

CNG FUELLING STATIONS · EASTERN MEDITERRANEAN

CNG line filters at 200 bar: 50 coalescing filters for fuelling stations

A distributor needed a high-pressure coalescing filter for CNG station lines. We converted the standard flow into actual flow, chose the pressure class and standardised on one housing and one element.



MEDIUM

**Compressed
natural gas**

OPERATING
PRESSURE

200 bar(g)

FLOW

1,000 Nm³/h

LINE SIZE

1" NPT

QUANTITY

50 filters

SITUATION

A distributor supplying CNG fuelling stations asked for 50 line filters downstream of the compressors. The specification called for fine coalescing to protect dispensers and vehicle tanks from compressor-oil aerosols, at 200 bar and 1,000 Nm³/h.

TASK

Find a filter that is rated for the pressure, does not create excessive velocity at the actual flow, and keeps spare-part handling simple across 50 installations.

ENGINEERING APPROACH

- Convert standard flow into actual flow**
1,000 Nm³/h at 200 bar(g) corresponds to only about 3.8 / 4.3 / 4.7 m³/h actual flow at 0 / 15 / 30 °C. Sizing on Nm³/h alone would lead to massively oversized housings.
- Select the pressure class**
RF-H-150HP is rated for 200 bar. Where the station pressure has peaks or the customer wants margin, RF-H-150VP is rated for 400 bar in the same 1" NPT size.
- Choose the separation grade**
RF-C-51230-HE removes oil aerosols with 99.99 % efficiency at 0.01 µm, the fine-coalescing grade that was requested.
- Define the service rule**
Change the element at 0.7 bar differential pressure or at the latest once a year, whichever comes first.

PRODUCTS USED IN THIS CASE



RF-H-150HP
HOUSING



RF-C-51230-HE
ELEMENT

Anonymised application example. Customer name, project data and prices are not disclosed.

RECOMMENDED R+F CONFIGURATION



HOUSING

RF-H-150HP

316L stainless steel, 1" NPT, 200 bar,
200 °C, internal volume 1.5 L.



HOUSING WITH EXTRA MARGIN

RF-H-150VP

Same size, rated for 400 bar.



ELEMENT

RF-C-51230-HE

Coalescing element, 99.99 % at 0.01
µm.

LIMITS & OPEN POINTS

- Seals for rapid gas decompression (RGD) are available on request.
- Documentation and certificates are clarified with the offer; this note makes no approval statements.
- Connection is 1" NPT.

Result: One housing type and one element type for all 50 positions, sized on real operating flow, with a clear change rule for the station operators.

HOW WE WORK WITH YOU

1 · Send your data

Gas, flow, pressure, temperature,
contamination and connection size.

2 · Get a configuration

Housing and element with R+F article
numbers, limits stated openly.

3 · Order and service

Housings supplied with element fitted;
replacement elements available
individually.

Similar application? Let us size it for you.

Send us your operating data and we return a concrete filter configuration with R+F article numbers.

- Gas / medium and contamination
- Flow (Nm³/h or L/min), pressure, temperature
- Connection size (NPT) and installation position

info@filter-elements.eu

Online inquiry: process-gas-filter.com

Free filtration engineering tool

Read more: CNG & natural gas filtration · CNG station filtration train · Compressor oil in CNG · High-pressure gas flow sizing