

EPC / PLANT ENGINEERING · MIDDLE EAST

Nitrogen filters for an EPC project: two grades, one element

An EPC contractor requested four 316 stainless nitrogen filters with 1 µm and 0.3 µm grades. One coalescing element covered both requirements, so the plant needs only one spare-part type.


MEDIUM
Nitrogen
PRESSURE
7 bar(g)
FLOW
**≥ 100 Nm³/h per
filter**
MATERIAL
**316 stainless
steel**
REQUESTED GRADES
1 µm and 0.3 µm

SITUATION

An engineering contractor needed four nitrogen filters for a plant project: two positions with 1 µm and two with 0.3 µm, all in 316 stainless steel, at 7 bar(g) and at least 100 Nm³/h each.

TASK

Meet both filtration grades with a robust stainless design and avoid different element types for a plant that will be operated far from the supplier.

ENGINEERING APPROACH

1 Check actual flow

At 7 bar(g), 100 Nm³/h corresponds to roughly 13 m³/h actual flow (estimate at 15 °C). A 1" housing handles this comfortably.

2 Standardise the housing

RF-H-150 in 316L with 1" NPT for all four positions.

3 One element for both grades

RF-C-51230-HE separates 99.99 % at 0.01 µm and therefore exceeds both the 1 µm and the 0.3 µm requirement. Result: a single spare-part type.

PRODUCTS USED IN THIS CASE



RF-H-150
HOUSING (ALL 4)



RF-C-51230-HE
ELEMENT (ALL 4)

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

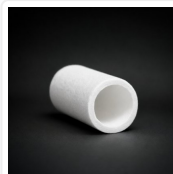
RECOMMENDED R+F CONFIGURATION



HOUSING (ALL 4)

RF-H-150

316L stainless steel, 1" NPT.



ELEMENT (ALL 4)

RF-C-51230-HE

Coalescing element, 99.99 % at 0.01 µm
– covers 1 µm and 0.3 µm.

LIMITS & OPEN POINTS

- Connection standardised to 1" NPT.
- The pressure regulator in the same package was not part of our scope.
- Differential pressure and change interval are confirmed with the offer for the actual operating data.

Result: Four identical filters, one element type for all positions and a clear sizing basis for the contractor's documentation.

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

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