

Complete removal of solid particles, condensed water, and oils

Long filter life, even in high use conditions

No effect by the filter on the composition of the gas

Complete resistance to corrosion



Filter System for Gasoline Engine Analyzers

Model 58N Filter Housing

The Model 58N housing is a rugged, economical housing with a 1/8" NPT drain. The transparent polycarbonate bowl and the nylon head, tie rod, and element retainer are resistant and non-absorbent to all components of the sample stream. The Balston 58N filter housing has much better corrosion resistance and is more economical than other filters used in this application.

Grade 404 Microfibre® Filter Cartridges

The Balston Grade 404 Microfibre Filter Cartridges were developed specifically for use in sample lines to Gasoline Engine Analyzers. The filter cartridges are composed of borosilicate glass and polyolefin fibers. They have a 93% retention efficiency at 0.1 micron and offer a significantly higher solids holding capacity and lower pressure drop than conventional resin-bonded glass microfibre filter cartridges. The Balston Grade 404 filter cartridges are hydrophobic and drain water much more rapidly than all-glass fiber cartridges, greatly reducing the possibility of loss of NO₂ and other water-soluble components from the gas sample.

When installed with inside-to-outside flow direction, the Grade 404 filter cartridges are efficient, fast-draining coalescing filters. When installed with outside-to-inside flow direction, the pure white surface of the filter tube permits quick visual estimation of the dirt loading on the filter cartridge.

In addition to the standard 100-12 size, Grade 404 Microfibre Filter Cartridges are available in sizes to fit all Vehicle Emission Analyzer filter housings.

Principal Specifications

| Inlet/Outlet Model | Ports | Drain Port | Materials of Construction | | | | Max. Press. | Max. Temp. | Filter Cartridge Replacement |
|--------------------|----------|------------|---------------------------|---------------|-----------|-------|-------------|--------------|------------------------------|
| | | | Head | Bowl | Internals | Seals | | | |
| 58N | 1/4" NPT | 1/8" NPT | Nylon | Polycarbonate | Nylon | Buna | 10 psig | 150°F (66°C) | 100-12-404 |

Ordering Information

For Assistance, call 800-343-4048, 8AM to 5PM Eastern Time. Email: balstontechsupport@parker.com

| Filter Housing Order Code | Units Per Box | Filter Cartridge Order Code | Cartridges Per Box | Comments |
|---------------------------|---------------|-----------------------------|--------------------|--|
| Model 58N | 1 | 100-12-404 | 10 | Filter cartridge not included, must be ordered separately. |

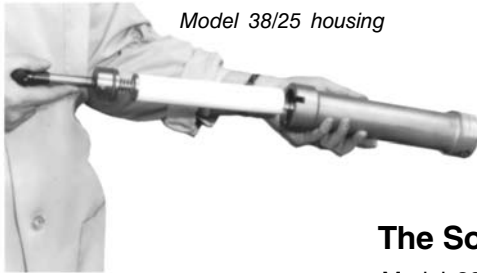
Balston Filter System for Diesel Engine Analyzers

Provides These Performance Features:

- Complete removal of suspended impurities from the gas stream
- Totally inorganic filter cartridge is inert and contains no extractables
- Temperature capability to 600°F (315°C)
- Filter housing designed for convenient external heating
- Long life filter element with internal prefilter
- Rapid, convenient filter cartridge change, even when unit is hot

Problems Associated with Diesel Engine Exhaust

- 1 The diesel exhaust has a much higher concentration of suspended solid particles and non-volatile liquid droplets.
- 2 Diesel engine exhaust has a high dew point and therefore must be kept hot to prevent liquid condensation which would affect accuracy of analysis. To avoid contamination of sample lines with dirt and oil, most diesel engine analysis systems are designed with the primary filter close to the inlet of the sample system. The filter is externally heated to prevent liquid condensation when the system is started up, but during prolonged operation, the filter often is subjected to engine exhaust gas temperatures, which normally could be 350°F to 450°F (176°C to 232°C) and occasionally get as high as 600°F (315°C).



Model 38/25 housing

The Solution: Model 38 Filters

Model 38 filters, designed specifically for diesel engine exhaust, are all-stainless steel housings with silicone seals (maximum temperature 600°F/315°C). The 1/4" NPT inlet and outlet ports are located at one end of the cylindrical body, and the bayonet closure for changing the filter cartridge is located at the opposite end. To maintain constant temperature, the body may be wrapped in heating tape or enclosed in an oven. The novel closure design permits an operator wearing gloves to replace a filter element rapidly, without disturbing the heating provisions or gas flow connections. The filter housing may be oriented horizontally, vertically, or at any other convenient attitude.

The standard size Model 38/25 housing has a 10-inch (25 cm) long body. Where the installation requires a smaller size housing, the Model 38/12 with 5 1/2 inch (14 cm) long body is available.

The Grade DH21 filter cartridge, composed of borosilicate glass microfibers and inorganic binder, is inert to all components in the gas and stable to 900°F (482°C). The retention efficiency is 93% of 0.1 micron particles and 100% of 2 micron and larger particles. With flow direction through the filter tube inside-to-outside, the internal prefilter in the Grade DH21 cartridge provides satisfactory life in a relatively dirty environment. Since the dirt is trapped on the inside of the cartridge, the external surface of the cartridge and the filter housing remain free of contaminants.

The Model 38 housing can also accommodate a Balston Grade H cartridge, as needed for particular applications. If a standard Grade H cartridge is to be used in a Model 38 filter housing, a special element retainer (P/N 30205) must be ordered and installed in place of the standard element retainer.



Model 38/12

Ordering Information

For Assistance, call 800-343-4048, 8AM to 5PM Eastern Time. Email: balstontechsupport@parker.com

| Filter Housing | Housing Order Code | Units Per Box | Filter Cartridge Order Code | Cartridges Per Box | Comments |
|----------------------------------|--------------------|---------------|-----------------------------|--------------------|---|
| Standard Length | Model 38/25 | 1 | 100-25-DH21 | 10 | Filter cartridge not included with housing, must be ordered separately. |
| Short Length | Model 38/12 | 1 | 100-12-DH21 | 10 | |
| H-Cartridge Element Retainer Kit | | P/N 30205 | | | |

