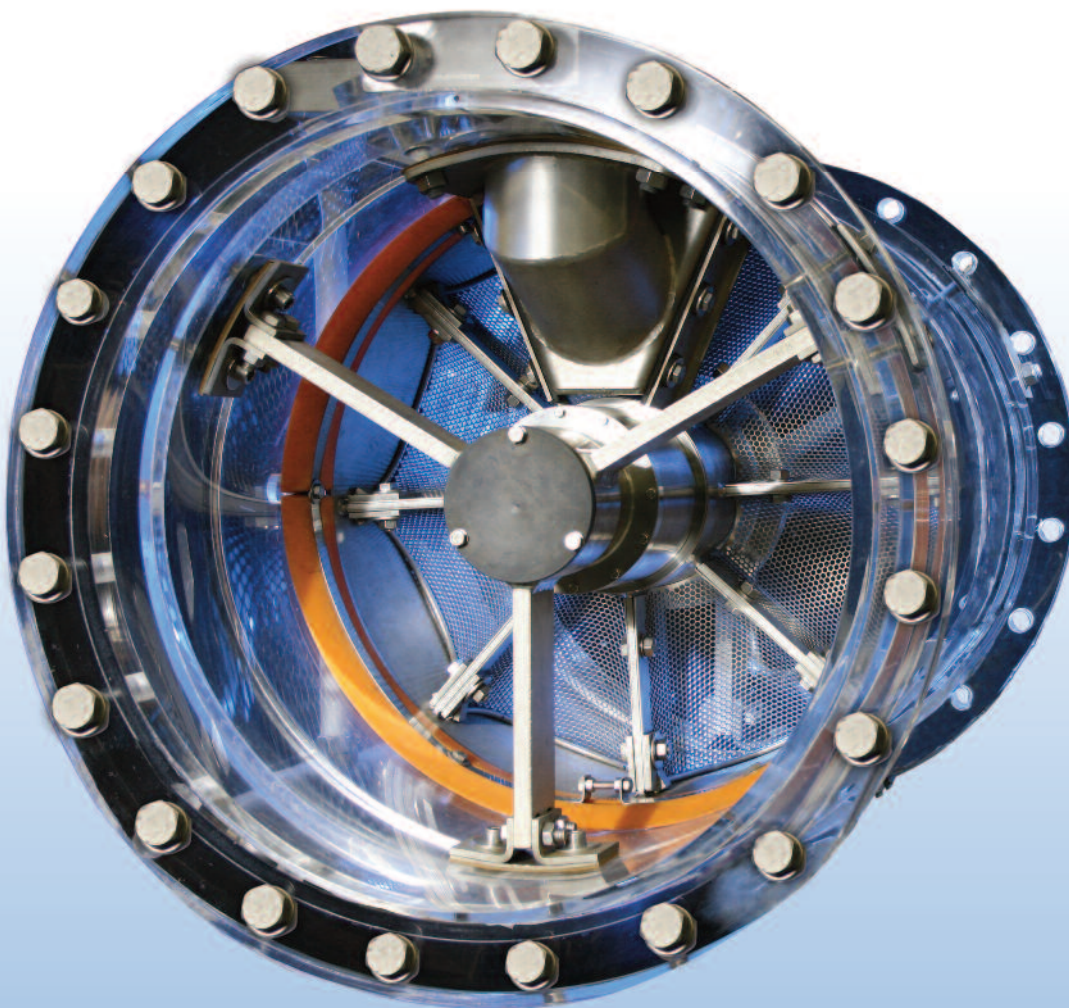


IN-TA-CT[®]

Filter Type PR-BW 800-C



Taprogge



Filtration

3

Compact high-performance debris filter with optimized cost-effectiveness

The PR-BW 800 high-performance debris filter, a design with many years of proven performance, has been expanded to include the new PR-BW 800-C model.

This model has been developed for the diameter range DN 600 (24") to DN 1200 (48") and has been optimized in particular with regard to its compact design and cost-effectiveness. The latter has been achieved through a further reduction of the pressure loss. With filter perforations from 2 to 11 mm (0.078 – 0.433"), most different types and amounts of fouling are reliably removed before they can enter into the objects to be protected downstream (condenser/heat exchanger/etc.).

In addition to its application in power stations, this filter is well suited for many industrial applications, as well.

