Filtertechnik

FIRST AID FOR OILS™

How to avoid breakdowns and maintain operational efficiencies of hydraulic, lubrication & gearbox driven systems.

UNDERSTANDING & CONTROLLING CONTAMINATION

PARTICULATE, WATER & OIL LIFE SENSORS

FILTER BODIES & FILTER ELEMENTS

OFF LINE CLEAN-UP SOLUTIONS

FILTERTECHNIK - OIL CLEANLINESS EXPERTS

Filtertechnik is a manufacturer and supplier of high quality filtration solutions for oils and process fluids. We have over 25 years experience supplying filtration solutions to the UK and overseas markets for lubrication, hydraulic and gearbox oil applications.

Our in-house design and build team can supply solutions to meet the most challenging clean-up or oil polishing tasks, regardless of the volume that needs to be cleaned or maintained.

From diagnostic equipment for determining the type and quantity of contaminants, to filter bodies, filter elements or clean-up rigs, Filtertechnik have a solution for you.

Filtertechnik can provide next day oil condition analysis from our on-site laboratory with an easy to read report providing a clear diagnosis of your oil's condition.

All of our filtration units are designed and built at our Nottingham centre of excellence.

WE'RE THE FIRST CHOICE FOR COMPLETE OIL SOLUTIONS

FIRST FOR DIAGNOSIS & PREVENTION

Our advanced diagnosis and prevention products, test kits, Particle Pal - laser particle counter and sophisticated laboratory service, will help you identify potential problems before it's too late.

FIRST FOR TREATMENT

We understand oil health. Filtertechnik's family of ready-to-go filtration and oil polishing products enable you to effectively remove water and solid contaminants to keep your oil clean, and your equipment performing at it's best.

FIRST FOR INDIVIDUAL CURES

As expert designers and builders of customised filtration systems, we ensure exactly the right clean-up system for your specific oil's health issue or challenge.

FIRST FOR HEALTH

We have been constantly innovating for over 25 years, making us the proven and qualified experts in oil health. If you need advice, consultancy, site-servicing, training or emergency product rental, trust Filtertechnik.

WHY DOES THE HEALTH OF YOUR OIL MATTER?

Over 80% of all hydraulic & lube system failures are caused by contaminants in the fluid. Even when no immediate failures occur, high contamination levels can decrease operating efficiency and shorten equipment life.

Hydraulic and lubrication systems rely on having clean and healthy oil in order to perform reliably and at their best. However, oil can quickly degrade in reactions with water, oxygen and heat, leading to a change of composition and viscosity, and the build-up of contaminants which can lead to:

- Costly equipment failure as a direct result of contamination
- Varnish forming
- Downtime
- Loss of system performance

Fortunately, having supplied oil filtration equipment for over 25 years Filtertechnik have a deep understanding of the effects of contamination and how to remedy an ingress issue quickly and cost effectively.

Before & After

TYPES OF OIL CONTAMINATION

Contamination comes from two basic sources: they either enter the system from the outside (ingestion) or are generated from within (ingression). New systems often have contaminants left behind from manufacturing and assembly operations. Unless filtered as they enter the circuit, both the original fluid and make-up fluid are likely to contain more contaminants than the system can tolerate.

According to Noria (the industry body that promotes better lubrication practices), 80% of hydraulic & lubrication failures can be attributed to contaminated oil.

If you are in a business that relies heavily on mechanical equipment - mining, quarrying, transport, manufacturing, agriculture and shipping for example, oil contamination can cause major disruption due to mechanical failure.

This makes the problem of oil contamination one that cannot be ignored. It is particularly prevalent in the mining and quarrying industries *. After all, these represent some of the dirtiest commercial environments on the planet; the air is full of abrasive particles.

*** "Up to 95% of mechanical failures are caused by particle contamination within these industries"**

(Schroeder Industries LLC)

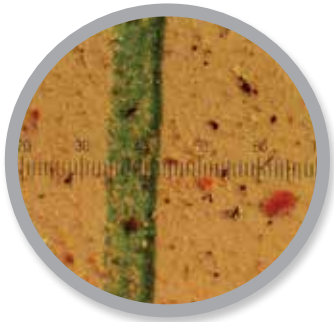
Particulate under microscope on a 1 micron patch

SOLID PARTICULATE CONTAMINATION

Solid Contamination - includes rust, silicon, silica, metals and other harmful, abrasive debris which cause damage to pumps, servo valves, rams etc.

Particulate is a major cause of system failures and component wear. Particles found in hydraulic systems are introduced from a variety of sources, from new oil deliveries to air born dust entering tank vents, to internal corrosion of tanks and wear particles to name but a few.

ISO 20/19/17



Particulate contamination on a 1 micron slide magnified x 100 through microscope

The finest tolerance level found in different components

Dynamic oil film	
Component	Oil film thickness in micron (μm)
Journal, slide and sleeve bearings	0.5-100
Hydraulic cylinders	5-50
Engines, ring/cylinder	0.3-7
Servo and proportional valves	1-3
Gear pumps	0.5-5
Piston pumps	0.5-5
Rolling element bearings / ball bearings	0.1-3
Gears	0.1 - 1
Dynamic seals	0.05-0.5

1 μm = 1/1000mm or same size as tobacco smoke.

Source: Noria Corporation

WATER CONTAMINATION

Water - is one of the most destructive contaminants in hydraulic and lubrication systems. It will deplete additives and will interfere with an oil's performance. Water exists in several forms in oils, depending on the quantity present:

Suspended or emulsified water - water that is in suspension that will eventually fall out of the oil and form free water when allowed to settle. The oil often has a milky appearance.

Free water - develops when droplets of emulsified water combine to become larger and heavier, falling out of suspension and gathering at the bottom of the tank.

Dissolved or entrained water - water that has chemically dissolved or is absorbed into the oil.

Acid Formation - oil degradation can cause acid to form on the surface. It is recommended that acid numbers should not increase above +0.5 AN.

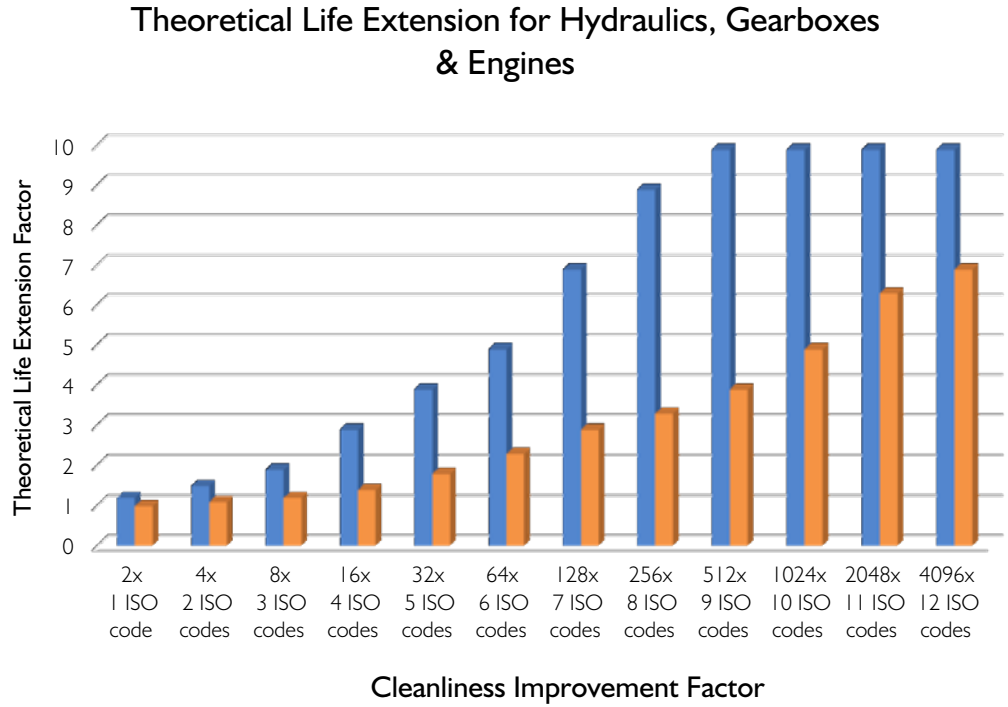
Varnish Formation - varnish forms a sticky layer on metal surfaces and will easily block fine tolerances causing components to seize. Hard particles of all sizes get caught in the sticky varnish layer, creating a sandpaper like, grinding surface which speeds up machine wear.

