



# SUPASEP LGP LIQUID/GAS COALESCERS

PROTECTING YOUR PROCESS | **OIL & GAS**  
UPSTREAM | MIDSTREAM | DOWNSTREAM

**AMAZON**

# Delivering Quality Filtration Product

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As one of Europe's leading manufacturers of process filters, Amazon Filters is able to offer solutions for all your filtration and separation needs.

We offer a comprehensive product range of filtration and separation media. This, coupled with manufacturing and design expertise, enables us to provide truly industry specific filtration systems. We manufacture a wide range of depth and pleated filters ensuring the optimum product can be supplied for the key applications found in Upstream, Midstream and Downstream operations. For liquid applications we are able to offer both absolute and nominal rated filters with either nylon or polypropylene media. This range includes [SupaSpun II](#), [SupaGard](#), [SupaPleat II](#), [SupaPleat FFC](#), [Contour](#) and [VisClear](#) cartridges, [DuoLine bags](#) and [SupaMesh](#) metal filters. Our filters are used in many applications including Produced Water, SRP membrane protection, Amine Sweetening and Glycol streams. With operating systems positioned worldwide, Amazon Filters has built a reputation for designing high quality filter vessels to support the range of premium specification filters.



## Customer Commitment

Delivering quality filtration products to our customers is one of the major factors in Amazon's success. Another, is in providing a level of customer service that few, if any, competitors can match. Recognised as a reliable and trustworthy supplier, Amazon targets first class service performance in terms of on-time deliveries; same-day despatch and quick response to enquiries. These are some of the factors that make Amazon stand out from the competition.

## Approvals

Amazon Filters is accredited to the latest revisions of ISO 9001, ISO 14001 and ISO 45001 ensuring the highest standards in quality, environment and health & safety for our customers and employees.

Our design team is fully conversant with the increasing technical demands of pressure vessel design codes including ASME VIII, PD5500 and EN13445. All our products meet the demand of ATEX and conform to the latest version of the Pressure Equipment Directive (PED) 2014/68/EU.

# SupaSep LGP

## Highly Efficient & Cost-Effective Coalescing Technology

The removal of fine liquid aerosols from process gas streams is essential in protecting equipment and guaranteeing process performance. The new **SupaSep LGP** provides a design with exceptional separation performance based on a combination of pleated and meltblown technology to promote rapid drainage of the coalesced liquid and eliminate potential carry-over.

Developed in partnership with leading academic experts in coalescing technology, the new design utilises a patented process for the application of the outer drainage layer. This innovative design is key to the performance of **SupaSep LGP**.

The highly efficient pleated glass microfibre coalescing media ensures that the fine aerosols are coalesced to large droplets as they travel through the depth of the media.

The patented meltblown drainage layer then ensures the coalesced liquid can quickly separate and drain to the base of the filter. The fine inter-pleat fibres promote the disengagement of bulk liquid from the downstream side of the coalescing media whilst the graded density structure of the drainage layer controls velocity profiles to prevent re-entrainment into the gas flow.

This innovative design provides downstream liquid levels typically below 3ppb<sub>w</sub>, ensuring downstream processes are fully protected.



## Application Areas

**SupaSep LGP** is suitable for any application where a process needs to be protected or improved through the removal of liquid aerosols from a gas stream including:

- |  |   |
|--|---|
| <b>Compressor and Turbine Protection</b>       | • Removal of solid particles and entrained liquid on gas intake |
| <b>Gas Sweetening and Dehydration</b>          | • Minimise amine/glycol losses and foaming                      |
| <b>Low and Ultra Low NOx burner protection</b> | • Minimise amine/glycol losses and foaming                      |
| <b>Separation Membranes and Sieves</b>         | • Protection of critical membranes                              |
| <b>Ammonia Gas</b>                             | • Removal of Lubrication Oil                                    |
| <b>Transmission Lines</b>                      | • Protection of Turbines  |
| <b>BioGas</b>                                  | • Cleaning up gas prior to compressing                          |

## Oleophobic/Oleophilic Treatments

**SupaSep LGP** uses inherently oleophilic materials. The design philosophy has been centred around creating an innovative meltblown structure that actively promotes drainage of the coalesced liquid. This contrasts with other designs that rely on post oleophobic treatments on the drainage layers that can potentially deteriorate over time.