Not only have the industry leading design elements of the PR-BW 800 filter been incorporated into the new model, like individual filtration chambers, a variety of filter elements, pressure-relieved backwashing, etc., the 800-C type has even been further developed in terms of its ultra compact design where the length of the filter approximately corresponds to its nominal diameter.



PR-BW 800-C filter in a power plant

Filter Design

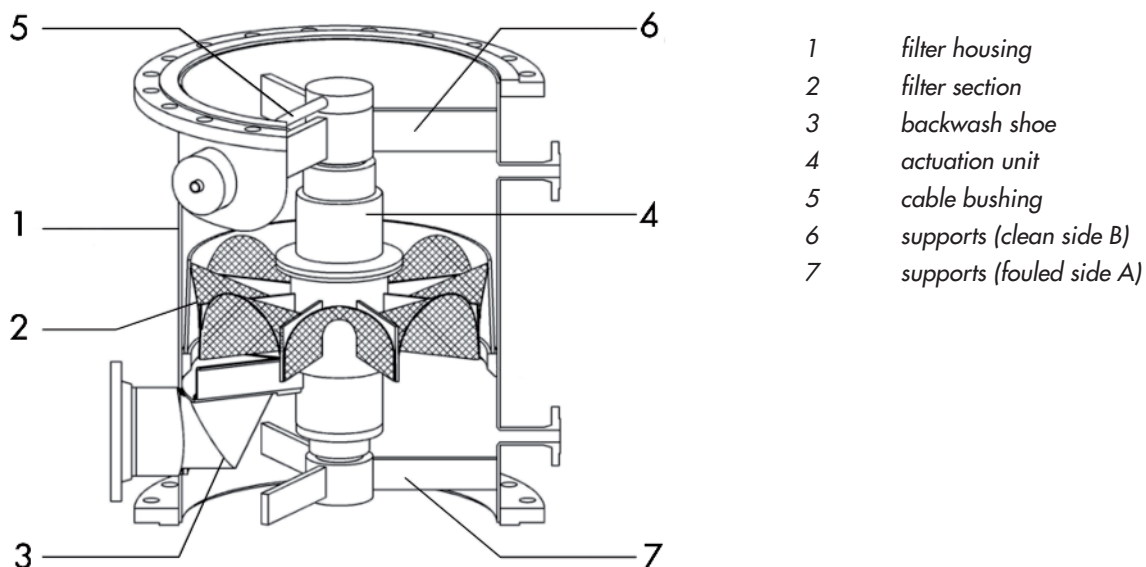
The filter housing (1) with flanges on both sides may be installed in any existing piping. Depending on the pipe diameter the filter section is divided into different numbers of chambers by supporting steel sheets.

The filter section (2) consists of radially arranged chambers. Fixed in each chamber, without gaps between inlet and outlet sides, is a segmented, concave shaped filter element. Depending on site specific requirements, these filter elements can be supplied in stainless steel with cylindrical or conical perforation, as grids, Cling-Free™ elements, or other special types.

The backwash shoe (3) is connected to the filter housing. During the backwash process the backwash shoe successively covers each of the segmented filter elements in a circular movement. Vortex inducers see to it that fouling is discharged completely and quickly.

The actuation device (4) consists of a drum motor that is bolted to the filter section. Multiple seals safely prevent the ingress of fouling and water into the actuation unit. A cable bushing (5) reliably separates the power supply to the actuation unit from the water flow.