Water contamination

Additive depletion

Sludge formation

Clean oil not only prevents breakdowns it can also significantly improve the long term life of your hydraulic or lubrication system. The graphs below show how each improvement in ISO code cleanliness leads to machinery life extension. For advice on how Filtertechnik can help reduce your ISO cleanliness codes and improve your machinery reliability please feel free to contact our engineers.



Source: Martin Williamson, KEW Engineering

GENERAL ADVICE

TOP TIPS FOR OIL MANAGEMENT

1

Oil Sampling or testing is the starting point to understand an oil's condition.

a. Machine should be running and at normal operating temperatures & load pressures.

b. Ensure the equipment and sample container are clean and dry for each sample taken.

c. Always sample upstream of filters and downstream of machine components such as bearings, gears, cylinders, motors and pistons.

d. Make sure samples are taken at regular frequencies.

2

Sample Analysis & Interpretation

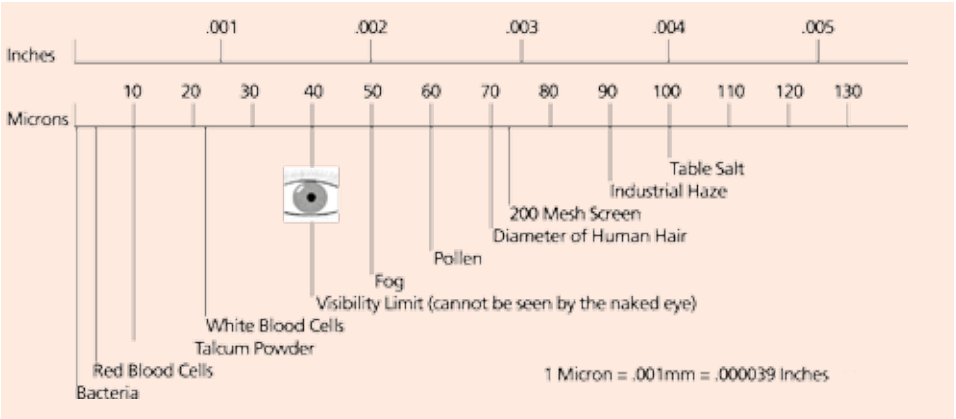
Visual clarity does not always mean that the oil is within specification. It is strongly recommended that further testing is undertaken.

The human eye can not see particles below 40 microns in size.

a. Portable laser counters and water content sensors such as the Particle Pal can help understand an oil's condition in real-time, giving live ISO cleanliness and water content levels. (see page 24)

b. A laboratory report will give you a full understanding of the condition of the oil and often the laboratory will advise next steps.

Figure 1. Sizes of Known Particles in Inches and Microns



Conclusion: if you see contamination in your oil it is too dirty for your hydraulic or lube system.

3

Oil Clean-up

If analysis shows that your oil does not meet specification, remedial action should be undertaken.

a. Establish the source of contamination if possible, e.g. free water could indicate water ingress - was the filler cap left off? Could water be entering the system via faulty seals?

b. Clean the oil - depending on the condition of the oil, this may be achieved via better system filters or a clean-up rig to rapidly remove contamination

c. If the oil is not too far off specification, it can be cleaned in-situ using our off-line filtration systems. (see pages 29-43)

d. Check oil life - consider a Particle Pal *Life* (see pages 26-27)

4

Oil Management/Storage

Once you have ensured both the oil and machinery are clean, it is critical to put a plan in place for regular checks.

a. Sampling should be conducted at least once a month and on any new delivery of oil.

b. Consider fitting a fixed oil polishing system, designed to recirculate the oil at predetermined times to ensure it remains clean and dry.

c. Consider a Particle Pal (see pages 24-25) to routinely check for solid and/or water contamination

d. Consider a Particle Pal Life to check for cleanliness levels and remaining useful life of your oil.

UNDERSTANDING ISO CLEANLINESS CODES

ISO 4406:1999 is an internationally recognised method of measuring particulate in a given oil or lubricant sample. The code is made up of three numbers. Each number represents a range and size of particles present in a given sample. Different components have different recommended cleanliness levels.

Filter element media recommendations

Desired Cleanliness Level (ISO Code) at 4µm / 6µm / 14µm	Filtertechnik Synthetic Media Type	Micron rating (Absolute)
20/18/15 - 19/17/14	Z25	25
19/17/14-18/16/13	Z10	10
18/16/13 - 15/13/10	Z3/Z5	3 or 5
15/13/10 - 14/12/9	Z1	1

(Schroeder Industries LLC)

Important note:
In order to achieve effective filtration, it is paramount that the correct filter cartridges are used. Filter elements can have varying quality ratings. These are known as 'nominal' or 'absolute' efficiencies.

Absolute rating of a filter refers to the diameter of the largest spherical glass particle, normally expressed in micrometres (mm), which will pass through the filter under laboratory conditions. It represents the pore opening size of the filter cartridge. Filter media with an exact and consistent pore size or opening have an exact absolute rating. Absolute rated filter elements will guarantee greater overall efficiency.

On the other hand nominal rating identifies the particle size that is retained by the filter at a particular filter efficiency. This could mean that actual pores of the filters can be larger than the particle size that is being tested.

For advice on the best filters to choose for your application, please contact our technical team.

An example code of 18/16/13;

18 - represents a range or count of particulate from 1300 – 2500 at 4 micron in size
16 - represents a range or count of particulate from 320 – 640 at 6 micron in size
13 - represents a range or count of particulate from 40 – 80 at 14 micron in size

ISO 4406:1999 CODES

	Particles per millilitre	
ISO Code	More than	Up to / including
>29	2500000	-
28	1300000	2500000
27	640,000	1300000
26	320,000	640,000
25	160000	320,000
24	80000	160000
23	40000	80000
22	20000	40000
21	10000	20000
20	5000	1000
19	2500	5000
18	**1300**	**2500**

	Particles per millilitre	
ISO Code	More than	Up to / including
17	640	1300
16	**320**	**640**
15	160	320
14	80	160
13	**40**	**80**
12	20	40
11	10	20
10	5	10
9	2.5	5
8	1.3	2.5
7	0.64	1.3
6	0.32	0.64

Important note:
Each time the range code increases by a single code, the number of particles doubles and each time a code decreases by a single number, the contamination level is halved.

The Particle Pal gives live cleanliness readings displaying readings in ISO, NAS or SAE codes, as well as water detection and remaining life indication (see pages 24-27).

HYDRAULIC SPECIFICATION FOR FLUID POWER CLEANLINESS

Recommended ISO target level and element micron rating for components under **low/medium pressure** - Under 130 bar / 2000 psi (moderate conditions).

Components	ISO Target Levels	Micron Ratings - (absolute rated)
Pumps		
Fixed Gear or Fixed Valve	20/18/15	20
Fixed Piston	19/17/14	10
Variable Vane	18/16/13	5
Variable Piston	18/16/13	5
Valves		
Check Valve	20/18/15	20
Directional (solenoid)	20/18/15	20
Standard Flow Control	20/18/15	20
Cartridge Valve	19/17/14	10
Proportional Valve	17/15/12	3
Servo Valve	16/14/11	3*
Actuators		
Cylinders, Vane Motors, Gear Motors	20/18/15	20
Piston Motors, Swash Plate Motors	19/17/14	10
Hydrostatic Drives	16/15/12	3
Test Stands	15/13/10	3
Bearings		
Journal Bearings	17/15/12	3
Industrial Gearboxes	17/15/12	3
Ball Bearings	15/13/10	3*
Roller Bearings	16/14/11	3*

Important note
*Two or more system filters of the recommended rating may be required to achieve and maintain the desired target cleanliness level.