## Design Features & Benefits

| Design Feature   | Advantage   | Benefit  |
|--|---|--|
| Patented meltblown drainage and anti re-entrainment zone | Drainage layers are bonded to the pleats for increased strength             | Prevents pleat movement during variable flow which could damage the GF media           |
|  |   | Pleat separation is guaranteed maximising surface area and minimising pressure drop    |
|  |   | Prevents drainage layer separating from coalescing layer which could reduce efficiency |
| Inter pleat microfibres                                  | Accelerated drainage of the coalesced liquid                                | Larger volumes of liquid can be separated  |
|  |   | Operating differential pressures not affected by flow interruption                     |
| Oleophilic drainage                                      | Prevents 'beading' of coalesced liquid on the outside of the drainage layer | Prevents small droplets re-entraining into the gas stream                              |
| High effective filtration area                           | Lower pressure drops and increased dirt holding capacity                    | Lower capital and maintenance costs  |
| Available in standard and large format design            | Optimum design configuration  | Lower capital and operating costs  |
| High efficiency coalescing media                         | Maximised coalescence with low saturated differential pressure              | Lower operating costs  |
| Heat bonded endcaps                                      | Elimination of resins and adhesives   | More robust product, minimal chance of endcap detachment                               |

## Technical Data

| Dimensions        | Standard | Plus  |
|-------------------|----------|-------|
| Outside Diameter: | 66mm     | 153mm |

### Materials of Construction

|                   |                                  |
|-------------------|----------------------------------|
| Filtration Media: | Glass Microfibre                 |
| Drainage Layer:   | Polypropylene or Polyester       |
| Core / Cage:      | 304 Stainless Steel              |
| Endcaps:          | Polypropylene (PP) or Nylon (PA) |

### Maximum Operating Conditions

|                |   |
|----------------|---|
| Temperature:   | 82°C                                      |
|                | 65°C (for version 11B when water present) |
| Pressure Drop: | Sized to customer requirements            |

### Performance

|             |   |
|-------------|---|
| Efficiency: | 99.99% with <3ppbw remaining oil content downstream<br>(Testing based on modified CAGI-400) |
|-------------|---|



## Ordering Guide

| 11A  | C  | G0X -                            | 40   | A                                | V          | A |
|--|--|----------------------------------|--|----------------------------------|------------|---|
| Media  | Endcap   | Nominal Length                   | End Caps                                   | Seal                             | Branding   |   |
| 11A - Pleated GF with Polypropylene Outer Drainage Layer<br>11B - Pleated GF with Polyester Outer Drainage Layer | A - PP Endcaps 66mm<br>B - PA Endcaps 66mm<br>C - PP Endcaps 153mm<br>D - PA Endcaps 153mm | 09 - 10"<br>30 - 30"<br>40 - 40" | 0 - DOE<br>2 - Code 2<br>A - SOE (153 dia) | V - Viton (Supplied as standard) | A - Amazon |   |

Example: 11ACG0X-40AVA = SupaSep Plus - Pleated GF with PP drainage layer, PP endcaps, Nominal Length 40" Long, SOE Endcaps, Viton Seal

## New & Retrofit Applications

Our engineers can work with you on new applications to design the most appropriate system or we can retrofit existing installations with our technology. Below are the common retrofits available. For availability on additional retrofits, please contact your Amazon Filters representative.

