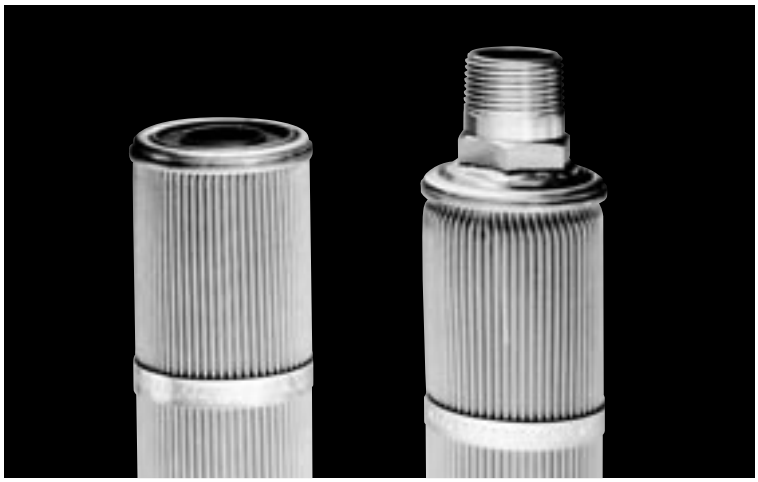
Pall Corporation

Rigimesh® Filter Elements



Description

Rigimesh® porous metal filter elements are extremely permeable and are constructed of high dirt capacity stainless steel (type 304 or 316L) woven wire mesh. Rigimesh media outperform other meshes because they are *sintered* woven wire meshes with higher void space. Pall sinters the wires at their points of contact, producing an extremely strong porous material whose wires will not shift under stress and whose pore size integrity is continually maintained. This patented Pall process permits use of finer diameter wires in manufacturing the filter medium. The net result is a filter with more pores per unit area, providing more dirt-holding capacity than that of an unsintered mesh made from coarser wires. Designs are available which are suitable for temperatures up to 600˚F/315°C.

Operating Characteristics

Standard cartridges are capable of withstanding a collapse differential of 125 psid in the forward flow (outside-in) direction and up to 600°F† and 10 psid in the reverse flow direction.

Sizes

The standard Rigimesh filters are cylindrical forms of pleated medium, 2 ½ inches in diameter in 10 inch multiple lengths, up to 30 inches. For AB style Rigimesh filters consult the factory.

Table I. Rigimesh Elements and Their Characteristics

Filter Grade	Removal Ratings				Clean Pressure Drop		Recommended Flow Density	
	Liquid Service(1) Rating In µm At % Efficiency		Gaseous Service(2)		Liquid Service	Gaseous Service		
	98%	100%	Weight % Removal	100% Removal (µm)	Aqueous Pressure Drop(3) psi/gpm/ft²	Air Pressure Drop(4) psi/acfm/ft²	Aqueous gpm/ft²	Air acfm/ft²
Z*	1.5	15	99.92	2	0.035	0.0038	1 – 5	10 – 40
K	5	18	99.45	13	0.0073	0.0008	2 – 8	20 – 60
J	10	25	99.20	18	0.0020	0.00025	3 – 10	25 – 80
M	17	45	98.65	25	0.0015	0.00019	4 – 15	30 – 100
R	40	70	–	55	0.0006	0.00008	5 – 20	35 – 150
S	70	105	–	85	0.0004	0.00006	6 – 25	40 – 200
T	145	225	–	175	0.0003	0.00005	7 – 30	45 – 240
A	300	450	–	350	Negligible	Negligible	8 – 40	50 – 300

† Threaded connector series only. Due to seal limitations, 1000 Series suitable for applications up to 450˚F.

* Supramesh sintered powder metal and mesh composite medium.

(1) Liquid removal efficiency ratings are based on hard spherical particles.

(2) Weight percent removal data is based on AC Fine Test Dust in air. Absolute retention ratings are calculated values.

(3) Pressure drop in psi obtained by multiplying value shown by actual flow desired in gpm, viscosity of liquid in centipoise (if other than 1 cp), all divided by total filtration area (ft²) selected. See Table II for areas.

(4) Pressure drop in psi obtained by multiplying value shown by actual gaseous flow rate desired (acfm), ratio of viscosities $\frac{\text{actual cp of gas}}{0.018 \text{ (viscosity of air)}}$ all divided by total filtration area (ft²) selected. See Table II for areas.

Part Numbers / Ordering Information

Table II. Standard Configurations of Rigimesh Elements

100% Removal Rating (µm)		Rigimesh Series Element Part Numbers	
Liquids	Gases	1000 Series	Threaded Element Series
15	2	MB ■ 100 ▼ RZ ●	◆ – 24 – ▲ – ■ – RZ
18	13	MB ■ 100 ▼ RK ●	◆ – 24 – ▲ – ■ – RK
25	18	MB ■ 100 ▼ RJ ●	◆ – 24 – ▲ – ■ – RJ
45	25	MB ■ 100 ▼ RM ●	◆ – 24 – ▲ – ■ – RM
70	55	MB ■ 100 ▼ RR ●	◆ – 24 – ▲ – ■ – RR
105	85	MB ■ 100 ▼ RS ●	◆ – 24 – ▲ – ■ – RS
275	175	MB ■ 100 ▼ RT ●	◆ – 24 – ▲ – ■ – RT
450	350	MB ■ 100 ▼ RA ●	◆ – 24 – ▲ – ■ – RA

Gasket Options	● Code
Viton*	H
Teflon*	H2
Silicone	H4
Buna-N (Std.)	H13
Ethylene Propylene	J
Butyl	J1
Neoprene	J2
Ethylene Propylene for Steam Service	J7

Nominal Length (in)	■ Code (Area (ft²))	
	MB S MB L	MB F MB LF
10	1.0	2.0
20	2.0	4.0
30	3.0	6.0

Nominal Length (in)	▼ Code
10	1
20	2
30	3

Area (ft²)	◆ Code	
	P	F
1.0	1.0	–
2.0	2.0	4.0
3.0	3.0	–
4.0	–	4.0
6.0	–	6.0

Nominal Length (in)	▲ Code
10	10
20	20
30	30

Housing Information

A full selection of standard Pall industrial housings are available for Rigimesh elements. Threaded connector elements are designed to fit a special line of housings capable of a broader range of temperature (cryogenic to 800°F) and chemical service. Custom designed housings for specific applications are also available.

Connection	■ Code
1″ NPT	4
1 $^{1}/_{2}$″ NPT	6

S= 304 hardware and 304 L medium.

L= 316 hardware and 316L medium.

* Trademark of E.I. du Pont de Nemours & Company.

Table III. Housings for Rigimesh Elements

Type of Element	Housing Available
MB ■ 100 Series	See Housing Data Sheets H1, H3-11, and H14-19.
Threaded Connector Series	See Housing Data Sheets H48, H49, and H50.

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