GENERAL ADVICE

Recommended ISO target level and element micron rating for components under **high pressure** - 130 - 200 bar (2000 to 2999 psi)

Components	ISO Target Levels	Micron Ratings - (absolute rated)
Pumps		
Fixed Gear or Fixed Valve	19/17/14	20
Fixed Piston	18/16/13	10
Variable Vane	17/15/12	5
Variable Piston	17/15/12	5
Valves		
Check Valve	20/18/15	20
Directional (solenoid)	19/17/14	20
Standard Flow Control	19/17/14	20
Cartridge Valve	18/16/13	10
Proportional Valve	17/15/12	3
Servo Valve	16/14/11	3*
Actuators		
Cylinders, Vane Motors, Gear Motors	19/17/14	10
Piston Motors, Swash Plate Motors	18/16/13	5
Hydrostatic Drives	16/14/11	3*
Test Stands	15/13/10	3*

Important note
*Two or more system filters of the recommended rating may be required to achieve and maintain the desired target cleanliness level.

Recommended ISO target level and element micron rating for components under **very high pressure** - 200 - 1,000 bar (3000 to 10,000 psi)

Components	ISO Target Levels	Micron Ratings - (absolute rated)
Pumps		
Fixed Gear or Fixed Valve	18/16/13	5
Fixed Piston	17/15/12	3
Variable Vane	N/A	N/A
Variable Piston	16/14/11	3
Valves		
Check Valve	19/17/14	10
Directional (solenoid)	18/16/13	5
Standard Flow Control	18/16/13	5
Cartridge Valve	17/15/12	3
Proportional Valve	16/14/11	3*
Servo Valve	15/13/10	3*
Actuators		
Cylinders, Vane Motors, Gear Motors	18/16/13	5
Piston Motors, Swash Plate Motors	17/15/12	3
Hydrostatic Drives	15/13/10	3*
Test Stands	15/13/10	3*
Bearings		
Journal Bearings	N/A	N/A
Industrial Gearboxes	N/A	N/A
Ball Bearings	N/A	N/A
Roller Bearings	N/A	N/A

Important note

*Two or more system filters of the recommended rating may be required to achieve and maintain the desired target cleanliness level.

OIL ANALYSIS

Filtertechnik understand that different types of contaminant affect components in different ways which is why we offer an unrivalled sampling and reporting service, as well as products to determine contamination and oil life which helps to choose the right course of action for removing contamination.

This section offers advice for carrying out effective oil analysis as well as highlighting our own range of oil analysis options.

OIL TESTING

Filtertechnik offer several ways to test your oil

In-House Laboratory
We have our own laboratory where we can quickly look at a given sample and produce an ISO report, patch slide and Karl Fischer water content test. This service is often free to our customers as support for their filter usage.

Laboratory Reports
Filtertechnik provide an easy to interpret, independent oil cleanliness report which highlights the condition of your oil. A simple traffic light system indicates the level of contamination and our reports show ISO, particulate, water, bacterial, wear metals, additives and other chemicals is an oil sample.

Analysis Equipment - on-line or portable
We offer a range of equipment including on-line particle monitors, patch test kits, portable particulate and water sensor kits and the award winning Particle Pal portable oil analysis product, now with oil life sensing.

Sampling
Best practice for oil testing is to take it from a live operating system at regular frequencies and ensure the machine is running at normal operational temperatures, pressures and loads. The recommended place to take a sample, in order to see how machine components are operating, is downstream from the working parts before any filtration and before the oil is returned to the system tank. This will show undiluted results of a wear being created in the machine. When collecting a sample, ensure the bottle and all equipment is exceptionally clean and dry or this will interfere with results.

OIL TESTING EQUIPMENT

Overview of oil testing equipment and services available from Filtertechnik:

- Oil Sample Bottles & Thief Pump (vacuum pump)
- In-line Particle Counter
- Patch test kits
- In-house laboratory for problem solving
- External laboratory services and tests to UKAS standard
- Karl Fischer monitor for accurate water content tests
- Particle Pal laser counter (testing to ISO 4406, water content or relative humidity, density & oil life)

- Sterilised sample bottles
- Thief pump available to aid sampling from oil reservoir or tank
- Simple & easy to read diagnosis report
- Cost savings from early diagnosis
- Our expert team can provide immediate action with our oil cleanup systems

OIL SAMPLE BOTTLES & THIEF PUMP

- Cost effective in-line monitor giving live readings
- Particle counting with instant LED readout
- Simple to install and use
- Accuracy is +/- 0.5 of an ISO code
- Also available as a portable system in our Particle Pal range (see page 24)

IN-LINE PARTICLE COUNTER

PATCH TEST KIT

- Patch test kit to measure contamination to ISO 44077 and AS 4059
- Identify wear elements
- High quality microscope & camera to provide a visual of contamination
- Software analysis of contamination
- Simple to assemble and use
- Option to add MPC Varnish test to each kit

IN-HOUSE LABORATORY

- We offer an easy to read complete oil analysis report showing particulate and water contamination
- We provide a simple traffic light system highlighting the contamination level of the oil sample
- We suggest the appropriate next steps to remove contamination

EXTERNAL LABORATORY

- Post oil sample (in a bottle pre-cleaned to ISO 3722 standard) to our external laboratory
- An independent laboratory will identify water, particle and microbial contamination as well as wear metals and oil additive make up
- UKAS standard testing
- An oil sample analysis report will be sent back from the laboratory

KARL FISCHER MOISTURE MEASUREMENT

- Quick diagnosis of water contamination
- Results in ppm, mg/kg, % and µg water
- Simple to use
- Built in printer for fast results

OIL ANALYSIS REPORT

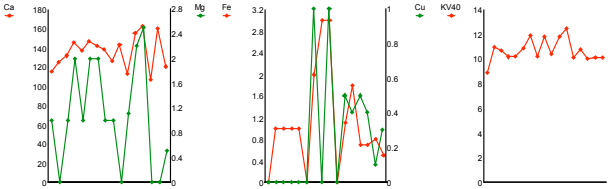
FT Filtertechnik

System:	HYDRAULIC	Kit Ref/Bottle No:	HT3487295
Brand:		Job No.:	
Grade:		Sampled:	24/08/17
Unique No.:	1770725	Received:	29/08/17

Diagnosis Key: Normal | Caution | Serious — Diagnostician: Nuria Romero

Water contamination. Wear appears satisfactory. Action should be taken to correct - Consider fluid clean/change and/or filter change.

Results		Current Sample	Historical Samples		
Sample No		5857350	5771988	5251317	5151155
Status					
Sampled		24/08/17	10/05/17	08/02/16	27/08/15
Fluid Age	HOURS				
Unit Age	HOURS				
Received		29/08/17	11/05/17	12/02/16	01/09/15
Fluid condition & other tests					
Viscosity @ 40 °C	mm²/s	10.1	10.1	10.0	10.8
Neut No.	mg KOH/g	0.19	0.03	0.11	0.09
ISO Code	-	21/19/16	19/17/14	19/17/13	17/14/10
Particle Count 4	particles/ml	13350	3536	2689	718
Particle Count 6	particles/ml	4529	1064	708	131
Particle Count 14	particles/ml	329	93	75	10
Wear Metals					
Al (Aluminium)	mg/kg	0.0	0.0	0.2	0.1
Sn (Tin)	mg/kg	0.0	0.9	0.8	0.1
Pb (Lead)	mg/kg	0.0	0.0	0.0	0.1
Cu (Copper)	mg/kg	0.3	0.1	0.4	0.5
Fe (Iron)	mg/kg	0.5	0.8	0.7	0.7
Mo (Molybdenum)	mg/kg	0.1	0.1	0.8	1.9
Ag (Silver)	mg/kg	0.0	0.0	0.9	0.2
Ni (Nickel)	mg/kg	0.1	0.2	0.3	0.1
Mn (Manganese)	mg/kg	0.0	0.0	0.3	0.1
Contamination					
Water	ppm	3689	2661		
Na (Sodium)	mg/kg	9.1	2.9	7.3	2.8
Si (Silicon)	mg/kg	25	2.3	6.8	49
Li (Lithium)	mg/kg	0.3	0.5	3.5	1.0
Overall SAE Code	-	11	9	9	7
Additives					
B (Boron)	mg/kg	8.3	4.2	4.7	4.2
Ba (Barium)	mg/kg	2.7	0.2	0.0	1.3
Ca (Calcium)	mg/kg	121	160	107	163
Mg (Magnesium)	mg/kg	0.5	0.0	0.0	2.5
P (Phosphorus)	mg/kg	>2000	>2000	>2000	>2000
S (Sulphur)	mg/kg	200	263	249	342
Zn (Zinc)	mg/kg	3.4	12	8.8	12
Fluid Condition					
Appearance	-	Dark	Dark	Dark	Clear & Bright



Important note
Our reports show ISO particulate counts, water, bacterial, wear metals, additives and other chemicals in an oil sample. Repeated oil tests are trended to help look at long term performance.