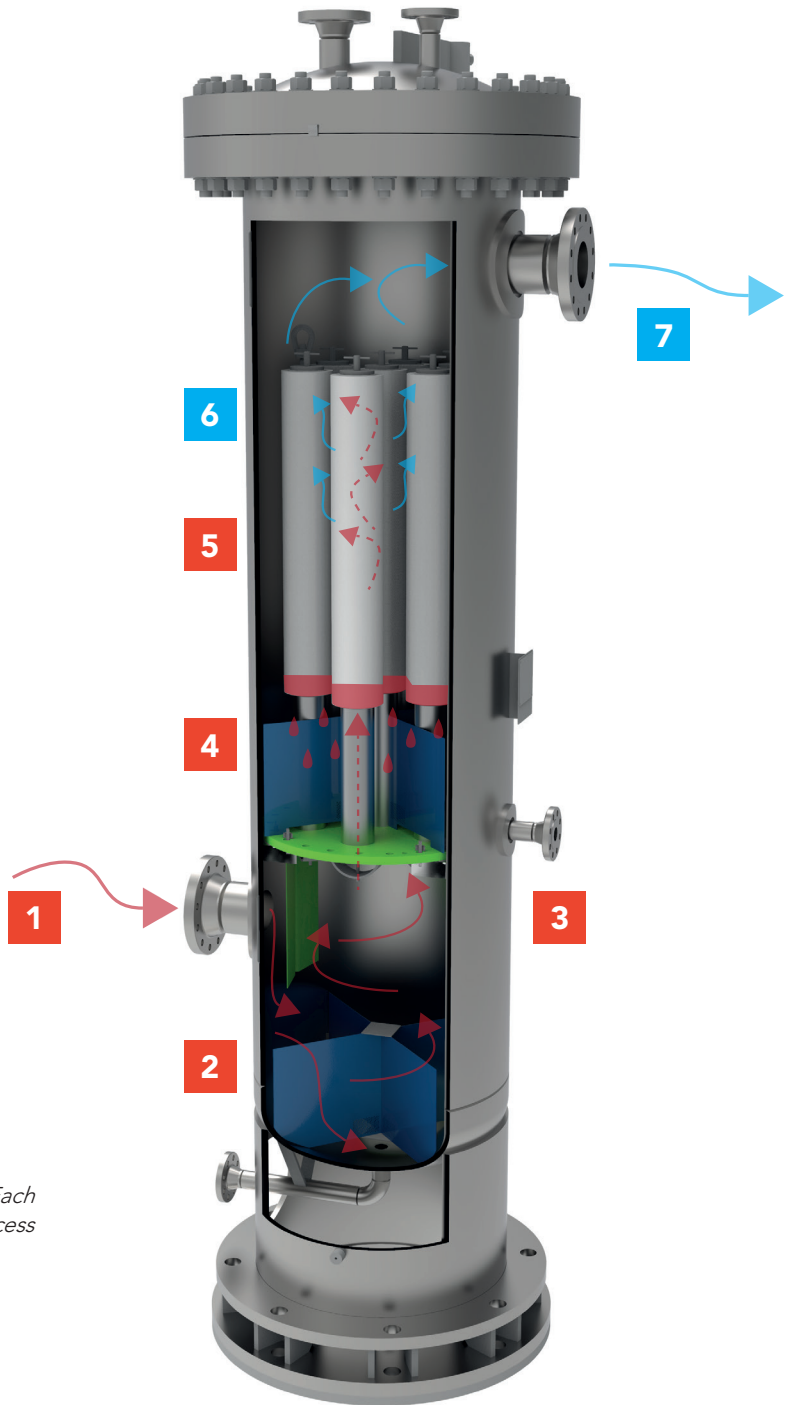
| Competitive Part Codes and Equivalent SupaSep LG Codes |                            |               |                            |                            |               |
|--|----------------------------|---------------|----------------------------|----------------------------|---------------|
| Seprasol <sup>1</sup>                                  | Amazon Code                |               | Seprasol Plus <sup>1</sup> | Amazon Code                |               |
|  | Recommended                | Alternative   |                            | Recommended                | Alternative   |
| CC3LGB7H13   | 11AAG0X-302VA              | -             | CS604LGH13                 | 11ACG0X-40AVA              | -             |
| CC3LGA7H13   | 11AAG0X-302VA <sup>2</sup> | 11BAG0X-302VA | CS604LGDH13                | 11ACG0X-400VA <sup>2</sup> | 11BCG0X-400VA |
| CC3LG02H13   | 11AAG0X-300VA <sup>2</sup> | 11BAG0X-300VA | CS604LGBH13                | 11ACG0X-40AVA              | -             |
|  |                            |               | CS604LGBDH1                | 11ACG0X-400VA <sup>2</sup> | 11BCG0X-400VA |

