Dairy Capability

Parker

dh

domnick hunter

Also available from Parker domnick hunter

- Complete Process Product Filtration Range
- Process Filter Datasheets
- Full Range of Process Housings
- Integrity Testing Equipment

- Parker domnick hunter Complete Product Range
- Process Filter Datasheets
- Full Range of Process Housings
- Integrity Testing Equipment

- Full TSG Capability
- Dedicated Support Team
- Contract Support
- Technical Analysis

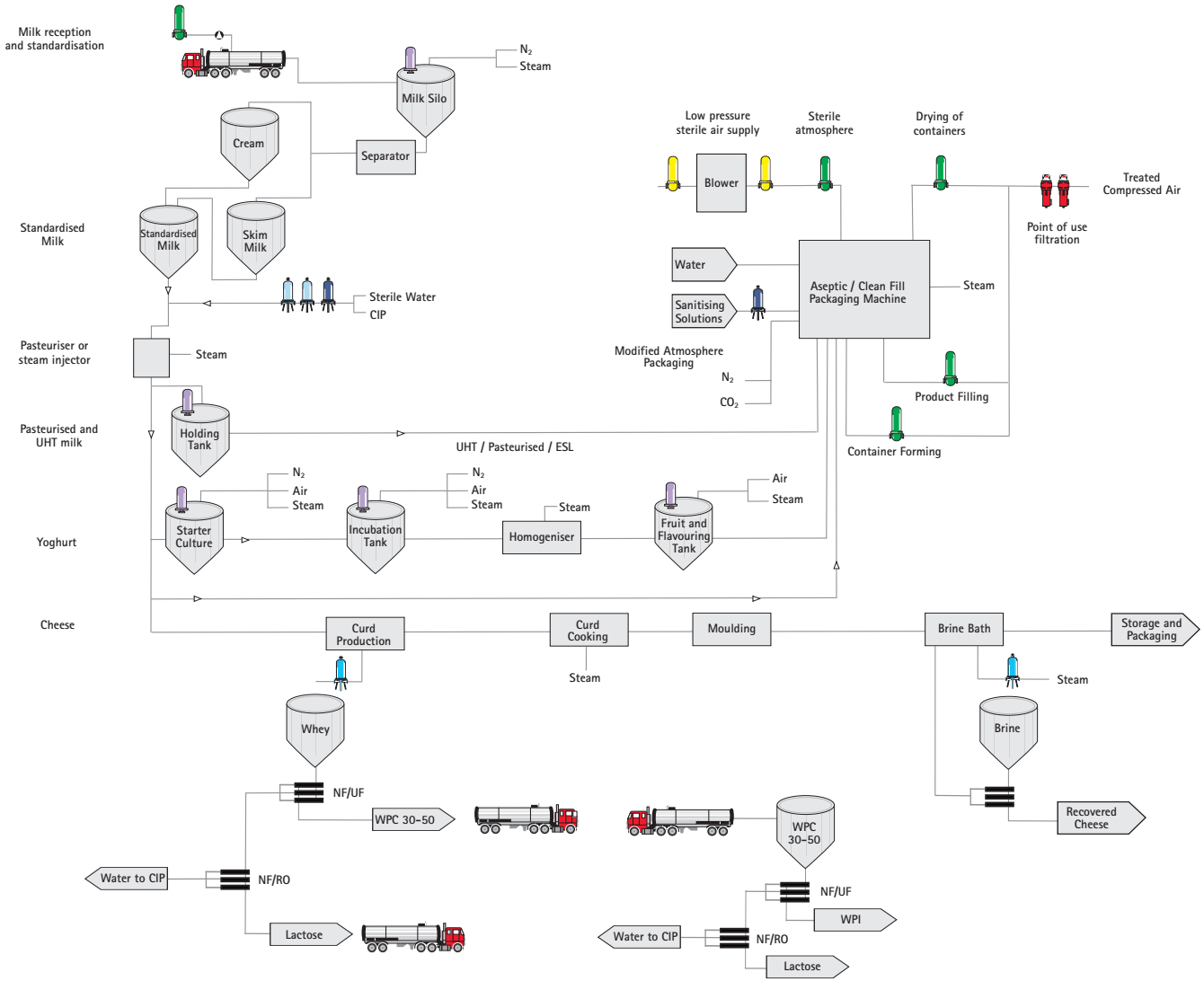
For more information please contact:

0191 410 5121

dhprocess@parker.com

www.domnickhunter.com

Typical Dairy Process



Key

- Steam Filter
- Sterile Gas Filter
- Liquid Prefilter
- Liquid Prefilter
- Vent Filter
- Coalescing Filter

contents


CUSTOMER FOCUSSED
Continued Investment in Manufacturing
State of the Art Laboratory Facility
Custom Fabrication Facility
Membrane Manufacturing
Dedicated Technical Support
Sterile Liquid and Gas Filtration
Integrity Testing Equipment
Global Support

Process Filtration

....providing complete filtration solutions

Parker domnick hunter specialises in the manufacture and supply of high quality products for the clarification, stabilisation and sterilisation of liquids and gases, providing full scaleability from membrane flat stock discs to multi-element filter systems. Each filter range has been specifically developed for industry requirements.

We have a vast range of filtration experience enabling us to provide innovative and cost effective solutions for all your filtration requirements.

Parker domnick hunter's commitment to service is reflected in our comprehensive before and after sales service.

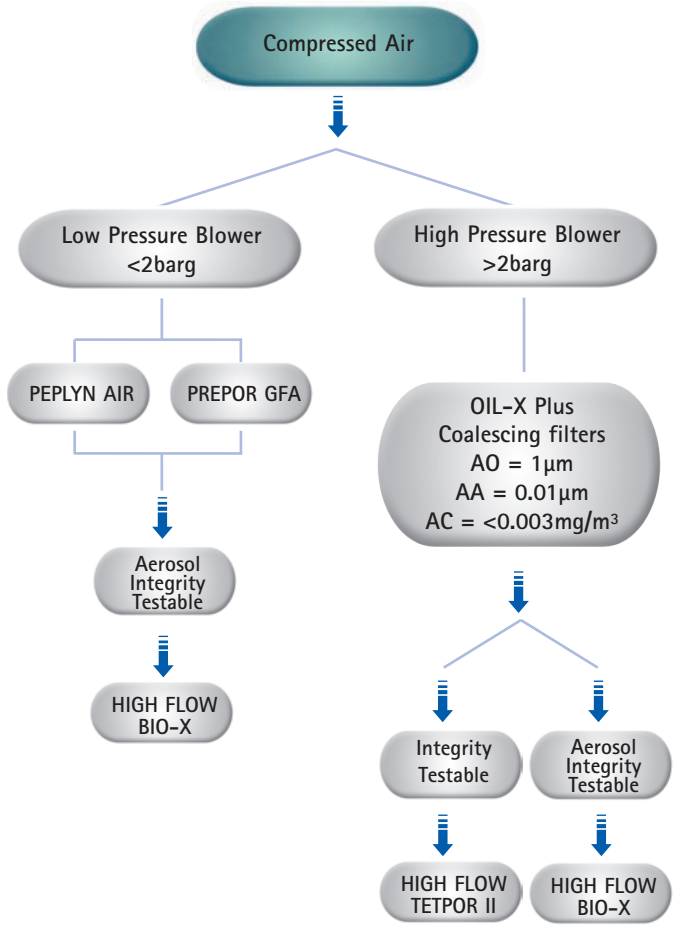
Our worldwide assistance extends to on-site evaluations, design, manufacture, validation, quality control and ongoing support long after the filters are installed.

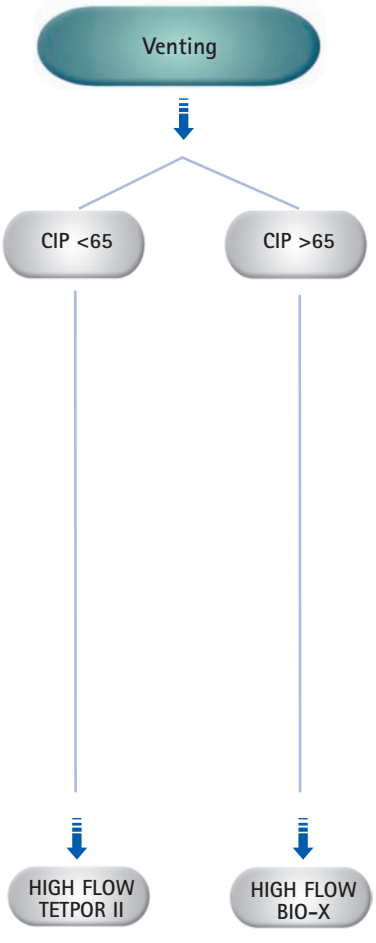
We supply the best products for you, when and where you need them.