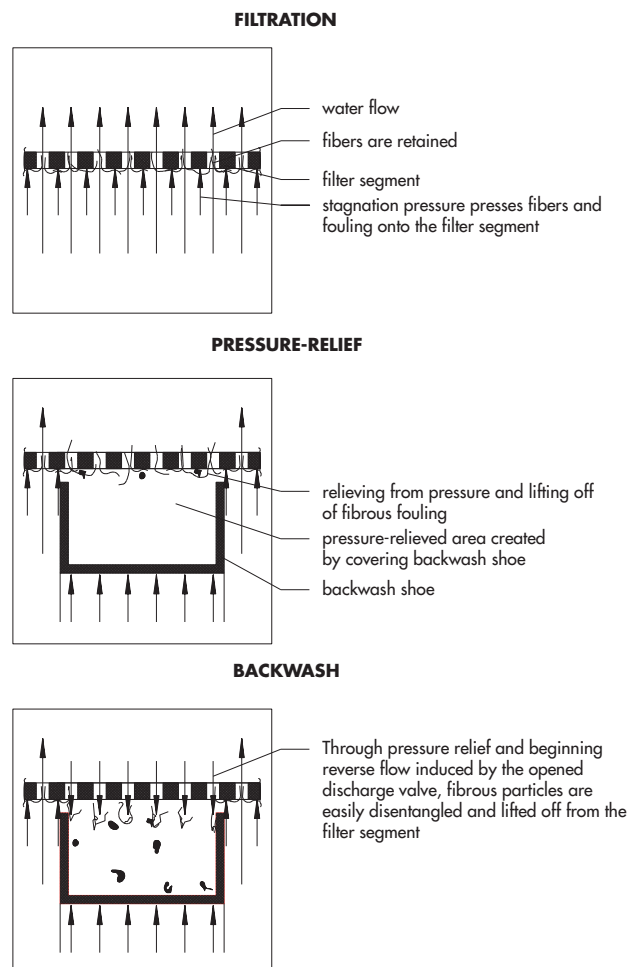
Both shaft ends of the motor are fixed through supports on the respective clean side (6), fouled side (7), respectively, in the filter housing.



Filter Functions

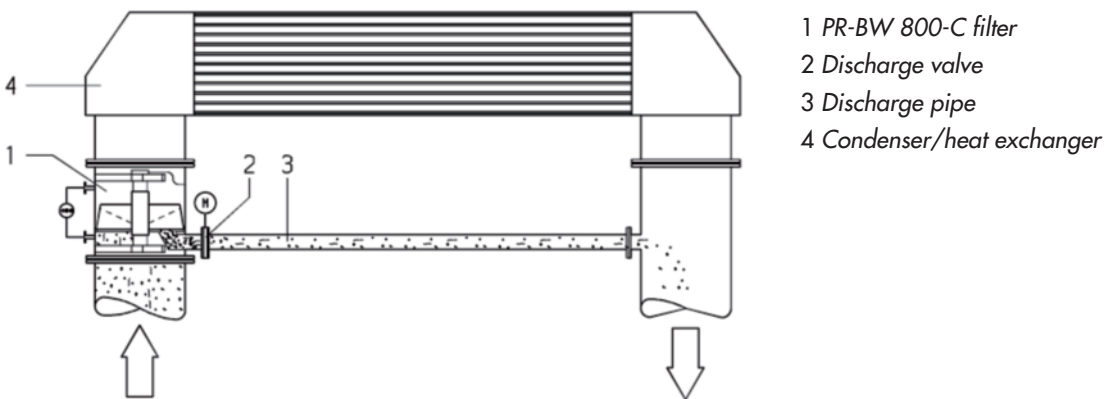
The fouling particles and fibers contained in the water are retained on the relevant filter segments in the filter chambers. With increased fouling, the differential pressure between the fouled and clean side of the filter increases until reaching a pre-set operational point. By the signal from the differential pressure measuring system, a timer, or via push button, the filter backwash process is initiated. The discharge valve opens and at the same time the filter section starts rotating. Once a complete filter segment is covered by the backwash shoe, it is entirely relieved from the pressure of the water flow, and the flow direction within the segment reverses starting from the clean side of the filter surface. In this way fouling is quickly and reliably discharged via the discharge pipe.

Principle of pressure-relieved backwash



Installation

Due to its compact design, the PR-BW 800-C filter can be adapted to nearly all existing piping systems. Normally, it is installed directly upstream of the object to be protected. The discharge pipe of the filter is arranged to by-pass the heat exchanger, for example, and discharge into the cooling water flow downstream of the exchanger. As the necessary pressure differential is caused by the heat exchanger resistance itself, it is not necessary to install pumps for the discharge of fouling. In different operating conditions, it is likewise possible to discharge fouling through a pipe by way of booster pumps.