ORDERING INFORMATION

Feel free to call our expert team for an independent oil analysis report and oil sample bottles.

PC9001 IN-LINE PARTICLE COUNTER

Filtertechnik brings you the latest technology for contamination control. The PC9001 particle counter gives live counts and is supplied with archiving and trending software. The PC9001 is a cost effective analysis solution, a must have for monitoring oil cleanliness.

FEATURES

- Low cost and compact
- Highly accurate
- Robust design
- Ideal for fluid cleanliness trending
- Alarm indication with relay for controlling systems
- Real time analysis of fluid cleanliness - ISO, SAE & NAS class readout
- Easy to install
- Up to 500 bar pressure
- Accuracy is +/- 0.5 of an ISO code
- Also available as a portable system in our Particle Pal (see page 24)
- Suitable for diesel through to oils at 400cSt
- Instant LED readout
- Ideal for plotting ISO cleanliness

The PC9001 provides early warning sign for:

- Rise in contamination
- Component wear
- Filter and seal failure
- Water ingress
- Oil oxidation
- Cavitation

Model	PC9001
Dimensions	8.9 cm (W) 10.7 cm (D) 8.9 cm (H)
Enclosure	IP 66
Fitting connections	SAE -4; SAE -8
Power requirements	9 to 33 VDC, 150 mA
Storage temperature	-40 to 85°C (-40 to 185°F)
Operating temperature	-10 to 60°C (-14 to 140°F)
Altitude limit	2000 m (6562 ft)
Light source	Laser diode, Class 1
Particle size/channel	4,6, 14 and 21μm (ISO MTD)
Storage/operating humidity	97% relative humidity, non-condensing
Fluid compatibility	Hydraulic and lubrication oils, mineral, synthetic (phosphate ester compatible), diesel fuels
Fluid viscosity	2 to 400 cSt
Reports	ISO 4406, NAS and SAE cleanliness code
Performance verification	Optional validation certificate available (ISO MTD at 2.8 mg/l concentration)
Reproducibility	±0.5 ISO code (minimum concentration ISO MTD 2.8 mg/l, maximum ISO code is 29)
Weight	746 grams (2lb)
Sample temperature	0 to 60°C (32 to 140°F)

The PC9001 counter is built into our Particle Pal range of laser particle counters for oil/fuel analysis.

OUR AWARD WINNING PARTICLE PAL® RANGE

The award winning and revolutionary portable particle monitor for advanced on-site testing of your oils or diesel fuels just got better. Our next generation V2 has many new features and a hugely improved fluid flow, pump feature set.

The next generation has many new features including a combined LCD screen and memory as well as a pressurised internal flow path for fluids from diesel through to oils up to 420 cSt.

The real-time Particle Pal shows live ISO particle counts as well as % RH water content or genuine water PPM counts – we believe it's the most cost-effective portable cleanliness monitor on the market.

The new FS9V2 model has a single screen to display any combination of particulate, water content or density depending on the model ordered. The FS9V2 units are supplied in a robust case and have all components needed to start using instantly. For testing readings from live systems up to 350 bar a high pressure option is also available.

FS9V2
Particulate, Water & Density Sensor options.
Complete with memory

FEATURES

- Particulate readings displayed in ISO 4406, SAE 4059 & NAS 1638
- Water sensing as either % Saturation (RH) or PPM
- Built-in memory for storing readings
- Bottle sample from a minimum of 200 ml (diesel), 300ml (normal oils) 400ml (heavy oils)
- High pressure option available for all oil Particle Pal units
- Density sensing option for diesel fuels

FS9V2 Display

BENEFITS

- Compact, lightweight and robust
- Accurate, repeatable and consistent results
- Measure the cleanliness of oils or diesel fuels
- Ideal survey tool for field or laboratory use
- Sample direct from tank, sample bottle, or live system feed up to 350 bar (via HP adapter)

Model	Fluid Compatability				Displayed Information				Modes Of Operation			Memory	Trending/ Software	
	Diesel Fuel	Mineral Oils	Organic Oils	Synthetic Oils	ISO 4406, SAE AS4059 & NAS 1638	Relative Humidity (RH%)	Water Particles Per Million (PPM)	Density	Tank Sampling	Bottle Sampling	High Pressure live system Sampling (up to 350 bar)	Internal Memory 512 lines of data (8.5 hours)	Live trending via ROC software, or via memory stored data. All data can exported via .csv file.	USB Data Transfer
FS9V2	✓	✓	✓	✓	✓	✗	✗	✗	✓	✓	✗	✓	✓	✓
FS9V2-HP	✗	✓	✓	✓	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓
FS9V2-RH	✗	✓	✓	✓	✓	✓	✗	✗	✓	✓	✗	✓	✓	✓
FS9V2-RH-HP	✗	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓
FS9V2-PPM	✓	✗	✗	✗	✓	✗	✓	✗	✓	✓	✗	✓	✓	✓
FS9V2-PPM-DEN	✓	✗	✗	✗	✓	✗	✓	✓	✓	✓	✗	✓	✓	✓

FS9V2	Particle Counting for diesel and oil
FS9V2-HP	Particle Counting for oil includes high pressure reducing valve for connection to a high pressure system (max 350 bar).
FS9V2-RH	Particle Counting for oil with water sensor (%RH)
FS9V2-RH-HP	Particle Counting for oil with water sensor (%RH) includes high pressure reducing valve for connection to a high pressure system (max 350 bar).
FS9V2-PPM	Particle Counting for diesel with a water sensor displaying PPM
FS9V2-PPM-DEN	Particle Counting for diesel with a water sensor displaying PPM and density sensor (kg/l)

Applications

- Plant Hire
- Injection Moulding
- Steel Production
- Manufacturing
- Automotive Industry

ORDERING INFORMATION

Feel free to call our expert team for model advice and further information or to arrange a product demonstration. Alternatively download our data sheet on filtertechnik.co.uk.

PARTICLE PAL® *'LIFE'*

Oil that is either contaminated through water or particulate ingress or is coming to the end of its useful life through additive depletion or excessive oxidation should be monitored closely to avoid costly breakdowns and unnecessary system failures.

Introducing the Particle Pal *Life*, combining a Particulate Laser Counter with a Water Sensor and an accurate full spectrum holistic Oil Condition Sensor from Tan Delta. The Particle Pal *Life's* software shows cleanliness and water levels in real time as well as oil condition/remaining useful life. All data is logged, can be recalled on screen order to build up a trend history. The full spectrum holistic oil condition sensor monitors the overall condition of the oil giving you unparalleled sensitivity, accuracy and precision, enabling the oil's remaining life to be calculated and displayed.

The Particle Pal *Life* has over 500 oils profile and allows for self calibration if an oil is not present on the database. Particle Pal *Life* is a self contained portable field kit capable of bottle sampling or connecting to a live system up to 350 bar via a high pressure adaptor.

This ground breaking new product is an essential tool to help diagnose and analyse the health of your oil, saving costly downtime.