In 2005 **domnick hunter,** became part of the Parker Hannifin Corporation, with annual sales exceeding $10 billion, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems.

We have a vast range of filtration experience enabling us to provide cost effective solutions for all your filtration requirements. We have the capability to work across application areas including:

- Biopharmaceutical
- Beverage
- Chemical
- Electronics
- Fermentation
- Food and Dairy
- Healthcare and Cosmetics
- Hospitals
- Paints and Inks
- Petrochemical


Compressed Air
Low Pressure Blower <2barg
High Pressure Blower >2barg
PEPLYN AIR
PREPOR GFA
Aerosol Integrity Testable
HIGH FLOW BIO-X
OIL-X Plus Coalescing filters
AO = 1µm
AA = 0.01µm
AC = <0.003mg/m3
Integrity Testable
Aerosol Integrity Testable
HIGH FLOW TETPOR II
HIGH FLOW BIO-X


Venting
CIP <65
CIP >65
HIGH FLOW TETPOR II
HIGH FLOW BIO-X

Sterile Air

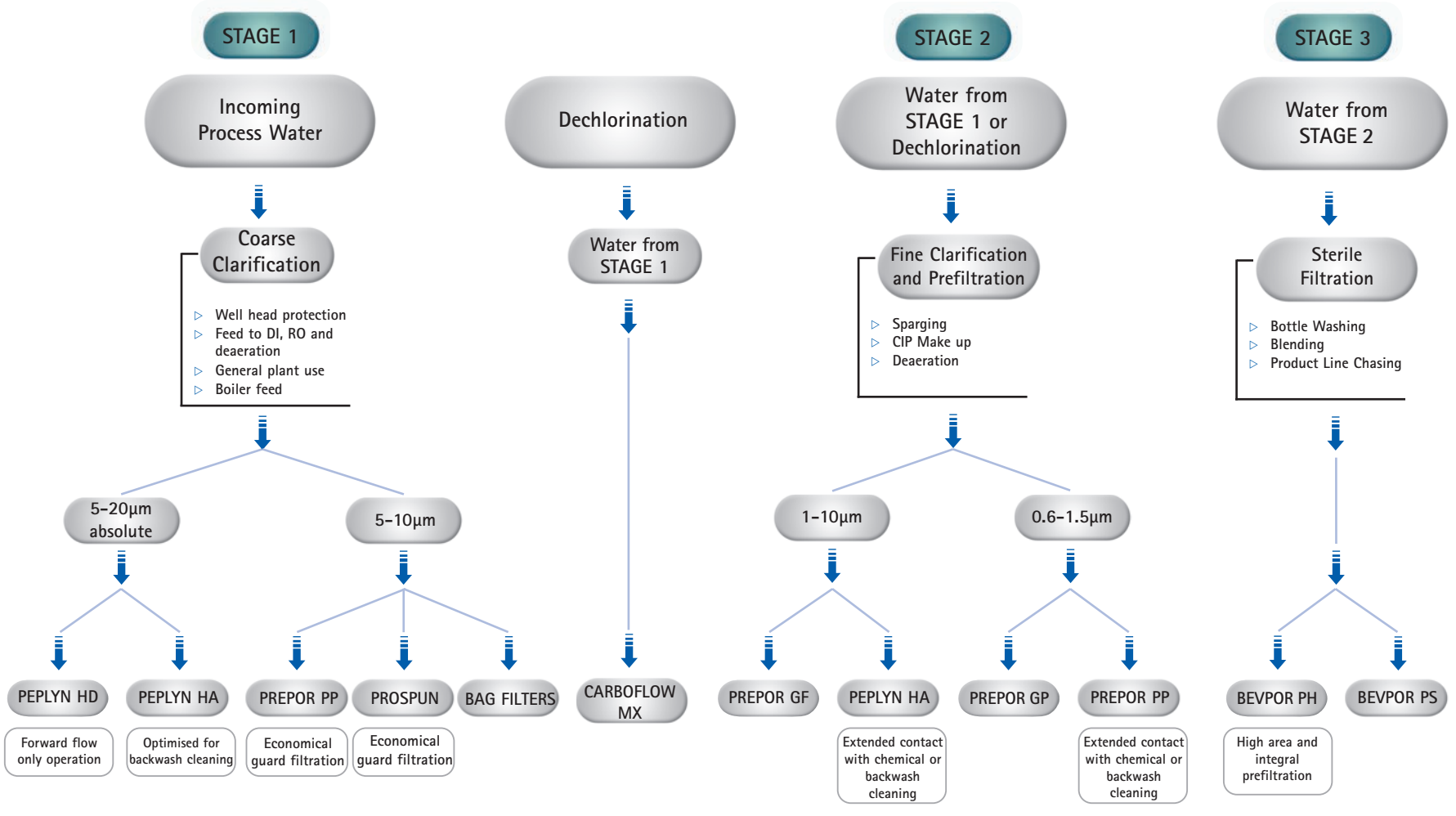
extending shelf life

Parker domnick hunter manufacture a range of filters primarily to provide a sterile air supply to aseptic and clean fill packaging machines. Hygiene standards within the dairy industry are rising on an annual basis to guarantee uniformity of product quality, as well as satisfying the ever-increasing demand for longer shelf life allowing the final product to be sold across national boundaries.

Parker domnick hunter offers pleated cartridge filters and advanced design wrapped filters that utilise high technology PTFE impregnated media. The filters can be tested using a simple aerosol technique that is correlated to bacterial and bacteriophage retention. The ability to test these filters fits well into both quality and HACCP frameworks.

Cost effectiveness and a proven track record of maintaining integrity following very aggressive steam cycles mean that glass microfibre depth filters become the filter of choice for the majority of applications in the dairy industry. However filters incorporating PTFE membranes are also used in some instances.

- Filters validated for both live aerosol bacterial challenge and bacteriophage challenge.
- Complete range of retrofits available
- Unique choice of PTFE membrane or hydrophobic depth media
- All products meet recommended 3-A sanitary standards 604-05


STAGE 1
Incoming Process Water
Coarse Clarification
Well head protection
Feed to DI, RO and deaeration
General plant use
Boiler feed
5-20µm absolute
5-10µm
PEPLYN HD
PEPLYN HA
PREPOR PP
PROSPUN
BAG FILTERS
Forward flow only operation
Optimised for backwash cleaning
Economical guard filtration
Economical guard filtration
Dechlorination
Water from STAGE 1
CARBOFLOW MX
STAGE 2
Water from STAGE 1 or Dechlorination
Fine Clarification and Prefiltration
Sparging
CIP Make up
Deaeration
1-10µm
0.6-1.5µm
PREPOR GF
PEPLYN HA
PREPOR GP
PREPOR PP
Extended contact with chemical or backwash cleaning
Extended contact with chemical or backwash cleaning
STAGE 3
Water from STAGE 2
Sterile Filtration
Bottle Washing
Blending
Product Line Chasing
BEVPOR PH
BEVPOR PS
High area and integral prefiltration

