

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Industrial Biotechnology Industry

A guide to products and services



ENGINEERING YOUR SUCCESS.

Adding value to your business

Through total fermentation solutions

Supported by innovative products, state-of-the-art technical facilities and an international team of specialists, Parker Hannifin understands the specific needs of your process. Our dedicated filtration and separation range features novel fermentation solutions that increase capacity, improve yields and reduce contamination risks.

Products designed with you in mind

Parker domnick hunter filtration and separation solutions have been delivering value to large-scale fermentation processes around the world for more than 40 years. Whether producing healthcare products, food additives, enzymes, biofuels or industrial chemicals, we have partnered with the leading names in industrial biotechnology to produce unique and trusted solutions for bulk fermentation applications.

From class leading sterile gas products and novel integrity test instrumentation to the innovative TURBOSEP for complete fermenter and off-gas control, we can provide an entire package of filtration and separation solutions around the fermenter.

Dedicated technical services

Parker's commitment to customers goes beyond the supply of high quality products. Our unique and customizable Purecare support packages are specifically designed to continually improve your efficiency and increase process control while guaranteeing product quality.

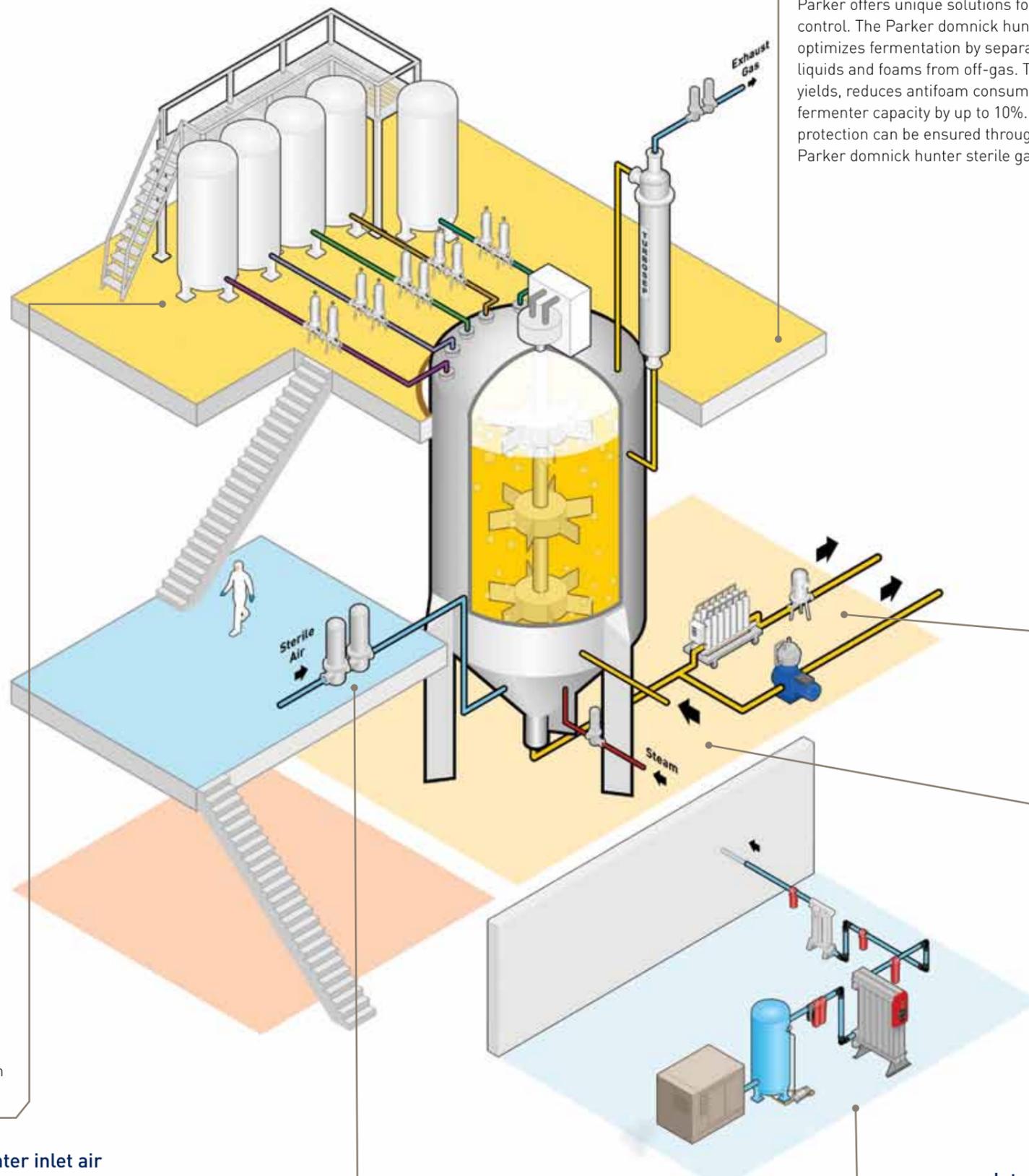
With Purecare, your filtration and separation systems are designed by experts to meet your individual needs. Moreover, we work closely with you to ensure the smooth operation of your process, continually minimizing costs and boosting productivity.

