NEW · DISPOSABLE IN-LINE FILTER WITH VISUAL CHANGE INDICATOR

RF-DIF-BN50SI – see when the filter is spent

The proven RF-DIF-BN50 disposable in-line filter, now with a silica-bonded element and an indicating dye: when red appears on the outside of the element, it is time to replace the filter. No guessing, no forgotten filters.

ARTICLE	EFFICIENCY	CHANGE SIGNAL	CONNECTION
RF-DIF-BN50SI	**99.99 % @ 0.01 µm**	**Red dye on the outside of the element**	**Ø 6.35 mm (¼″) spigots**

WHAT IS NEW

Disposable in-line filters protect analysers, sensors, sampling lines, pneumatic instruments and small consumers. Until now, the only way to know whether a disposable filter was still working was a fixed change interval – or a failure downstream.

RF-DIF-BN50SI carries an **indicating dye** in its borosilicate glass microfibre element. The transparent body lets you watch the element in service. As long as the outside of the element stays light, the filter is working. When **red becomes visible on the outside of the element**, the filter has reached the end of its useful life and must be replaced.



Fig. 1 – RF-DIF-BN50SI: transparent body, element visible in service.

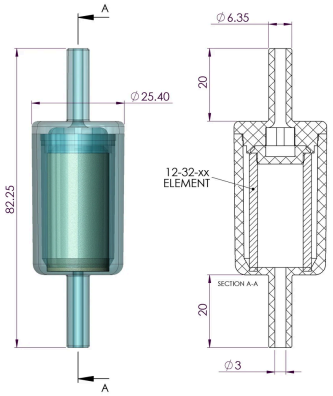
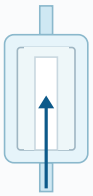


Fig. 2 – Flow from the inlet spigot into the inside of the element (inside → outside).

HOW THE INDICATOR WORKS

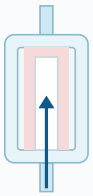
The gas must flow **from the inside of the element to the outside**. Captured liquid contaminants – typically oil aerosol and droplets – collect in the depth of the microfibre media and, as the element loads up, migrate outwards through the media. On their way they take up the indicating dye and carry it to the outer surface of the element.

A red outer surface therefore shows that the element is loaded through its full depth and that liquid would soon pass downstream. This is why the orientation matters: with the wrong flow direction the dye would show on the inside, where you cannot see it.



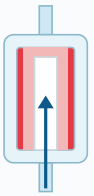
1 · New

Element light over its full length – filter in service.



2 · Loading

Liquid is held in the depth of the media – outside still light.



3 · Replace

Red dye visible on the outside of the element – replace the filter.

INSTALLATION & REPLACEMENT

- **Flow direction:** connect the inlet so that the gas flows into the inside of the element (Fig. 2). Mark the flow direction on the line.
- **Installation:** connect both ends with push-on hose or compression fittings for Ø 6.35 mm (¼″) spigots.
- **Replacement:** when red is visible on the outside of the element, disconnect both ends and fit a new RF-DIF-BN50SI **in the same orientation**.
- **Completely disposable** – body and element are replaced together; nothing to clean or reassemble.

TECHNICAL DATA

Article	RF-DIF-BN50SI (indicator version of RF-DIF-BN50)
Former article no.	RF-N05-CK-SI
Body	Nylon, transparent, welded
Filter media	Borosilicate glass microfibre, silica-bonded (stays white), with indicating dye
Grade / efficiency	Grade 50 – 99.99 % @ 0.01 µm
Element	12 × 32 mm
Connections	2 × hose spigot Ø 6.35 mm (¼″), bore Ø 3 mm
Dimensions	Overall length 82.25 mm, body Ø 25.40 mm
Rating	110 °C @ 0 bar – 50 °C @ 8.5 bar (limit set by the nylon body)
Flow direction	Inside → outside (mandatory)
Change signal	Red dye on the outside of the element

RF-DIF-BN50 VS. RF-DIF-BN50SI

	RF-DIF-BN50	RF-DIF-BN50SI
Efficiency	99.99 % @ 0.01 µm	99.99 % @ 0.01 µm
Body / connections	Nylon, Ø 6.35 mm	Nylon, Ø 6.35 mm
When to change	Fixed interval / visual inspection	**Red dye on the outside**
Flow direction	As marked	**Inside → outside**

- **Silica-bonded element – stays white:** standard binders can turn slightly brown when the filter is heated or oven-dried, and the element then looks damaged or dirty. The silica-bonded element of RF-DIF-BN50SI stays white. Efficiency is unchanged.
- The indicator shows loading with **liquid contaminants (e.g. oil)**. It is not a differential-pressure indicator: a filter loaded mainly with dry dust can block without turning red. In dry, dusty gas keep a change interval or monitor the pressure drop.
- Other efficiency grades with indicator are available on request – please ask us for your grade.
- Check chemical compatibility of the nylon body with your gas and observe the pressure/temperature rating. For higher pressures or temperatures use a stainless steel housing with differential-pressure indication.

Want to try RF-DIF-BN50SI?

Tell us your gas, flow, pressure and the equipment you protect – we confirm the right grade and send an offer.

info@filter-elements.eu

Product page & FAQ →
Engineering tool →