Water

clear options, clear results

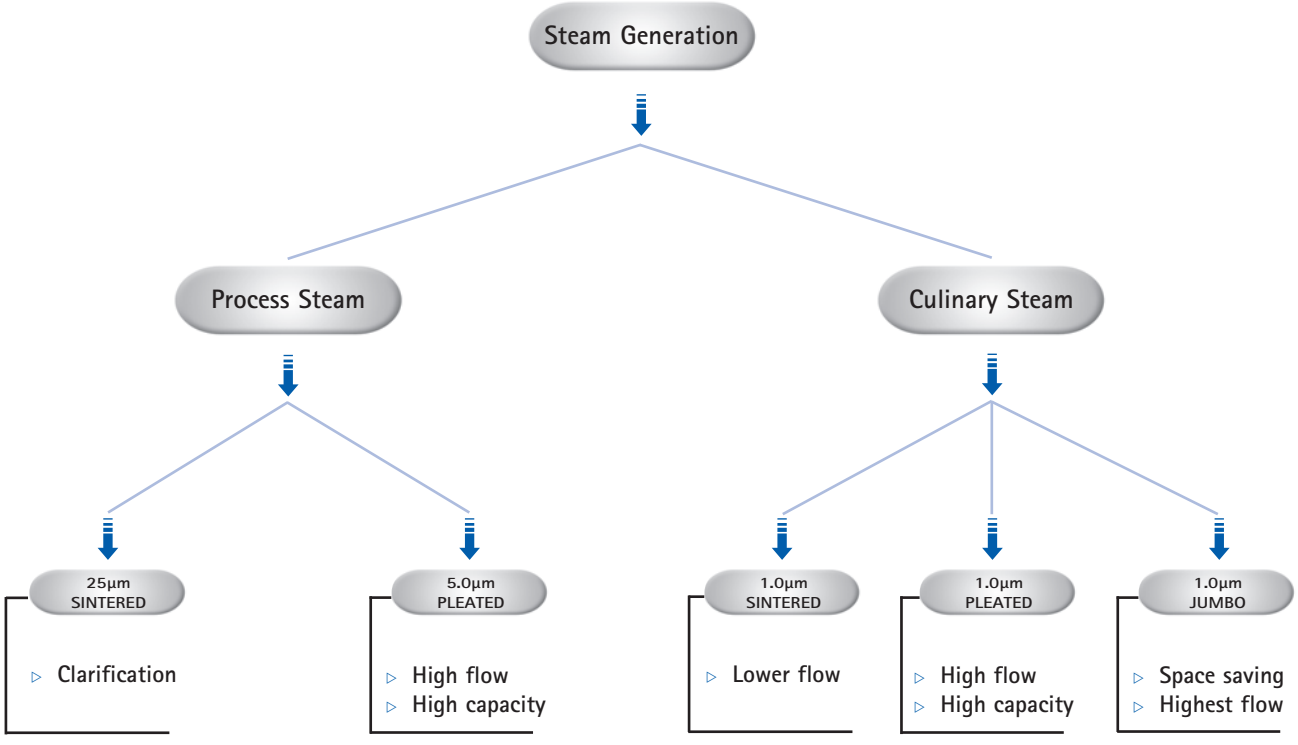
Water is an essential but expensive commodity. It has many uses in the dairy and the level of treatment required differs according to the source and quality of the incoming water, as well as the application that it is to be used for.

Water for general use will require coarse clarification to remove larger particles. This can be economically achieved using general clarification filters from the PROSPUN or PROPLEAT ranges. The other extreme is that water used for bottle washing or for blending should be sterilised to ensure that no extraneous microorganisms are introduced. The BEVPOR range of polyethersulphone (PES) membrane filters are ideal for water sterilisation. For intermediate production stages and make-up of CIP solutions, where the water is used to clean and sanitise pipework, bottling equipment and process filters, fine clarification offered by PREPOR GF and PEPLYN range filters are ideal.

Multi-barrier techniques may be used, for example where water for blending requires softening or deionisation to prevent dissolved salts from causing sensory defects. In this case filter selection is based on the combined performance of the overall treatment process.

- **Wide range of retention ratings provides coarse and fine clarification and sterilising options.**
- **Options to suit filtration-only and multi-barrier treatment.**
- **High mechanical strength and chemical resistance enable washing and regeneration of the filters to increase service life.**
- **Positive impact on quality assurance and HACCP frameworks.**




Steam Generation
Process Steam
Culinary Steam
25µm SINTERED
5.0µm PLEATED
1.0µm SINTERED
1.0µm PLEATED
1.0µm JUMBO
Clarification
High flow
High capacity
Lower flow
High flow
High capacity
Space saving
Highest flow

Steam

for general plant and culinary applications

Steam used to sterilise product contact surfaces should be of culinary quality to ensure that it does not contaminate the product with particles or chemicals that could be damaging to the quality of the product or hazardous to the consumer. The water quality used for culinary steam generation is addressed in The Food and Drugs Administration's Code of Federal Regulations. The quality of the water and permitted boiler additives are addressed specifically in the following Code of Federal Regulations:

Water Quality: CFR Title 40 Parts 141,142 and 143

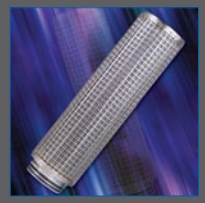
and

Boiler Additives: CFR Title 21 Chapter 1, Section 173.310

In addition, 3-A standard 609-03 states that pipework and associated equipment should be constructed from 300-series stainless steel and that filters used for particulate removal should be capable of retaining >95% of particles of size 2 micron or larger.

Parker domnick hunter 1 micron rated sintered and stainless steel filter elements meet and exceed the requirements for culinary grade steam quality. In addition Parker domnick hunter provides a number of steam filtration options for general and culinary use together with a comprehensive guide to their selection.

- **Stainless steel housing and filter cartridges for general or culinary use.**
- **Sintered and pleated fibre filters options provide wide sizing options.**
- **Jumbo range for high volume applications.**
- **Comprehensive guide to steam quality guidelines, filter section and sizing.**



Crossflow Separation (Spiral Wound)

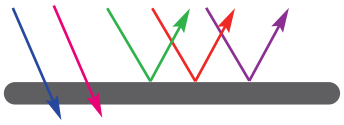
Reverse Osmosis (RO)

Operating pressure
14 - 83 bar
(200 - 1200 psi)

A high rejection membrane, designed to separate low molecular weight organics and salts from a feed stream while allowing water to pass. Suited to the concentration or removal of monovalent ions.

- RO permeate polishing
- Evaporator condensate polisher
- Sweet and acid whey concentration
- UF permeate concentration
- Skim milk concentration
- Starch recovery
- Rinse water recycle
- Gelatin concentration

Nanofiltration (NF)

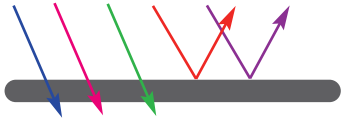


Operating pressure
10 - 31 bar
(150 - 450 psi)

Developed for the permeation of minerals with ion selectivity. The membranes will allow monovalent ions to pass through. NF is preferred to RO where possible due to the lower operating pressures and higher flow rates.

- Salt whey concentration and demineralisation
- Sweet and acid whey concentration and demineralisation
- High solids concentration
- UF whey concentration and demineralisation
- Water softening
- Mineral reduction

Ultrafiltration

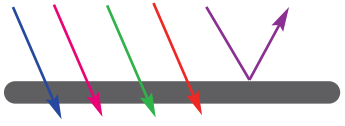


Operating pressure
2 - 10 bar
(30 - 150 psi)

UF retention is based on molecular weight cut off (MWCO). The membrane allows smaller molecules and dissolved salts to pass through, but will selectively separate higher molecular weight species. Available in two membrane types, both with high flow and low fouling characteristics, the UF modules have a wide range of applications.

- Casein and whey protein separation
- Sweet and acid whey concentration from 35-90%
- Whole milk concentration
- Alternative to diatomaceous earth
- Waste water recycling
- Protein concentration
- Gelatin concentration
- PVA recovery
- Enzyme concentration
- Diafiltration
- Microorganism removal from surface water

Microfiltration (MF)



Operating pressure
>5 bar
(>75 psi)

MF membranes provide retention in the range of 0.1 to 0.5 micron. MF is used for the separation of larger species, particles and microorganisms from the feed stream. The membrane has excellent flow characteristics, chemical resistance and low fouling. Predominantly for use in food and dairy applications. The modules have excellent chemical and temperature resistance and resistance to fouling

- Fat reduction in whey
- Casein separation from whey proteins and skimmed milk
- Concentration of cheese milk

- Water
- Salt
- Low molecular weights
- High molecular weights
- Suspended particles

Crossflow Separation

greater options

In crossflow systems, the process fluid is directed across the membrane surface at velocities that create high turbulence. A portion of the fluid permeates through the membrane, whilst the remainder, the retenateor concentrate, produces a scouring effect that minimises the build-up of foulants on the membrane and creates extended periods of consistent permeate flow.