Global support with a local perspective

Wherever you are in the world or whatever your fermentation filtration and separation requirements, Parker's dedicated support team are there to help you get the most out of your filtration systems.

With multiple laboratory and manufacturing facilities and a network of sales companies operating in more than 50 countries worldwide, we can offer you a truly global support service.





Fermenter additions

Sterilization of fermenter additions is essential to maintain optimum growth conditions in the fermenter and to prevent batch contamination.

Antifoam

Traditional heat stabilization of antifoam can not only affect its efficacy but is also very difficult, if not impossible to validate. Parker has experience in providing fully validated filtration solutions for the sterilization of antifoam using the Parker domnick hunter PROPOR range.

pH adjusts - acids and bases

pH adjusts require sterilization in order to remove bacterial spores which can be activated once introduced into fermentation media. Parker's product range includes both PES and PTFE filters for compatibility with a range of liquid acids and bases, as well as ammonia gas additions.

Nutrient feeds

Heat sterilization of nutrient feeds can reduce their efficiency and exacerbate chemical corrosion of stainless steel pipework. An excellent alternative is to utilize Parker domnick hunter PEPLYN PLUS and PROPOR SG to provide sterile filtration of nutrient feeds, thereby eliminating these issues.

Sterile water

Cost-effective sterile filtration of make-up water can be achieved using Parker domnick hunter PROPOR SG sterilizing grade filters. Additional sterile water is required to replace any fermenter volume lost through evaporation.

The alternative method of water replacement through steam injection can result in damage to the fermentation organism.

Fermenter inlet air

The supply of sterile air to the fermenter is paramount in preventing costly contamination that could lead to lower yields or even total product batch loss. The Parker domnick hunter gas purification range can ensure the quality of fermenter inlet air from compressed air systems to final sterilizing grade filters from the TETPOR and BIO-X ranges.

Fermenter off-gas

Parker offers unique solutions for complete off-gas control. The Parker domnick hunter TURBOSEP optimizes fermentation by separating aerosols, liquids and foams from off-gas. This improves yields, reduces antifoam consumption and increases fermenter capacity by up to 10%. Environmental protection can be ensured through the class-leading Parker domnick hunter sterile gas range.

Downstream processing

Parker offers a range of microfiltration solutions for downstream processing applications including water sterilization and chromatography column protection.

Steam generation utilities

Parker domnick hunter steam filters have been specifically designed to protect process equipment and pipework from particulate contamination during steam-in-place sterilization of process lines.

Compressed gas utilities

Parker domnick hunter is market leader in compressed gas purification and nitrogen generation solutions with a range of technologies and services to guarantee the efficient and trouble-free operation of your compressed gas utilities.

Integrity testing

In addition to the PORECHECK IV instrument for liquid-based integrity testing, Parker can offer a unique solution specifically developed for fast and efficient testing of sterile gas filters with the Parker domnick hunter VALAIRDATA II aerosol challenge tester.



Products

Air and gas prefiltration



OIL-X PLUS - Removal of high levels of oil and water from compressed air.



TURBOSEP - Mechanical separation of fermente off-gas for optimized fermentations.



PEPLYN AIR - Efficient, high capacity general prefiltration to sterilizing gas filters.

PREPOR GFA - Exceptionally high flowing air prefiltration resulting in smaller installations.

Sterilizing air and gas filtration



HIGH FLOW BIO-X - Fast and cost-effective depth media sterilization of fermenter inlet air.

TETPOR AIR - Economical PTFE membrane sterilization of fermenter inlet air.



HIGH FLOW TETPOR II - High performance air and gas sterilization of fermenter inlet air and off-gas with unrivalled flow rates and steam life.

HIGH FLOW TETPOR H.T. - Effective sterilization of gas streams at continuous temperatures up to 100 °C (212 °F).

Steam filtration



Steam filters - sintered and pleated options for effective protection of process equipment and pipework.

Liquid clarification and prefiltration



PEPLYN PLUS - All polypropylene filters for reliable, cost-effective prefiltration of liquids.

PREPOR GF - Glass fibre depth media for economical removal of particulate and micro-organisms.



PROSTEEL - Stainless steel element for robust prefiltration of liquids.

Sterilizing liquid filters



PROPOR HC - High capacity sterilizing filtration for efficient processing of difficult to filter solutions.

PROPOR SG - Fast, reliable and cost effective PES membrane sterilization of liquids.

TETPOR LIQUID - PTFE membrane for effective sterilization of aggressive liquids.

Other Parker products



PORECHECK IV - Water intrusion, pressure decay and bubble point testing of membrane liquid filters.



VALAIRDATA II - Fast and efficient aerosol challenge testing of sterile gas filters.



Filter housings

Single and multi-round liquid and gas housings designed specifically for fermentation applications.

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