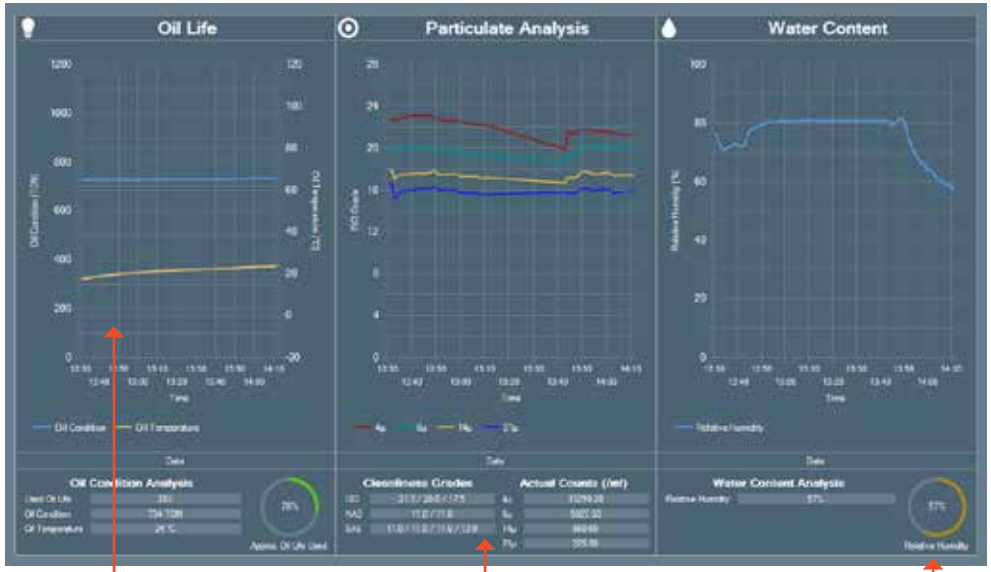
FEATURES

- Particulate readings displayed in ISO 4406, SAE 4059 & NAS 1638
- Water as % saturation (RH)
- Oil condition sensor monitors the overall condition of the oil giving you unparalleled sensitivity, accuracy and precision
- Bottle sample or connect to live systems up to 350 bar via HP adaptor.
- Gives you the remaining useful life of the oil being tested
- All readings logged internally
- Off site backup service ensures no loss of data and remote access

BENEFITS

- Compact, lightweight and robust
- Easy to use software displays & logs results
- Over 500 oils profiled, self calibration of other oils, up to 600 cSt possible if heated to 50°C
- Accurate, repeatable and consistent results
- Measure the cleanliness and remaining life of oils in real time
- Ideal survey tool for field or laboratory use
- Sample direct from a tank or sample bottle, connect to a live system up to 350 bar via HP adaptor.

HOME SCREEN

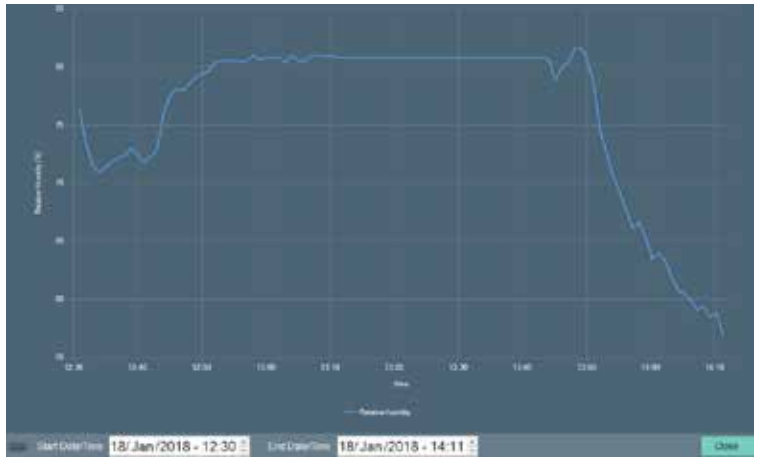


The Oil Life indicates the oils condition, remaining life and temperature

Particulate analysis shows the amount of particulate found in the oil ISO/NAS/SAE classes as well as actual particle counts per ml

Water humidity level of oil sample

ZOOM VIEW



This is a new product, please check our website for the latest information.

PATCH TEST KITS TO MEASURE PARTICULATE TO ISO 44077 & AS4059, WEAR DEBRIS & VARNISH MPC TEST OPTION

Our patch test kit enables you to quickly identify abnormal levels of contamination, wear debris and varnish so that corrective actions can be scheduled. Our portable patch test kit helps to identify and monitor the types and levels of contamination in fluid power systems. The kit enables instant visual analysis through an optical microscope of the major types of system wear including bright and black metals, silica, fibres, elastomers, plastics and others. New 0.45 micron patches allow for varnish tests to be performed via colour photospectrometer.

The Patch Test Kit contains:

- Vaccum Pump
- Full instruction manual
- Forceps
- Monocular Microscope (with built in integral digital camera)
- Glassware including Filter Holder
- Filter membranes and mounting slides
- Petri dishes
- Test colour photo
- Pressurised sure shot spray gun
- Plastic beaker
- Carry case
- MPC Varnish
- Colour photospectrometer

FEATURES

- Patch test kit to measure contamination to ISO 44077 & AS 4059
- High quality microscope & camera give a visual representation and record of contamination
- Identify wear elements
- Varnish test complete with reference slides

BENEFITS

- Software available to display trending graphs
- Simple to assemble and use

WHY BUY A PATCH TEST KIT?

If you are looking for a kit which is supplied complete with everything required to take immediate samples and is simple and easy to read, choose Filtertechnik's patch test kit.

MPC varnish colour photospectrometer option

OIL CLEAN-UP SYSTEMS & SKIDS

Filtertechnik have been supplying filtration solutions to a wide range of industries for over 25 years. Our next generation oil filtration systems provide a winning combination of highly efficient filtration with practicality enabling the end user to remove contaminants from their oil supply effectively and quickly.

In this section you will find a vast range of systems and skids, from small lightweight units to large installations, with flow rates of 5 l/min to 1,000 l/min no job is too demanding for our filtration units.

Don't hesitate to contact us for any further details on our systems highlighted in the following pages.

HIPPO FILTER SYSTEMS

The Hippo range of filter housings and clean-up systems simultaneously remove both water and solid contaminants from a wide range of oils or fuels. They are simple to install and are a cost effective way of removing dirt and solid contaminants from your fluids. Hippo filters are typically added to any given system to provide additional off-line filtration capability. Their low cost elements are the perfect addition to a system that struggles to keep oil or fuel clean with standard filters.

WHY BUY A HIPPO FILTER?

Standard in-line filters mostly filter down to 20 micron efficiency. The most harmful contaminants in oil are sub 5 micron particles, these are also the most abrasive. The Hippo filter is capable of removing harmful solid contaminants down to 3 microns or less on hydraulic oil. The Hippo filter can also clean contaminant down to ISO 14/12/9 and remove water down to 50 ppm.

APPLICATIONS

- Hydraulic oil
- Diesel fuel
- Lubrication oil
- Gear oil
- Engine oil
- Coolants

EXTEND YOUR OIL LIFE BY UP TO 10 TIMES

By fitting a Hippo filter, you can ensure your oil (lubricating, hydraulic or gear oil) remains clean and dry. This will ensure that the oil remains in excellent condition for up to 10 times longer

BEFORE **AFTER**

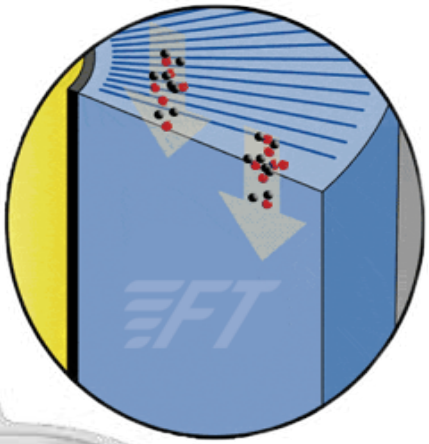
HIPPO FILTERS
LOVE DIRT & WATER

It is a well known fact that oil and fuel cleanliness is critical. It is not uncommon for large machines to dispose of oil on a monthly basis. By fitting a Hippo filter, you will extend the lifetime of your oil.