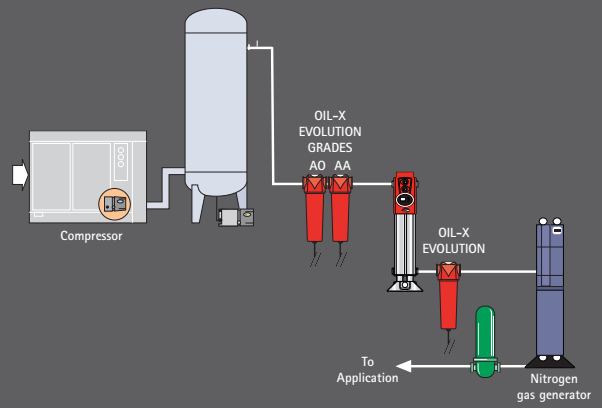
Parker's spiral-wound crossflow membrane modules are a key component in modern separation processes. A wide range of retention characteristics and module formats are available to suit the many system sizes and applications to be found. Coupled to this is the knowledge and experience that Parker offers to optimise system design, performance and economy.

Application Development
Parker has a team of highly qualified and experienced engineers that works closely with users and specialist system builders to optimise system design, operation and economics. The majority of applications can be satisfied with industry standard module sizes, but should these not fulfil the requirement, flexibility and know-how can be called upon to produce customised configurations.

New applications and system upgrades can be further supported from laboratory- scale studies and by using pilot-scale systems that, together with full technical support, are available for rental. Information generated from these analyses and trials provide the user with higher confidence prior ro large capital investment, and supply valuable data that can accelerate the commissioning and optimisation for the full size system.

	Model	With Compressor	Without Compressor	Nitrogen Outlet Flowrate – Nm3/hr (ATP) v Oxygen Content						
				10ppm	100ppm	0.1%	0.5%	1%	2%	3%
MAXIGAS MIDI	N2MID350		•	0.6	1.0	1.6	2.6	3.1	4.0	N/A
	N2MID351	•								
	N2MID600		•	0.9	1.5	2.6	3.9	4.6	6.1	N/A
	N2MID601	•								
SINGLE BANK MAXIGAS	N2MAX104		•	1.3	2.2	4.5	7.6	9.0	11.8	13.8
	N2MAX106		•	1.9	3.2	6.7	11.4	13.5	17.7	20.7
	N2MAX108		•	2.6	4.4	9.0	15.3	18.0	23.6	27.6
	N2MAX110		•	3.2	5.3	11.3	19.1	22.6	29.5	34.5
	N2MAX112		•	5.2	8.4	18.4	30.8	36.4	41.2	47.8
	N2MAX116		•	6.9	11.2	24.5	41.0	48.5	52.9	61.4

Performance data based on 6 barg (87 psig) air inlet pressure, 20 °C - 25 °C (68 °F - 77 °F) ambient temperature.
Consult Parker domnick hunter for performance under other specific conditions.



Modified Atmosphere Packaging

improving product quality and extending shelf-life

Product spoilage can occur from the moment a food item has been produced. Increased consumer demand for fresh, high quality preservative-free foods has led to the development of modified atmosphere packaging (MAP).

MAP or 'gas flushing' as it is also known, is an increasingly popular technique used to easily and economically improve product quality and extend shelf-life.

Flushing packaged foods with inert high purity nitrogen retards aerobic spoilage and oxidative deterioration by typically reducing the oxygen level in packaged foods to below 1% so that food tastes as good as the day it was packaged.

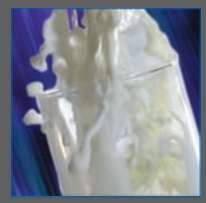
Nitrogen is primarily used to reduce the oxygen content within food packaging and to avoid product deterioration. A secondary reason for using nitrogen is as a filler gas to provide a pressurised atmosphere that prevents package collapse, an important consideration for consumer brands.

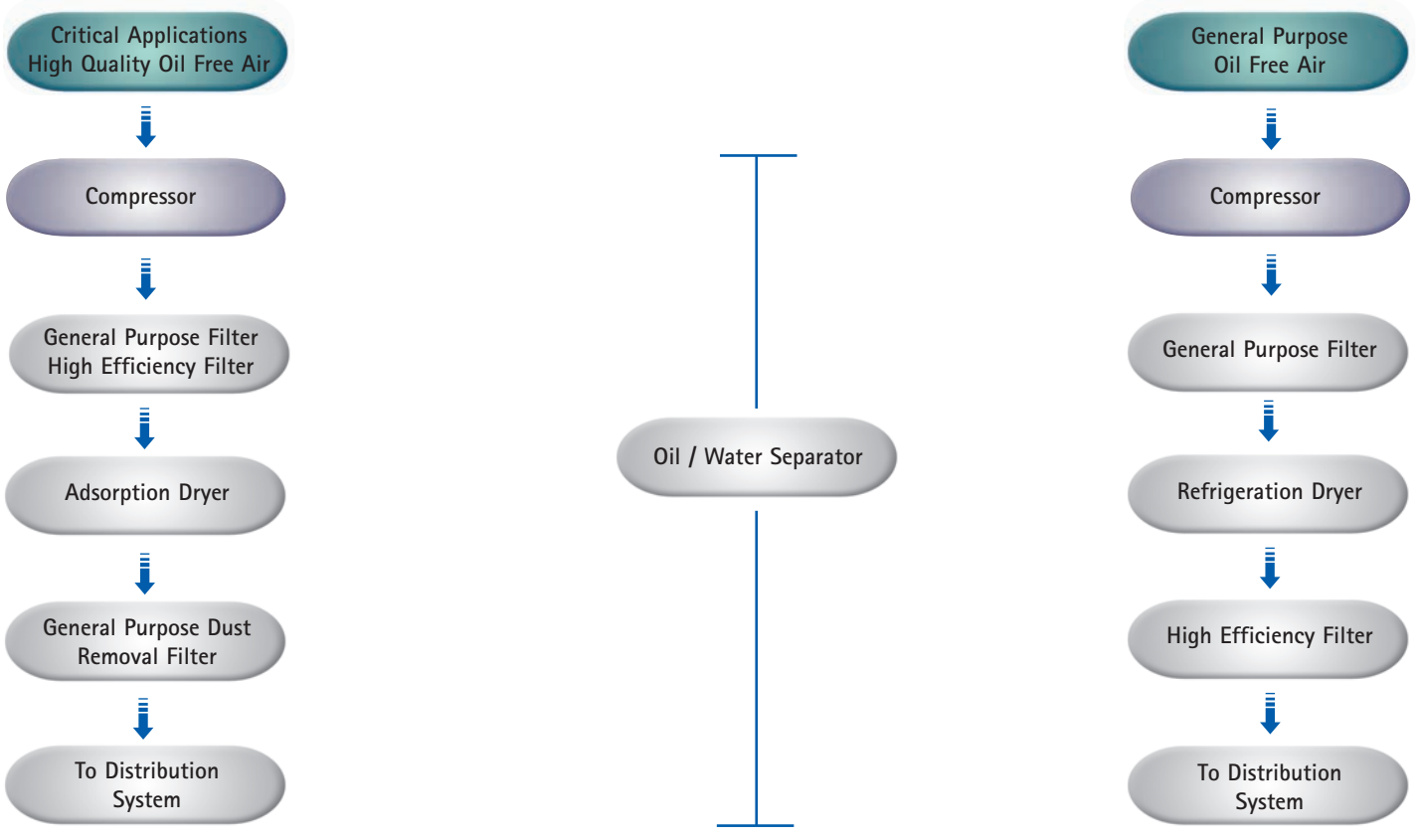
Why MAXIGAS?

MAXIGAS is a cost effective alternative to other nitrogen sources with on-going refill costs or other costs associated with order processing or multiple deliveries. It is also a safer alternative to the manual handling of high-pressure nitrogen gas cylinders.

Downtime is minimised due to the permanent availablilty of an on-demand nitrogen supply, giving manufacturers increased control. MAXIGAS requires minimal maintenance and can also bring valuable space saving advantages.