<sup>1</sup> Seprasol and Seprasol Plus are registered trademarks of Pall Corporation  
<sup>2</sup> The standard construction for the **SupaSep LGP** product is with polypropylene componentry. This is the recommended replacement unless process conditions dictate that a polyester construction is required.



# Coalescer Principle

1. Contaminated gas enters the housing.
2. Internal impingement plates provide primary separation.
3. Small aerosols travel to the inside of the **SupaSep LGP**.
4. Coalescence occurs through highly efficient GF media.
5. Bulk liquid drains by gravity through the patented meltblown layer.
6. Gas velocity controlled to prevent re-entrainment.
7. Clean gas exits.



*The above design is a representation of one application. Each housing design is bespoke depending on customer process parameters and the quality of gas required.*

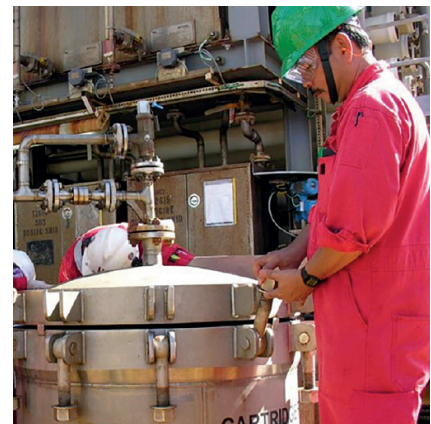
# Engineering Capabilities

Amazon Filters has particular strength in the design and manufacture of filter housings for the critical demands of the Oil and Gas industry. We have extensive experience in fabricating vessels in Duplex (UNS S31803), Super-Duplex (UNS S32750/60) and 316 stainless steels. We can also supply carbon steel vessels lined with rubber, vinyl ester or glass flake.

Amazon Filters also offer its **27 Series GRP** housing specifically for brackish and seawater applications.

Our design team is fully conversant in the increasing technical demands of pressure vessel design codes including ASME VIII, PD5500 and EN13445. All our products meet the demand of ATEX and conform to the latest version of the Pressure Equipment Directive (PED) 2014/68/EU.

Amazon Filters has onshore and offshore installations in service globally. Amazon Filters accredited design and build systems have offered EPC contractors and final clients the products demanded on time, to specification, making us an ideal partner for new project installations.



# Interested in Our Liquid Filtration Solutions?

Our engineers can work with you on new applications to design the most appropriate system or we can retrofit existing installations with our technology. Below are the common retrofits available. For availability on additional retrofits, please contact your Amazon Filters representative.

| Amazon Product | Water Injection | Produced Water | Completion Fluids | Membrane Protection (SRP & Desal) | Amine Filtration | Glycol Filtration | Diesel Filtration |
|----------------|-----------------|----------------|-------------------|-----------------------------------|------------------|-------------------|-------------------|
| SupaGard*      | ✓               |                | ✓                 |                                   |                  |                   |                   |
| SupaSpun II*   | ✓               | ✓              | ✓                 | ✓                                 | ✓                | ✓                 |                   |
| SupaPleat      | ✓               | ✓              | ✓                 | ✓                                 | ✓                | ✓                 | ✓                 |
| SupaCarb       |                 |                |                   | ✓                                 | ✓                | ✓                 |                   |
| SupaSorb       |                 | ✓              |                   |                                   |                  |                   |                   |
| SupaMesh       |                 | ✓              | ✓                 |                                   |                  |                   | ✓                 |

\*Available in KilBac variant for prevention of cartridge biofouling. If you are looking to retrofit other manufacturers, contact your Amazon Filter representative.



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