The Hippo Filters' high performance cartridges allow for the removal of ultra-fine particles and debris, thereby immediately reducing the risk of contamination-induced damage to parts and machinery.

With today's machinery operating under increasingly fine tolerances, the removal of particulate and moisture down to acceptable levels is paramount.

As the Hippo system effectively removes water from oil or diesel fuel the risk of fluid degradation is significantly reduced along with inevitable associated down-stream problems.



The diagram to the left highlights how the oil passes through the centre of the filter and back down through the media on the outside.

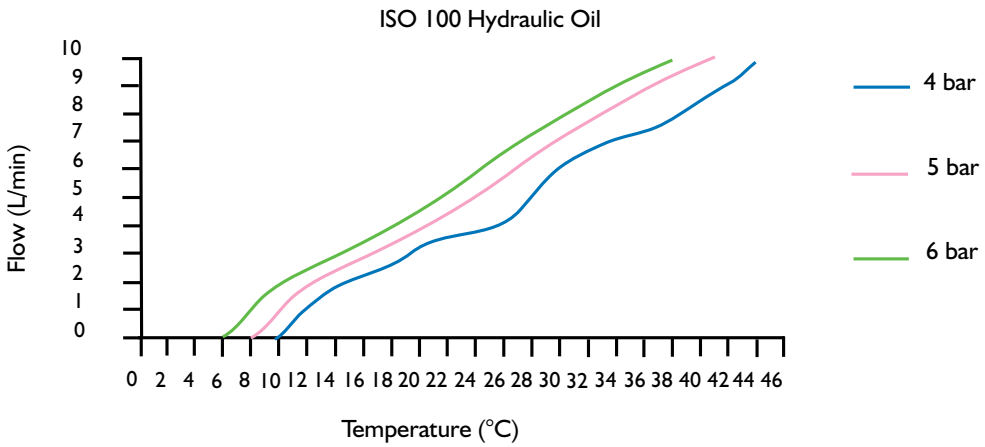
FEATURES & BENEFITS

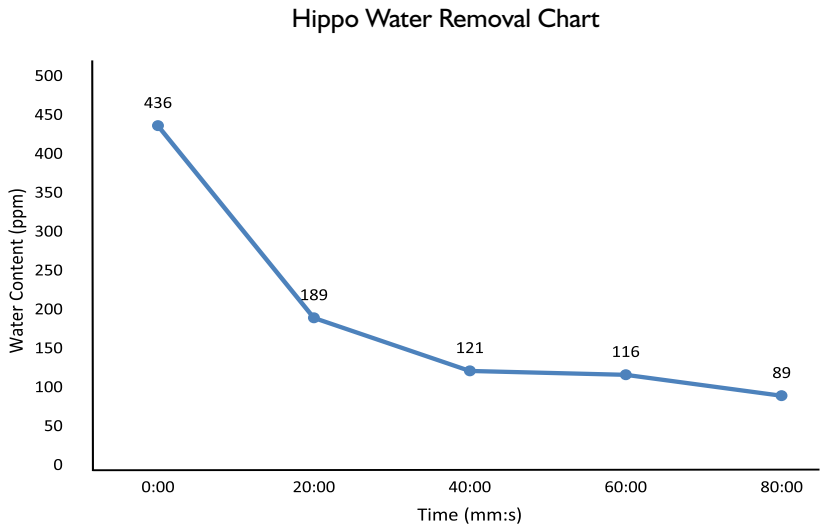
- Eliminates water from oil or diesel fuel using cellulose elements
- Does not remove additive packages
- Extends oil drain intervals
- Increases service intervals
- Provides continuous protection
- Environmentally friendly
- Reduces machine downtime
- Removes dirt and solid contaminants down to NAS 5 ISO 14/9 or better

Our hippo filters are distributed worldwide and can fit onto a wide range of construction machinery, filtering oil as the machine is running.

PRODUCT TESTING

The chart below indicates the flow rate v temperature of the hippo filter under different pressure ratings.





FTP-180

- Flow rates of up to 10 l/min (depending on cartridge)
- High volume dirt holding capacity
- Water is removed to below 0.05%
- Connections: 3/8" BSP (F) or 1/2 BSP (F)
- Various cartridge options available depending on the level of solids and/or moisture present
- Suitable for most oils including kerosene, turbine oils and bioethanol

FTP-180-2

- Flow rates of up to 10 l/min
- High volume dirt holding capacity
- Lightweight and easy to transport
- Water is removed to below 0.05%
- Various cartridge options available depending on the level of solids and/or moisture present
- Suitable for most oils including kerosene, turbine oils and bioethanol

BD5000

- Flow rates of up to 10 l/min
- Remove both solid contaminants and water at the same time
- Removes dirt and solid contaminants down to NAS 5 and ISO 14/9 or below
- Various cartridge options available depending on the level of solids and/or moisture present
- Down to 2.8μm
- 3 metre suction and return hoses
- Simple to install and operate
- Reduces machine downtime
- Suitable for most oils including kerosene, turbine oils and bioethanol

ORDERING INFORMATION

Feel free to call our expert team for further application details.

Filtertechnik Super Duty Filter (x6) Hippo Systems

FTP-180-6

- Flow rates of up to 20 l/min
- 10 bar maximum pressure*
- High volume dirt/ water holding capacity
- Water is removed to below 0.05%
- 1/2" BSP inlet and outlet
- Various cartridge options available depending on the level of solids and/or moisture present
- Suitable for most oils including kerosene, turbine oils and bioethanol

*High pressure option available

HIPPO ELEMENT OPTIONS

CELLULOSE ELEMENT
FTHF-01

- Water removal to below 0.05%
- Flow rates of up to 10 l/min
- Solid removal to 2.8μ absolute
- Wide range of oil compatibility
- Economic cartridge option
- Ideal for most oils/ fuels

POLYPROPYLENE ELEMENT
FTHF-03

- Ideal for water glycol & fire resistant fluids
- Flow rates of up to 10 l/min
- Economic cartridge option
- Designed for use with water based oils

PLEATED ELEMENT
MM467-AI

- Flow rates of up to 22 l/min per cartridge
- 3μ absolute filtration efficiency
- High dirt holding capacity
- Low pressure drops
- For use with hydraulic & lubricating oils

SENTRY FILTER CART

The Sentry is our entry level filtration cart designed for constant industrial or intermittent oil transfer use. Fitted with high quality housing and absolute rated synthetic media elements, the Sentry boasts not only a high dirt holding capacity but also simple element changeovers. Use your Sentry to ensure that oil will be clean and ready for use at anytime.

FEATURES

- Lightweight and portable, perfect for mobile use
- Up to 25 l/min flow rate
- Ideal for use with high viscosity oils
- Range of absolute rated micron rating options available
- Clean oil to ISO cleanliness codes of 14/12/9 - 13/11/8
- Rugged frame with integral drip tray
- All terrain castor wheels
- Uses standard 110 or 240 Vac mains electric
- Off-line contamination control

BENEFITS

- Rugged design
- Low initial consumable costs
- Easy to transport
- Simple to use
- Perfect for replenishing systems with filtered oil and small scale oil polishing

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Paper Mills
- Injection Moulding
- Marine

ORDERING INFORMATION

Feel free to call our expert team for further application details.

SFC-3000 FILTER TROLLEY

The SFC-3000 is a rugged filtration cart designed for constant industrial or intermittent oil transfer use. With two housings fitted onto the unit, the SFC-3000 boasts not only a large dirt holding capacity but also the option of staged filtration. This staged process will reduce the frequency you need to change your elements. The dual-filter design also means that you can introduce a water removal element, giving the option to remove both solid and water contamination in a single pass.