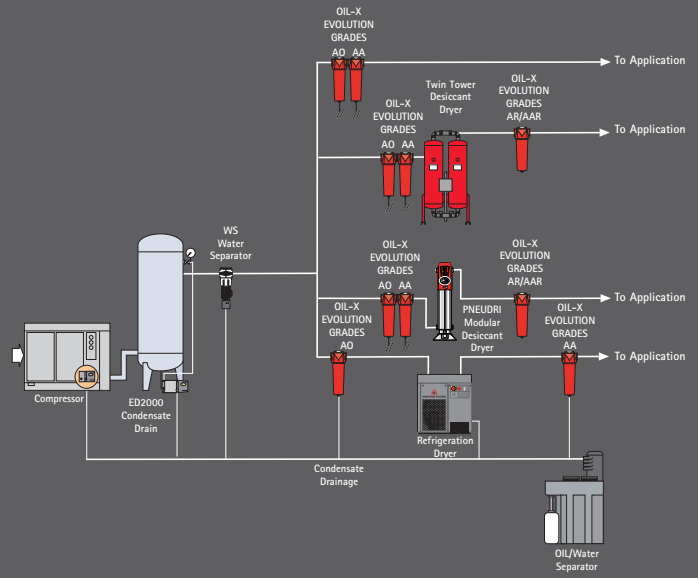
The development of food packaging machines with integrated gas flushing capabilities and the supply of 'food grade' nitrogen by Parker domnick hunter allows food manufacturers to enhance the quality of their products.




Critical Applications
High Quality Oil Free Air
Compressor
General Purpose Filter
High Efficiency Filter
Adsorption Dryer
General Purpose Dust
Removal Filter
To Distribution
System
Oil / Water Separator
General Purpose
Oil Free Air
Compressor
General Purpose Filter
Refrigeration Dryer
High Efficiency Filter
To Distribution
System

Compressed Air

selecting the ideal management system for your needs



The quality of air required throughout a typical compressed air system can vary. The extensive range of purification equipment available from Parker domnick hunter is ideal for both centralised and decentralised compressed air systems. This allows the user to tailor the quality of air for each specific application, from general purpose ring main protection, through to critical clean dry air (CDA) point of use.

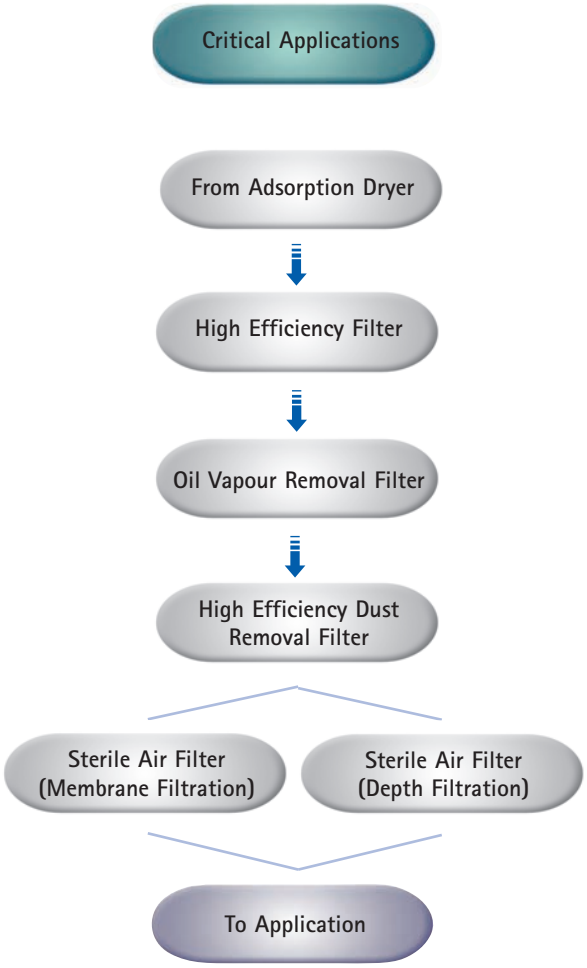
Parker domnick hunter can tailor its range of purification equipment to exactly match system requirements, ensuring both capital and operational costs are kept to a minimum.

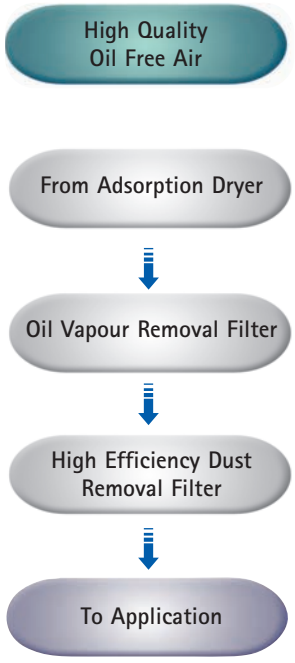
To achieve the levels of cleanliness specified by ISO8573.1:2001 a careful approach to system design, commissioning and operation must be employed.

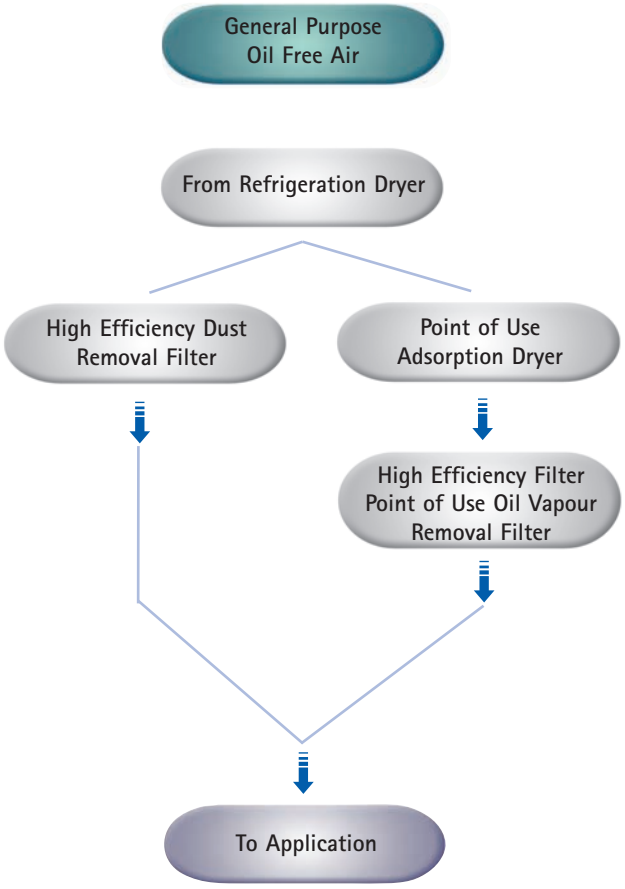
It is highly recommended that the compressed air is treated prior to entry into the distribution system as well as at each usage point or application.

This approach to system design provides the most cost effective solution to system purification as it not only removes the contamination already in the distribution system, it ensures that only the most critical areas receive air treated to the highest level.

- International system of air quality classification.
- From compressor house to point of application.
- See publication 17 400 4765 for detailed information.

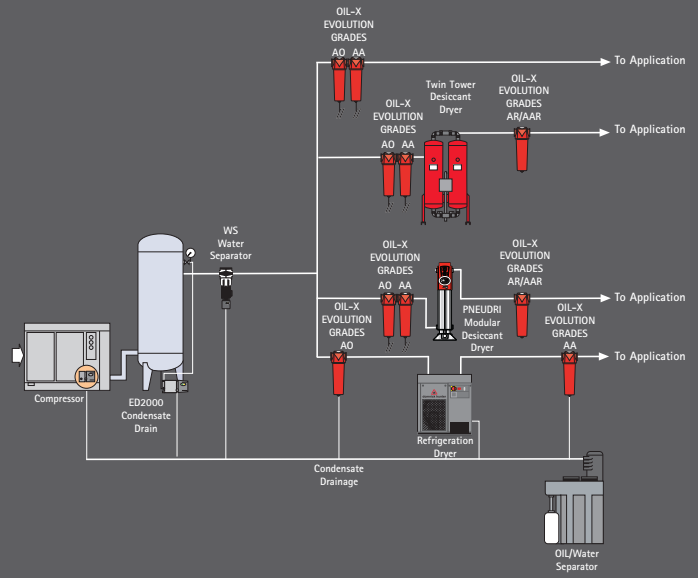

Critical Applications
From Adsorption Dryer
High Efficiency Filter
Oil Vapour Removal Filter
High Efficiency Dust Removal Filter
Sterile Air Filter (Membrane Filtration)
Sterile Air Filter (Depth Filtration)
To Application


High Quality Oil Free Air
From Adsorption Dryer
Oil Vapour Removal Filter
High Efficiency Dust Removal Filter
To Application


General Purpose Oil Free Air
From Refrigeration Dryer
High Efficiency Dust Removal Filter
Point of Use Adsorption Dryer
High Efficiency Filter Point of Use Oil Vapour Removal Filter
To Application

Compressed Air Applications

high quality compressed air from generation to application



Compressed air can be an expensive commodity if not efficiently managed. As well as the primary costs associated with the production of compressed air and losses from leaking distribution systems, poor management of compressed air can lead to a rapid deterioration of the distribution system, failure of equipment due to oil, water and particulate carry-over, and bacterial traps which cause sensory taints in the final product.

