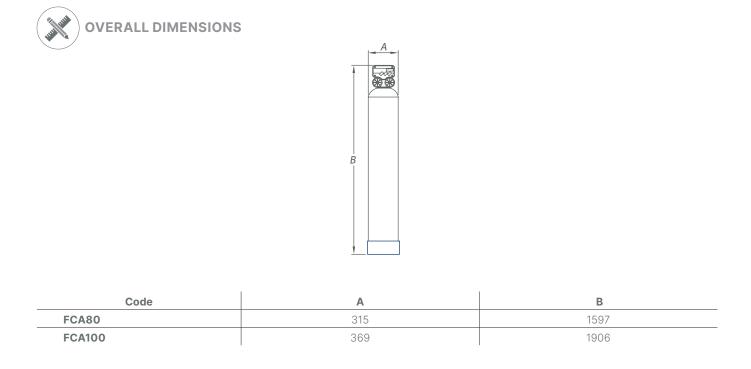
# INDICATIVE TABLE OF THE REDUCTION OF THE NOMINAL WORKING FLOW RATE DEPENDING ON THE TURBIDITY OF THE WATER

**ATTENTION**: Depending on the actual water conditions, the working flow rates may also be subject to significant reductions.

	Percentage reduction of nominal flow rate	
Dechlorination (A)	0%	
Dechlorination and absorption (B)	-50%	
Dechlorination and absorption (C)	- 75%	

(A) Maximum concentration of active chlorine: 1 ppm

(B)Maximum concentration of active chlorine: 1 ppm - maximum concentration of organic matter: 1 ppm (C)Maximum chlorine concentration: 3 ppm - maximum concentration of organic matter: 3 ppm.





## EQUIPMENTANDSUPPLYSPECIFICATIONS

BravoFCA filters are supplied complete with fiberglass cylinder to contain filtering material, control valve with distributor tube and diffuser mushroom, carbon and quartzite for filling delivered separately.

The product is accompanied by an instruction, use and maintenance manual in Italian.

Supply:

Pallets :

- · Cylinder
- · Control valve
- · Distributor tube and diffuser mushroom
- Coal and quartzite in kg bags. 25 not loaded into the cylinder



#### REFERENCE STANDARDS

**Ministerial Decree No. 174/2004:** Regulation concerning materials and objects that can be used in fixed systems for the collection, treatment, supply and distribution of water intended for human consumption.

**Directive 2014/30/UE:** concerning the approximation of the laws of the Member States relating to electromagnetic compatibility.

**Directive 2014/35/UE:** concerning the approximation of the laws of the Member States relating to electrical equipment intended for use within certain voltage limits.

Art. 4 Par. 3 Of Directive 2014/68/EU (PED).



#### • START-UP AND TESTING

Upon request, Water Treatment Industry can provide the start-up and testing service carried out by a specialized technician.Please contact us for information on the scheduled periodic maintenance service.

COD. 84022100 Equipment filling service daily cost quote

#### COD. 84022110 First start-up service and equipment testing daily cost quote

The services do not include travel expenses related to the kilometric cost of the car according to ACI tables, as well as motorway travel. Services refer to the national territory (excluding islands)



The installation of the activated carbon filter must be carried out exclusively by qualified personnel in full compliance with local regulations. The installation of the filter must be carried out in hygienically suitable places. The filter must be installed at the inlet of the system immediately downstream of the general meter and in any case upstream of the system to be protected. Install an adequate by-pass system that allows you to exclude the filter in the event of a malfunction without preventing the supply of water. Provide an adequate visible drain under the filter to convey the washing water. In case of installation on drinking water lines, provide for the installation of sample taps upstream and downstream of the filter and in any case in compliance with the provisions of Ministerial Decree No. 25/2012. In any case, see the Instruction Manual supplied with the filter.



### **PRECAUTIONS AND WARNINGS**

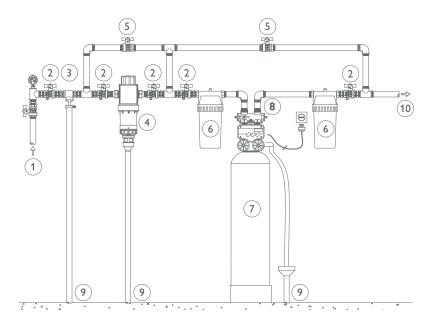
Attention! This equipment requires regular periodic maintenance in order to guarantee the drinkability requirements of the treated drinking water and the maintenance of the improvements as declared by the manufacturer.

Protect from frost and bad weather, thus avoiding contact with solvents and chemical products in general. See the Technical Data paragraph for the working limit values. Observe what is stated in the Instructions for Use and Maintenance Manual.



Periodically check the correct operation of the equipment. Ordinary operation of the equipment requires periodic regeneration. Make sure that there is always a sufficient amount of salt in the brine tank (the water level in the tank must always be lower than the salt level). If there is a periodic cleaning and sanitization plan for the system, it is also necessary to include the equipment. To ensure correct management of the equipment, it is advisable to carry out at least two checks per year. Respect all the instructions given in the Use and Maintenance Manual.

#### **INDICATIVE INSTALLATION DIAGRAM**



 Raw water inlet, 2. Shut-off valve with sample tap, 3. Disconnector, 4. BravoFIL self-cleaning filter, 5. By-pass valve, 6. Filter with MB cartridge at least of 50 μ, 7. BravoFCA column filter, 8. By-pass valve for post-coloring (optional), 9. Drain, 10. Treated water outlet.

AVERAGE DELIVERY TIMES 2 weeks

# GENERAL EXCLUSIONS

- Special dedicated packaging, where required wooden crates
- -Filling the filter material tank\* (if any)
- -Equipment start-up and final testing\*
- \* See filling and final testing price list
- Lifting and handling means
- Hydraulic and electrical connections to our plant and to our utilities
- Masonry, carpentry and foundation works
- Chemical analyses
- Structural calculations
- Anything not expressly mentioned in the offer