FEATURES

- Flow rate options of either 18 l/min or 45 l/min
- High volume dirt holding capacity to deliver ISO cleanliness codes of 14/12/9 or better
- Dual 9" or 14" filter housings for continuous filtration
- Rugged frame with integral drip tray
- Easy to transport

BENEFITS

- Rugged design
- Low cost consumables available in a range of micron ratings
- Increased dirt holding capacity
- Staged filtration possibilities to reduce element change out
- Flexible filter element selection - water removal options available
- Simple element changeover
- Perfect for replenishing systems with filtered oil and end of production line flushing

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Mining/Quarrying
- Injection Moulding
- Marine

ORDERING INFORMATION

Feel free to call our expert team for further application details.

DFC-3000 DRUM OIL DISPENSER & FILTER TROLLEY

The DFC 3000 is designed to carry and clean 208 litre drums of oil and is fitted with two standpipes and hoses for efficient fluid transfer. With a flow rate of 45 l/min, large volumes of oil can be cleaned and water removed quickly and efficiently.

FEATURES

- Portable and easy to transport - perfect for mobile use
- Powerful 45 L/min flow rate
- Low cost consumables in a range of micron ratings
- Water removal option available
- Rapid complete barrel transfer
- High dirt holding capacity
- Staged filtration to reduce element change over

APPLICATIONS

- Filtering the fluid in a hydraulic reservoir periodically as a supplement to continuous filtration by system filters
- Cleaning up your hydraulic system before restarting the system following component failure
- Providing clean fluid when re-filling and adding fluid to the system reservoir
- Reclaiming contaminated fluid
- Pre-filling and cleaning up hydraulic systems on new or re-built machinery and equipment.
- Off line contamination of hydraulic systems

ORDERING INFORMATION

Feel free to call our expert team for further application details.

IFC-6050 INTELLIGENT FILTER TROLLEY FITTED WITH PARTICULATE AND WATER SENSORS

The IFC-6050 is an intelligent portable filtration cart. With two built-in hippo filters with a flow rate of 10 l/min (600 l/hr) for oils, combined with an intelligent laser particle counter, the IFC-6050 delivers clean and dry oils ready for use anytime.

FEATURES

- Flow rate rates of up to 10 l/min (600 l/hr)
- High volume dirt holding capacity to deliver ISO cleanliness codes of 14/12/9 and the equivalent of NAS 1638 class 5
- Eliminates water from oil
- PC9001 laser particle monitor fitted, LED display to ISO 4406
- Moisture monitor fitted to display water content as % saturation
- Various cartridge options available depending on the level of solids and/or moisture present
- Suitable for most oils including kerosene, turbine oils and bioethanol

BENEFITS

- Clean & dry oil ready for use when required
- Recover and re-use contaminated oils
- Single pass cleanliness
- Ideal for tank cleaning and oil recovery

WHY BUY AN IFC-6050?

Great filtration efficiency down to 3 micron and the ability to quickly find the cleanliness level of oils on-site in real-time.

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Mining/Quarrying
- Injection Moulding
- Marine

ORDERING INFORMATION

Feel free to call our expert team for further application details.

NDU-1NX - NEPTUNE DEHYDRATION UNITS

The NDU-1NX is a portable oil dehydration filter cart capable of rapidly removing both free and entrained water to under 100ppm with flow rates up to 15 l/min. By utilising Filtasorb2® (see page103) or 1 micron absolute rated elements (see page106), the NDU-1NX is ideal for oil dehydration and clean-up.

FEATURES

- Flow rate rates of up to 15 l/min (900 l/hr)
- High volume dirt holding capacity to deliver ISO cleanliness codes of 18/16/13
- Lightweight and portable, perfect for mobile and basement tank access
- Rugged frame with integral drip tray
- Uses standard 110 Vac or 240 Vac mains electric

BENEFITS

- Rapidly removes both free and entrained water from oil
- Low cost replacement filter cells
- Small footprint and easy to transport
- Single pass cleanliness

WHY BUY AN NDU-1NX?

Filtertechnik's range of oil dehydration units are perfect for returning oil contaminated with water back to health cost effectively. By utilising the revolutionary Filtasorb2®, Filtertechnik have developed a robust range of oil dehydration units that can return oil at many thousand ppm down to acceptable working levels of water content. Our Neptune range is able to remove water down to below 100ppm.

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Transformer oils
- Injection Moulding
- Gearbox oils

ORDERING INFORMATION

Feel free to call our expert team for further application details.

NDU-2NX

The NDU-2NX is a portable oil dehydration filter cart capable of rapidly removing both free and entrained water to under 100ppm with flow rates up to 25 l/min. By utilising Filtasorb2® (see page 103) or 1 micron absolute rated elements (see page 106) The NDU-2NX is very flexible for oil dehydration and clean-up.

FEATURES

- Flow rate rates of up to 25 l/min (1,500 l/hr)
- High performance Filtasorb2® inserts to achieve 100ppm or better
- High volume dirt holding capacity to deliver ISO cleanliness codes of 18/16/13
- Rugged frame with integral drip tray
- All terrain castor wheels for ease of manoeuvre

BENEFITS

- Rapidly removes both free and entrained water from oil
- Low cost replacement filter cells
- Small footprint and easy to transport
- Single pass cleanliness

WHY BUY AN NDU-2NX?

Filtertechnik's range of oil dehydration units are perfect for returning oil contaminated with water back to health cost effectively. By utilising the revolutionary Filtasorb2®, Filtertechnik have developed a robust range of oil dehydration units that can return oil at many thousand ppm down to acceptable working levels of water content. The NDU-2NX is able to remove water down to below 100ppm at 25 l/min.

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Transformer oils
- Injection Moulding
- Gearbox oils

ORDERING INFORMATION

Feel free to call our expert team for further application details.

NDU-3NX

The NDU-3NX is a portable oil dehydration filter cart capable of rapidly removing both free and entrained water to under 100ppm with flow rates up to 50 l/min. By utilising Filtasorb2® (see page 103) or 1 micron absolute rated elements (see page 106) The NDU-3NX is very flexible for oil dehydration and clean-up.

FEATURES

- Flow rate rates of up to 50 l/min (3000 l/hr)
- High performance Filtasorb2® inserts to achieve 100ppm or better
- High volume dirt holding capacity to deliver ISO cleanliness codes of 18/16/13
- Rugged frame with integral drip tray
- All terrain castor wheels for ease of manoeuvre

BENEFITS

- Rapidly removes both free and entrained water from oil
- Low cost replacement filter cells
- Small footprint and easy to transport
- Single pass cleanliness

WHY BUY AN NDU-3NX?

The NDU-3NX provides a flow rate of 50 l/min and utilises the revolutionary Filtasorb2®'s ability to remove water down to 100ppm. The NDU-3NX is a great option for oil dehydration.

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Transformer oils
- Injection Moulding
- Gearbox oils

ORDERING INFORMATION

Feel free to call our expert team for further application details.

NDU-4NX

The NDU-4NX is a transportable oil dehydration filtration unit capable of rapidly removing both free and entrained water to under 100ppm. By utilising Filtasorb2® (see page103) or 1 micron absolute rated elements (page 106) The NDU-4NX is ideal for use around a plant & rugged enough to run continuously in order to clean up heavily contaminated oils.

FEATURES

- Flow rate rates of up to 100 l/min (6000 l/hr)
- High performance Filtasorb2® inserts to achieve 100ppm or better
- High volume dirt holding capacity to deliver ISO cleanliness codes of 18/16/13
- Rugged frame with integral drip tray
- All terrain castor wheels for ease of manoeuvre

BENEFITS

- Rapidly removes both free and entrained water from oil
- Low cost replacement filter cells
- Single pass cleanliness

WHY BUY AN NDU-4NX?

With a higher flow rate than its predecessor, the NDU-4NX utilises the revolutionary Filtasorb2®, removing water down to under100ppm, making it a great option for oil dehydration.

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Transformer oils
- Injection Moulding
- Gearbox oils

ORDERING INFORMATION
Feel free to call our expert team for further application details.