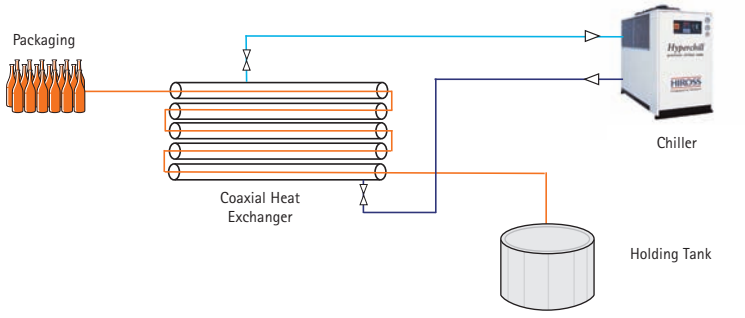
Management of compressed air falls into three main categories:

- Effective removal of all contamination in the form of dirt, oil, water and microorganisms.
- Minimising pressure losses between the compressor and the point of use.
- Eliminating losses from the system due to leaks, uneconomical regeneration of drying plant and inefficient condensate drains.

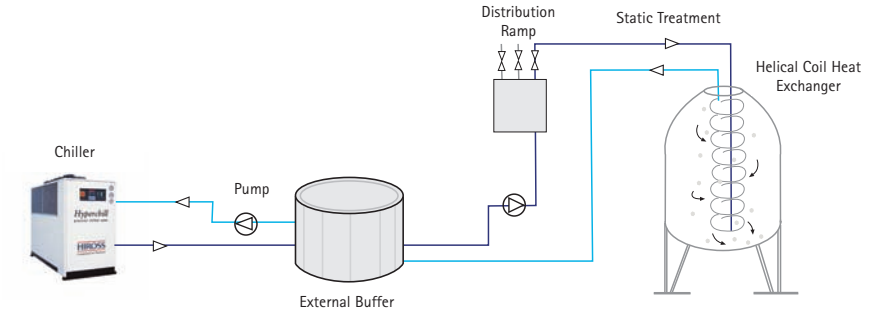
Parker domnick hunter offers unrivalled expertise in the purification of compressed air and works in partnership with many of the world's leading compressor manufacturers. In order to explain the various forms of compressed air treatments Parker domnick hunter has published a guide to ISO 8573.1:2001 Air Quality Classes. This provides an in-depth guide to identifying the air quality that best suits the needs of different applications.

- **Easy to understand guide to air quality classes.**
- **Filters for coalescing oil aerosols from the compressed air stream.**
- **Range of desiccant and refrigeration dryers to suit varied needs.**
- **Sterilising filters for high pressure (compressor) lines.**
- **Sterilising filters for low pressure (blower) applications.**

In-Line Chilling



Tank Chilling



Chilling

creating the right environment

Process cooling is regularly used in the processing of dairy products:

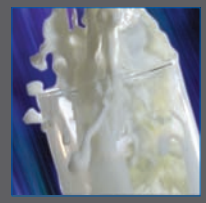
- To regulate temperature during fermentation.
- During accelerated precipitation of tartrate crystals.
- To stabilise the wine during storage.

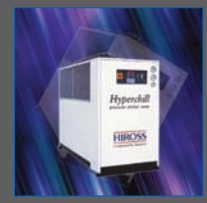
Parker domnick hunter Hiross has more than 30 years experience in the manufacture of industrial cooling systems. In recent years a wide range of chillers for the production of chilled water has been introduced. Coupled with a sales and engineering team capable of providing customised solutions to meet application needs, this provides a dedicated approach to the requirements of dairy applications.

The technology is characterised by a high refrigeration yield for low electrical consumption. Combined with a small footprint this leads to a compact, space-saving and energy efficient solution.

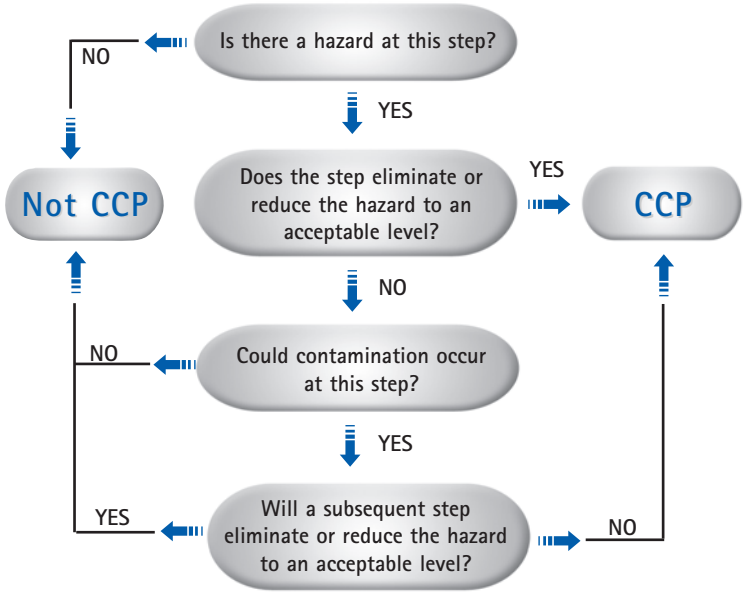
Chillers are available for internal and external installation and are equipped with microprocessor intelligence providing precise control and automatic function.

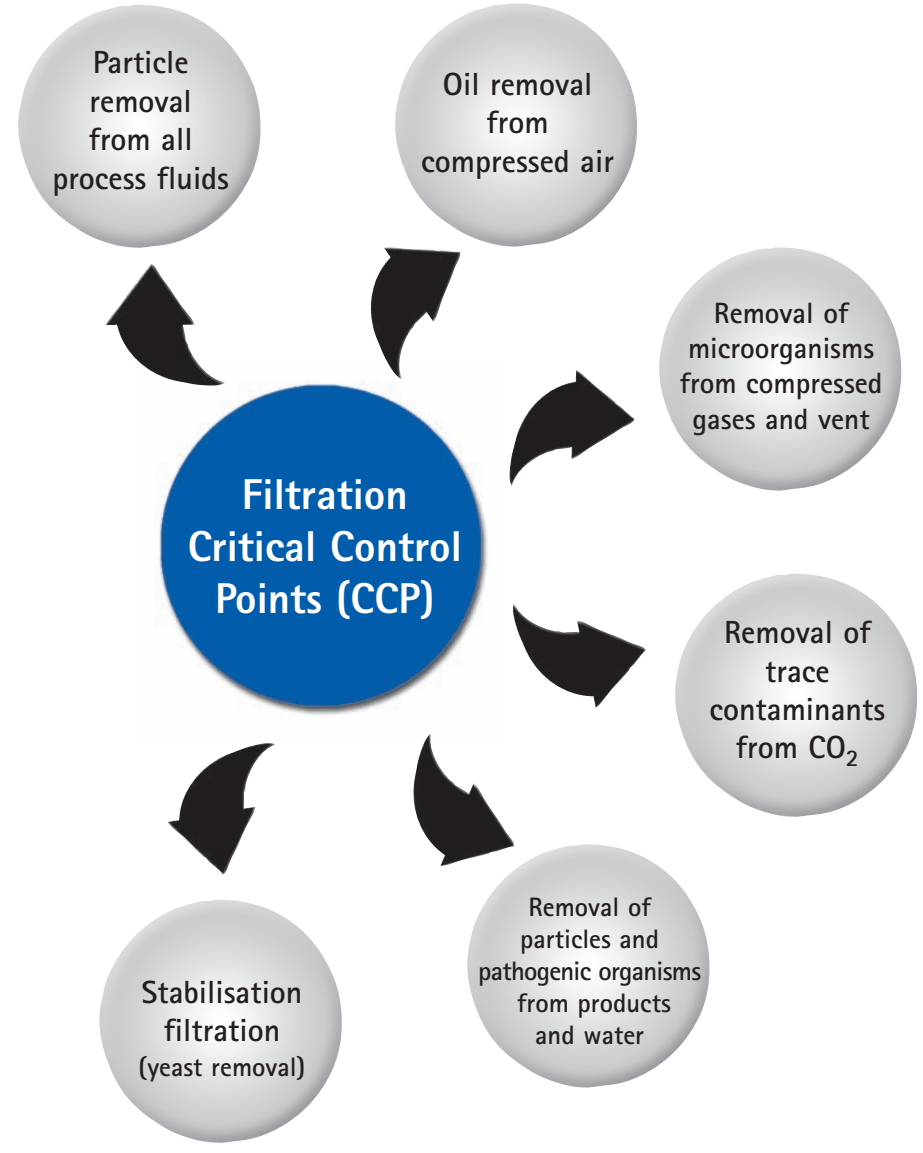
- **Standard and custom designed options provide unrivalled choice.**
- **Wide range of cooling capacities.**
- **Minimal space-saving footprint.**
- **Low energy consumption.**





