



FILTRATION SOLUTIONS FOR BUILDING SERVICES



FILTRATION SPECIALISTS

Delivering quality filtration products...



As one of Europe's leading manufacturers of filtration systems, Amazon Filters is able to offer a solution to meet all your filtration needs.

Amazon Filters understanding and knowledge of Closed Loop Water Circuits in the Building Services sector is our strength. This industry experience enables us to provide you with optimum filtration solutions for your particular process.

We design and manufacture an extensive range of liquid filtration systems, providing one of the widest selections of filtration vessels, depth filters and pleated cartridges available today. Amazon's filters are manufactured in clean room conditions and all products come with detailed Product Validation Guides and Technical Support documentation.

Customer Commitment

Delivering quality filtration products to our customers is only one of the major factors in Amazon Filters 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 dispatch; quick response to enquiries and answering 95% of telephone calls within two rings. These are some of the factors that make Amazon stand out from the rest.

Quality Approval

Amazon Filters is accredited to ISO9001:2008 by one of the worlds most prestigious and respected accreditation bodies, the British Standards Institute. Our certificate number is FM 39584. To support and complement the Company's quality systems, Amazon Filters is also actively engaged in gaining approvals for its products in specific industries. For example, **SupaSpun II** filters have been accredited for use in public water supplies under Regulation 31 of the UK Water Supply (Water Quality) Regulations 2000, one of very few products to achieve this high standard of approval. Our products have also been independently tested and verified for the effective removal of Cryptosporidium. We also have the ability to carry out in-house testing on products and processes to provide a complete service for all clients.

Closed Loop Water Circuits

Typically, closed loop water circuits employed as part of the environmental control systems, will be contaminated with suspended solids produced by the corrosion of pipework and other components of the system. This contamination can cause abrasive wear and tear, foul heat exchangers and affect the operation of valves. This will often result in poor temperature control within the building. The problem is often increased due to contamination by water-born microorganisms such as Pseudomonas. Circulating bacteria or biofilm coating pipework can be chemically treated with biocides, but although this process may hinder further proliferation of bacteria, the 'dead' material will add to the quantity of recirculating particulate matter.



Amazon Filters recommends the use of Side Stream filtration systems to help solve these problems. The use of these systems is also recommended by the Building Services Research and Information Association (BSRIA publication AG 1/2001: Pre-commission Cleaning of Pipework Systems ; Parsloe C) for both the initial clean up and for the ongoing maintenance of pipe-work systems. We have designed and supplied systems for LTHW, CHW and condensate circuits.

Side Stream System Design

A Side Stream filtration system is designed to treat 5 - 15% of the main water circuit flow to remove both

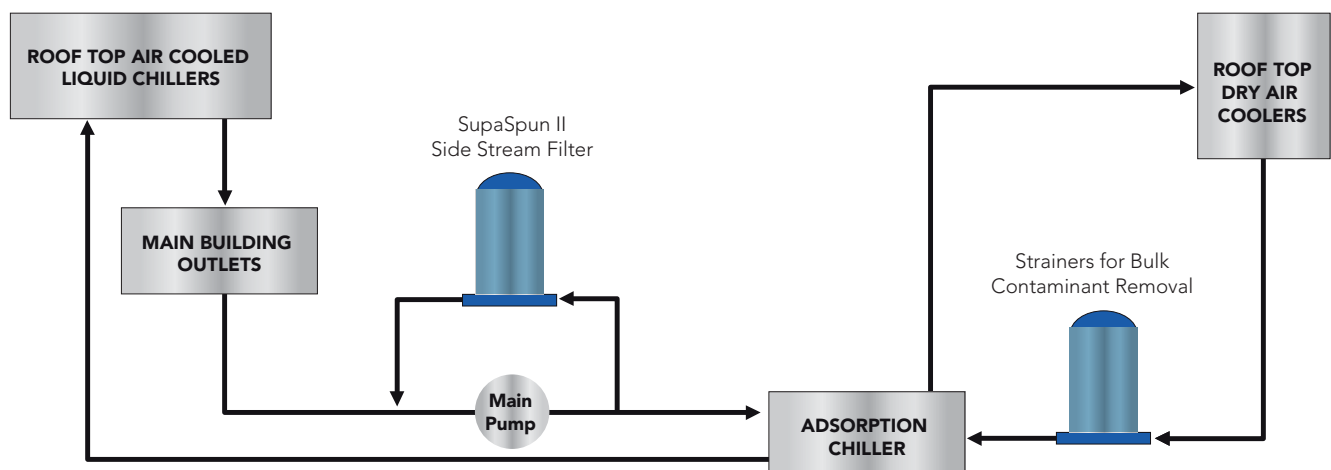
suspended solids and the chemically treated biomass. A typical system would consist of an Amazon Stainless Steel 61 Series filter housing and Amazon SupaSpun II filter cartridges.

SupaSpun II filters are available in a range of absolute micron ratings so the removal efficiency can be adjusted so as to achieve a progressive clean up of the recirculating water. Typically a 20µm rated filter is used for the initial clean up. Once this is achieved a finer filter can be used e.g.10µm absolute. We recommend the use of absolute rated filters as unlike nominal filters they maintain their removal efficiency for contaminants throughout the lifetime



Continued overleaf

Example Chilled Water System



of the filter even under varying water quality conditions.

Side Stream filters are typically installed inside in the Building Plant Room. A variety of operator friendly accessories can be fitted to the vessels to make installation, operation and filter change-out as easy as possible. These include drain valves, pressure gauges and vent valves. On certain applications with high iron content, Rare Earth Ferrostik magnetic assemblies are used for removal of iron based contaminants. An automatic vent valve can also be incorporated on the filter housing to help eliminate trapped air from the system.



Installation recommendations are available from Amazon Filters. Normally if there is at least 2 barg positive pressure they are installed on the positive side of the system pumps. The outlet pipe work of the filter should be connected to the suction side of the pump. Where the feed pressure is less than 2 bar the filters are installed in separate loop systems serviced by an independent booster pump.

Benefits of Installing Amazon’s Side Stream Filtration Systems

- Protection of automated valving from fouling to ensure effective building temperature control is maintained
- Removal of suspended solids to reduce abrasive wear and tear on process plant
- Removal of chemically treated biomass to further reduce pipework degradation
- Separation of entrapped air from closed loop systems
- Reduced time and lower labour costs when compared to a conventional flushing regime
- Reduced maintenance, equipment downtime and repair costs

Cooling Tower Loops

Buildings located in urban areas are likely to experience significant contamination of the water circuits within the cooling tower system. Dirt and particles generated by vehicles, local building works etc will be transferred from the air passing through the cooling tower to the cooling water. If the level of this contamination is not controlled, it will affect the operation of the heat exchange system the cooling water feeds into. Amazon Filters recommends the use of cleanable mesh strainers in the water circuit to remove the bulk of this contaminant. Typically, we supply

duplex systems consisting of our **88 Series** housings, strainers and the appropriate valving to allow continuous operation. One filter system can be operated whilst the other system is isolated and cleaned. The system is designed with the operator in mind and allows easy access for the removal of filter baskets.

Please contact us at sales@amazonfilters.co.uk for further information on our product range for Building Services applications.



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