Technical data

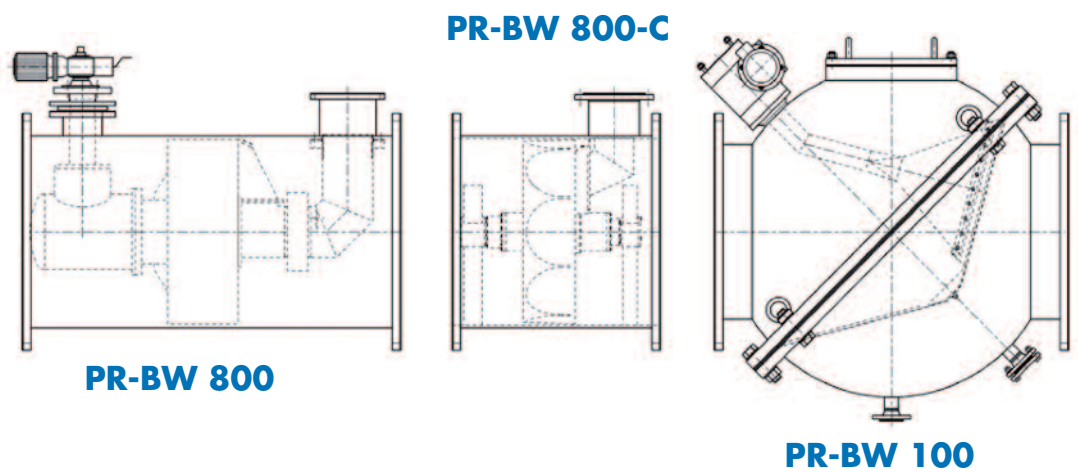
Series:	PR-BW 800-C
Volume flow:	900 – 12,000 m ³ /h (3,963–52,834 USGPM)
Connecting diameters:	DN 600 – DN 1200 (24"–48")
Filter fineness degrees:	2 – 11 mm (0.078–0.433")
Filter element:	perforated steel sheet or grid in stainless steel Cling-Free™ elements
Material of housing:	Steel, rubberlined
Temperature:	max. 50°C (120°F)
Debris discharge capacity:	1.9 l/m ³ (2 gallons of debris/1,000 gallons of discharge)
Control:	PLC (programmable logic controller)
Options:	FilterOptimizer Remote Monitoring Service
Special execution:	on request

Technical features and benefits

Compactness

The PR-BW 800-C model offers high performance in a compact design. Its unparalleled compactness opens up new installation possibilities at places where the application of filters was so far excluded due to space problems.

A comparison with previous filter solutions demonstrates the proportions.



Reliability

The use of proven design components from other TAPROGGE filter series guarantees the reliability of this model. These components, installed in thousands of systems with operational hours totaling several millions, provide us with unparalleled experience, and our customers with the security of a well-proven technology.

Economy

Through a standardization of components and optimized manufacturing and assembly procedures, not only are our delivery periods shorter in relation to previous filter types, but, also, lower costs are realized - which ultimately translates into a shorter payback time of your capital expenditure. Also, follow-up costs for installations and operation and maintenance are clearly reduced.

TAPROGGE Care & Comfort Package

Quality right from the start

- Performance by TAPROGGE as per ISO 9001
- Safety of design by fulfilling the requirements of the European Pressure Equipment Directive 97/23/EC
- Application of a management system for safety, health and environmental protection (SCC)
- Standard documentation; documentation upon Customer's request, respectively
- The use of extremely corrosion-resistant materials safeguards the preservation of the value of your capital expenditure

Compatibility by IN-TA-CT® Modules

- The PR-BW 800-C filter is a modular element of IN-TA-CT®, our integral principle for the optimization of cooling water circuits
- By combination with a TAPROGGE pre-screening system upstream and a TAPROGGE tube cleaning system type E1/D2 downstream, an effective overall solution according to IN-TA-CT®, our integral system, presents itself for the protection from macro and micro fouling. Without interfaces – and inclusive of the TAPROGGE System Guarantee.

Competence and experience all in one place

- Application consultancy, project management, fabrication, installation and commissioning of the PR-BW 800-C filter are available from TAPROGGE out of one hand.
- With more than 12,000 successful applications, TAPROGGE can make use of its application-technological experience in its special field that stands unparalleled the world over. This plus of competence is indispensable for difficult media and unknown cleaning behavior.
- In addition to that, the cooling water test circuit of TAPROGGE's Technology Center allows a particularly reliable and cost-effective simulation of site conditions.

Comprehensive Operator Support by IN-TA-S®

- By the installation and commissioning of the PR-BW 800-C filters, operators have immediate access to IN-TA-S®, our integral principle for the optimization of cooling water circuits
- By IN-TA-S®, TAPROGGE takes care of the operator in all questions of operation and maintenance. Scope, duration and frequency of the care can be determined by the operator.
- Particularly quick support is available to the users of our "Remote Monitoring Service".



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