Codex Decision Tree





HACCP and Integrity Testing

monitoring critical control points

HACCP

If precautionary measures are not in place during production, products may be contaminated biologically, chemically or physically. "Hazard Analysis of Critical Control Points" (HACCP) is a food safety management system acknowledged by governments, regulatory control bodies and the food industry as a system that identifies and monitors specific food safety hazards and risks.

Microporous filter products are used by a number of industries to achieve required levels of purity in both gases and liquids. The verification of filter performance has been identified as an important process monitor.

The HACCP programme should be applied from the production, supply and handling of unprocessed material, to the processing, distribution and consumption of the final product. Global markets are demanding more than ever that potential food safety risks are managed.

ASSURED PERFORMANCE

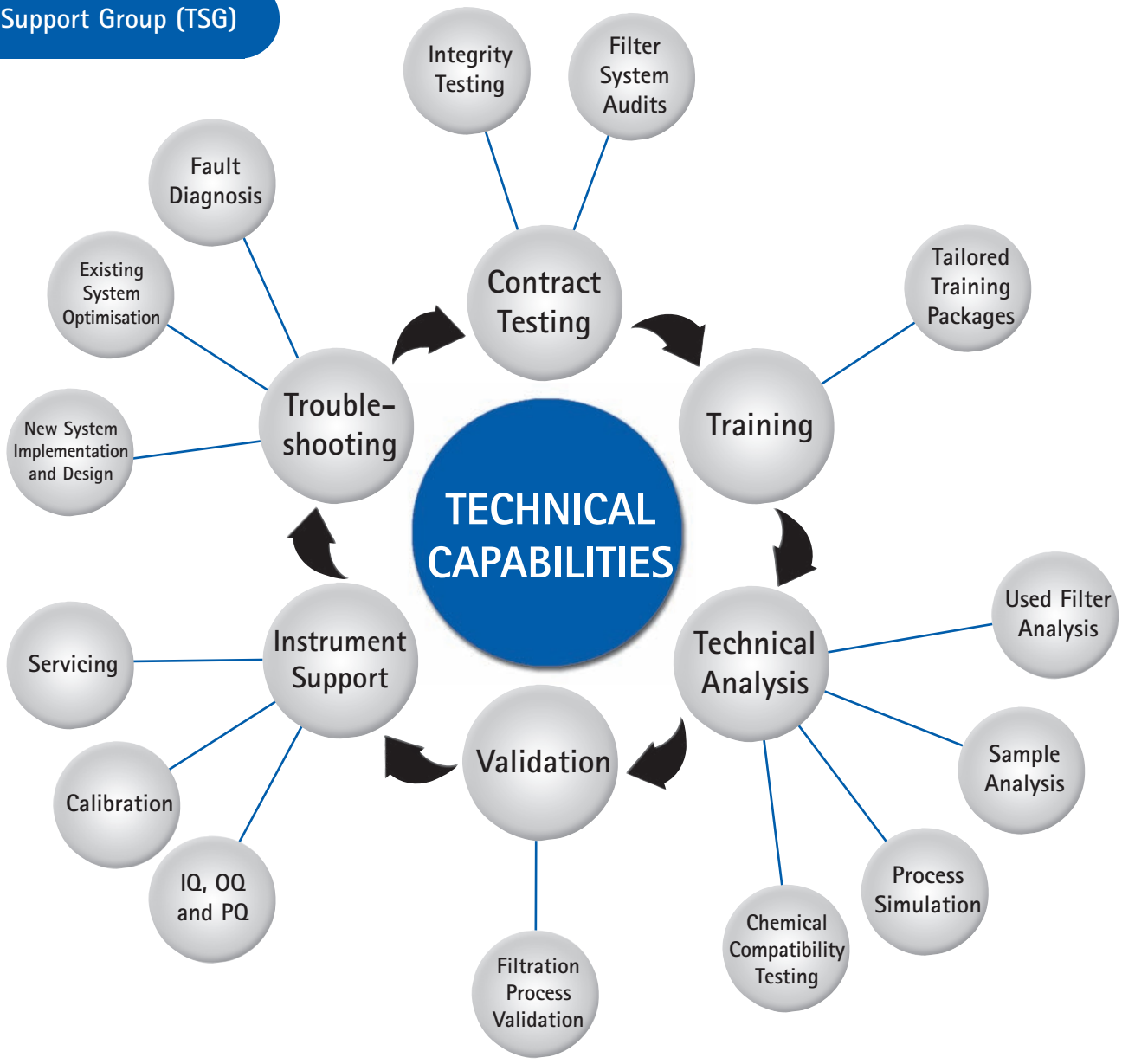
The ability to test the integrity of a filter provides a valuable quality assurance tool. A properly conducted integrity test provides assurance that the filter will fulfil the role that it was designed for, ensuring that it is fit for purpose BEFORE a process run is initiated. As well as installing confidence in the filter, recording integrity test results demonstrates sound process quality monitoring and provides a test protocol that fits well into a HACCP framework.

VALAIRDATA II

VALAIRDATA II is based on an aerosol integrity test, making it the most effective and practical integrity test for sterile gas filters.

BEVCHECK

BEVCHECK is a hand-held instrument that provides a convenient and easy means of carrying out pressure decay and diffusional flow integrity tests, on liquid filters or sterile gas filters.


TECHNICAL CAPABILITIES
Contract Testing
Integrity Testing
Filter System Audits
Training
Tailored Training Packages
Technical Analysis
Used Filter Analysis
Sample Analysis
Process Simulation
Chemical Compatibility Testing
Validation
Filtration Process Validation
Instrument Support
IQ, OQ and PQ
Calibration
Servicing
Trouble-shooting
New System Implementation and Design
Existing System Optimisation
Fault Diagnosis

Technical Support Group

dedicated support team

Parker domnick hunter has a multi-disciplinary team of scientists and engineers dedicated to the technical support of our products. Situated at facilities around the globe including centres of excellence in Birtley, UK and Oxnard, USA.

Through the Technical Support Group (TSG) and Laboratory Service Group (LSG), our teams assist clients in the selection and design of filtration systems coupled with ongoing support including: validation services, instrument servicing and calibration, contract testing, delivery of training programmes, on-site support (system optimisation, trouble shooting) and an advisory service.

The commitment of our people is backed up by state-of-the-art facilities. Our Birtley site has been the subject of a major investment programme to extend existing laboratory, manufacturing and training capabilities. This supports our commitment to provide world-class products and support services.

- **Filtration process validation.**
- **Industry tailored training.**
- **Process optimisation.**
- **Instrument support.**

Also available for sampling and small scale applications.

Liquid Prefilters

Clarification

	PEPLYN HD	PEPLYN HA	PREPOR GF	PROPLEAT	PROSPUN	BAG FILTERS
						
Filtration Media	Polypropylene	Polypropylene	Glass microfibre	Polypropylene	Polypropylene	Various
Retention Rating	5 – 35 microns absolute	3 – 100 microns absolute	2 – 10 microns absolute	1 – 75 microns	0.5 – 75 microns	Medium to coarse
Key Benefits	■ Graded density and increased depth resulting in high dirt holding capacity ■ Ideally suited to high volume, forward flow processes	■ Graded density results in high dirt holding capacity ■ Optimised pleat configuration maximises backwash efficiency ■ Wide range of chemical resistance improves chemical regeneration	■ High voids volume glass microfibre media provides high dirt holding capacity ■ Higher flow than polypropylene media results in low pressure drop even in viscous liquids	■ Economical general clarification ■ Higher area than spun products provides longer life to blockage	■ Economical general clarification ■ Excellent first-stage protection of downstream processes	■ Economical general clarification in non-critical applications

Liquid Prefilters

Stabilisation

	PREPOR GP	PREPOR PP	CARBOFLOW MX
			
Filtration Media	Glass microfibre Polypropylene	Polypropylene	Extruded activated carbon
Retention Rating	0.6 – 1.5 microns stabilising	0.6 – 1.5 microns stabilising	Adsorptive colour, odour and taste removal
Key Benefits	■ Composite media provides high strength and dirt holding capacity ■ High efficiency removal of spoilage organisms and yeast ■ Improves filterability which increase the life to blockage of downstream membrane filters	■ Maximised chemical and mechanical resistance for repeated regeneration ■ Yeast removal and spoilage organism reduction ■ Improves filterability which increase the life to blockage of downstream membrane filters	■ High capacity, long life ■ Extruded media provides particulate reduction as well as adsorption

Also available for sampling and small scale applications.

Sterile Liquid Filters

	BEVPOR PS	BEVPOR PH	BEVPOR PT
			
Filtration Media	Polyethersulphone	Polyethersulphone	Polyethersulphone
Retention Rating	0.2 - 1.2 microns sterilising	0.2 - 1.2 microns sterilising	0.2 - 0.65 microns sterilising
Key Benefits	■ Can be sanitised and regenerated for extended life ■ Low adsorption of protein colours and flavours	■ Integral prefilter layer maximises service life ■ Can be sanitised and regenerated for extended life ■ Higher surface area extends service life	■ Prefilter layer removes colloids extending service life ■ Low adsorption of protein, colours and flavours

Steam Filters

	SINTERED	PLEATED
		
Filtration Media	316L	316L
Retention Rating	1.0 - 25 microns	1.0 - 5.0 microns
Key Benefits	■ Ideally suited for lower flow rate applications ■ Available in culinary grade 1 micron ■ Low pressure drops	■ Re-cleanable metal fibre 316L Stainless Steel ■ Exceptionally high flow rates ■ Available in culinary grade 1 micron

Sterile Gas and Vent Filters

	HIGH FLOW BIO-X	BIO-X	TETPOR AIR
			
Filtration Media	PTFE Impregnated Glass Fibre	Glass Microfibre	Expanded PTFE
Retention Rating	0.01 microns sterilising	0.01 microns sterilising	0.01 microns sterilising
Key Benefits	■ 94% voids volume PTFE impregnated GF ■ Exceptional flow rates with low pressure drops ■ Integrity testable by aerosol challenge	■ High Temperature operation 200 °C (392 °F) ■ Robust construction ■ Full range of retrofits ■ Integrity testable by aerosol challenge	■ Assured biosecurity with absolute rated filtration ■ High voids volume PTFE membrane ■ Unique prefilter layer ■ Steam sterilisable to 142°C (287°F)

Integrity Test

	VALAIRDATA II	BEVCHECK
		
Tests	■ Aerosol challenge	■ Pressure decay ■ Diffusional flow
Key Benefits	■ 30 second test for single 10" cartridge, filter back in use immediately after test ■ Increased sensitivity compared to liquid based test ■ Easily applied to multi-cartridge systems ■ Test results downloaded to PC	■ Portable - lightweight,hand held unit ■ Simple to use - pre-programmed operation ■ Flexible - wide range of test parameters ■ Robust - IP53 protection and wipe-clean surfaces ■ Stores up to 100 test reports

For full range of Custom and Industry Specific Housings and Skids please contact Parker domnick hunter

MAXIGAS

nitrogen generators

- On-demand, Secure Supply
- The Safest Supply
- Generate The Right Purity
- Space Saving
- Easy to increase supply as required

You can now generate your own nitrogen gas at the press of a button - as much or as little as you need, at a fraction of the cost of your existing supply and at the purity your process requires. The generators are virtually maintenance free. Simply switch on and let your Parker domnick hunter nitrogen generator do the rest.

For more information publication number: 174004791

ES2000

oil / water separators

- Help to protect and maintain the environment
- Efficiently separate oil and water on-site and return up to 99.9% of the condensate to foul sewers
- Meet trade effluent discharge regulations
- Rapid payback over conventional disposal methods

Discharging oil contaminated condensate from compressed air systems is not only harmful to the environment, it is invariably illegal.

Oil spillages from industry do not have to be big to be serious. One litre of oil can cover 3500m^2 of water surface. One gallon of oil can cover 4 acres of water surface.

For more information publication number: 174004429

OIL-X EVOLUTION

compressed air filters

- High quality ISO 8573.1 : 2001 compressed air
- Running costs that start low and stay low

OIL-X EVOLUTION has been designed from the outset with the key design focus concentrated in critical areas such as air flow management, filtration media selection and construction and the efficient removal of coalesced liquid. OIL-X EVOLUTION has also been designed to be fully compliant with the latest ISO8573.1 : 2001 air quality standards as well as the forthcoming ISO12500 standard for filter testing.

For more information publication number: 174004402

ED2000

series condensate drains

- Removes liquid condensate efficiently
- Saves valuable compressed air
- Protects downstream equipment and processes from condensate damage
- Help protect the environment

Consider the compressed air and energy losses associated with the common types of drain. What appears to be a good purchase could actually turn out to be the most expensive option. For example, a system using a single timed drain, could lose approximately 0.062m^3/min (2.18cfm) of air.

Over a full year of continuous operation that equates to approximately 32,798m^3 (1,142,669 ft^3) of air lost! In energy terms that single drain would use 3,581 KW (4,804 hp) energy per year! Now multiply by every drain of that type in the system.

For more information publication number: 174004423

PNEUDRI

desiccant dryers

- Highest Quality Air
- Totally stops corrosion and damage
- Low installation costs
- Energy efficient

PNEUDRI cleans and dries compressed air down to -40°C (-40°F) PDP as standard and for critical applications, PNEUDRI can be supplied with a dewpoint of -70°C (-100°F) PDP.

Our award-winning modular design utilises Parker domnick hunter patented technology to provide the ultimate in uncompromising performance, security and reliability for your compressed air system.

For more information publication number: 174004759

CRD

refrigeration dryers

- Environmentally friendly R407C refrigerant
- Energy efficient, low running costs
- Suitable for high ambient operating conditions up to 50°C (122°F) and inlet temperatures up to 60°C (140°F)

Remove water from any compressed system economically. Well proven refrigeration principles are at the heart of this reliable and complete product range.

Avoid corrosion, machinery failure and product spoilage. Reduce energy costs and improve productivity by installing a Parker domnick hunter refrigeration dryer with OIL-X EVOLUTION filtration.

Modern features include the latest technology ultra-compact modular aluminum cross flow heat exchangers with low differential pressure and energy efficient scroll compressors (most models).

For more information publication number: 174004566

PCO2

carbon dioxide polishing filter

- Ensures compliance with quality guidelines published by the International Society for Beverage Technologists (ISBT)
- Protects drinks manufacturing processes from vapour impurities

The Parker domnick hunter PCO2 range of carbon dioxide purifiers will remove harmful contaminants from CO_2 used in the manufacture of beverages.

The PCO2 cartridge incorporates a mix of adsorbents that effectively remove the contaminants. The addition of a particulate retention filter, providing protection down to 0.01 micron, completes a package that will ensure CO_2 conforms to the quality guidelines for carbon dioxide (published 1999) by the International Society for Beverage Technologists. (ISBT)

The domnick hunter PCO2 Carbon Dioxide Polishing Filter, model: MF-5 is deigned to give point of use protection in draught dispense applications.

For more information publication number: 174004462

HYPERCHILL

precision chilled water

- Standard custom designed options provide unrivalled choice
- Wide range of cooling capacities
- Minimal space-saving footprint
- Low energy consumption

Hyperchill is the new range of precision water chillers by domnick hunter Hiross. The range covers cooling capacities from 2 to 360 kW. Each model is designed for safe and reliable operation, whatever the working conditions.

Flexibility and an extensive range of options ensure that Hyperchill operates continuously and efficiently whatever the conditions. All models accept water inlet temperatures up to 30°C and water outlet temperatures down to 0°C. Custom-designed alternatives for tower temperature glycol solutions are also available.

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