BESPOKE FILTRATION SYSTEMS

From concept to creation, Filtertechnik are there every step of the way finding the right solution for our customers. Our expert in-house design and build team use the latest 3D CAD system to design filtration systems and all our builds are manufactured under ISO 9001 procedures to the highest engineering standards. From cleaning hydraulic oil for earth moving machinery on the production line to servicing injection moulding machines, no matter what the flow rate, oil or application Filtertechnik will get the job done.

ORDERING INFORMATION
Feel free to call our expert team for further application details.

FILTRATION RENTAL FLEET

Filtertechnik stock the largest filtration hire fleet in the whole of the U.K. From our 25 years experience we have brought together a versatile range of filtration solutions suitable for most oil applications. If you require rapid clean-up of particulate and water from oil look no further.

BENEFITS

- Rental units from 10-45 l/min are available for immediate deployment
- Rapidly return fluids to optimum cleanliness levels
- Maximise equipment performance
- Prevent expensive downtime
- Remove both solid particulate & water at the same time

ORDERING INFORMATION
Feel free to call our expert team for further application details.

SCHROEDER FILTER ELEMENTS

Filtertechnik offer a wide variety of filter elements suitable for many different applications. Every filter element is tested under stringent conditions before it is supplied to the customer ensuring that each filter provides the filtration efficiency specified.

We are Europe's premier Schroeder partner as well as offering our own range of filter elements and housings.

SCHROEDER ELEMENT OVERVIEW

CARTRIDGE ELEMENTS

Features and Benefits	• For use in SAE manifold cavities • Designed to fit directly into manifold • Space-saving solution providing component-specific filtration • Low initial pressure drop with a max operating pressure of 206 bar (3,000 psi) • Easy element access with simple change out

COALESCING ELEMENTS

Features and Benefits	• Designed to provide the highest water and particulate removal efficiency from today's ULSD and biodiesel based fuels • Patent-pending, three-phase, particulate and fuel/water separation media technology • Tested according to the SAE J1488 particulate removal test

GeoSeal®

GEOSEAL®

Features and Benefits	• Provides a unique way for OEM's to retain replacement element business and keeps a filter's performance at the level that it was supplied. • The critical sealing arrangement between a filter housing and its replacement element takes on a shape other than the standard circular arrangement. • The element grommet and mating bushing are given a unique geometric shape.

CNG ELEMENTS

Features and Benefits	• For the removal of contaminates including water, compressor oil, rust, and scale from compressed gasses • Provides the necessary protection of sensitive alternative fuel system components, extending system life and reducing overall maintenance costs • High quality solutions available for common dispensing and on-vehicle applications operating pressure of 206 bar (3,000 psi)

DirtCatcher® there's no way out!

SCHROEDER ANTI-STAT PLEAT®

Features and Benefits	• For use in SAE manifold cavities • Developed to greatly reduce or eliminate electrostatic discharging problems that can occur during filtration of hydraulic and lube fluids • By combining proven Excellement® media and ASP technology, it is now possible to offer both high filtration efficiency and electrical conductivity

SCHROEDER DIRTCATCHER®

Features and Benefits	• DirtCatcher® elements, a superior alternative to inside-out filtration • An outer shell prevents contaminants from falling back into the system during element changes • Provides the excellent dirt retention of Excellement® media

BestFit®

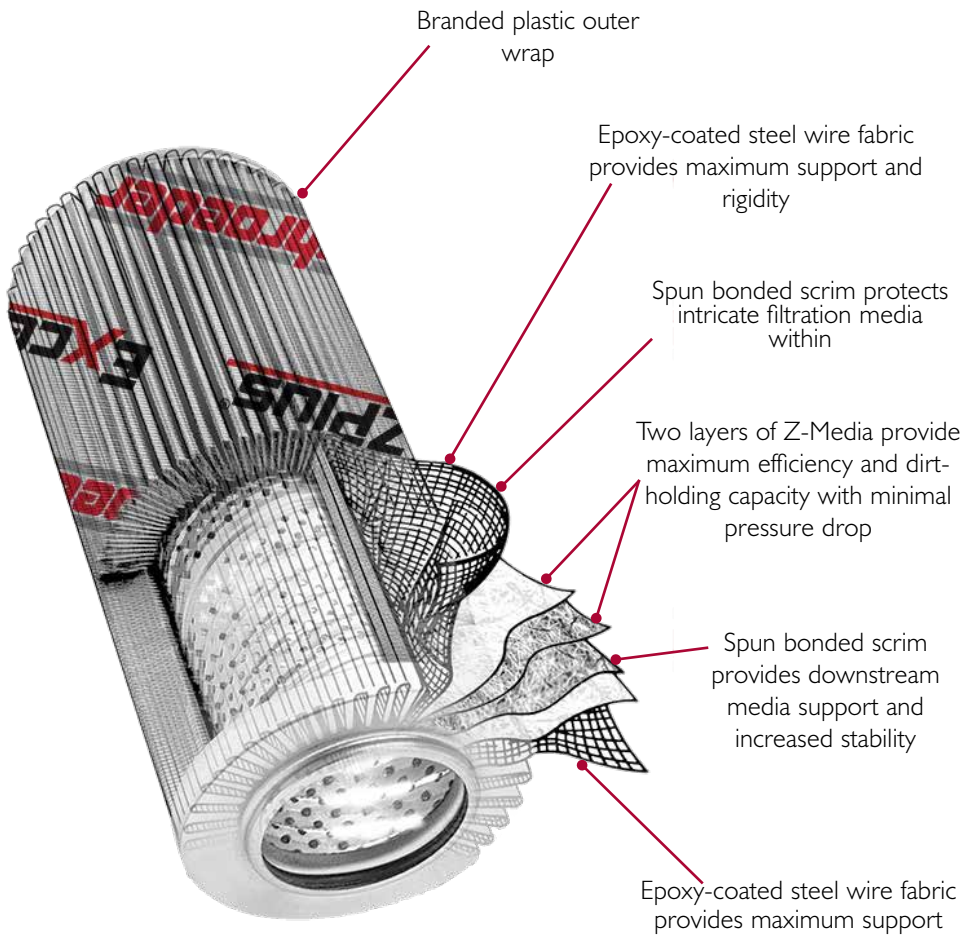
BESTFIT®

Features and Benefits	Affordable filtration solutions that are sized to fit a wide variety of applications and replace a wide range of competitor elements • Cartridge and spin-on styles available • Variety of media grades (cellulose, synthetic, water removal, anti-stat, stainless steel, metal mesh) • Over 40,000 cross references online

F-PACK ELEMENTS®

Features and Benefits	The change-over to "F" pack media from a traditional, high performance, synthetic media results in lower clean pressure drop and higher efficiency. This change eliminates cast-off, or shedding of synthetic fibers, which result in component failure.

EXCELEMENT SYNTHETIC MICROGLASS FILTRATION MEDIA



Cost-effective media area
Less restriction, lower pressure drop, lower hydraulic load

Own branding
Please contact us for more details

FILTER MEDIA TYPES AND RATINGS DEPTH MEDIA

The two basic depth media types that are used for filter elements are cellulose and synthetic.

Due to the sporadic size and shape of the fibres, the pores in cellulose filter media usually have a wide variety of sizes. Synthetic filter media is different; it consists of fibres that are consistent in size and shape, are usually thinner than cellulose and have an even circular cross section.

The differences in the size and layout of fibres is the reason why synthetic filter media performs better. A thinner fibre means more pores in an area, as well as thinner fibres being able to be sorted closer together, resulting in smaller pores, ideal for finer filtration. The arrangement and size of the fibres also improves the dirt holding capacity.

General comparison of filter media

MEDIA MATERIAL	CAPTURE EFFICIENCY	DIRT HOLDING CAPACITY	DIFFERENTIAL PRESSURE	LIFE IN A SYSTEM	INITIAL COST
Fibreglass	High	High	Moderate	High	Moderate
Cellulose (paper)	Moderate	Moderate	High	Moderate	Low
Wire Mesh	Low	Low	Low	Moderate	High

The filter media is that part of the element which removes the contaminant.

The main objective of filter media is to expose the largest amount of surface area to the flow of fluid. The common way to achieve this is to pleat the media, which reduces the differential pressure whilst improving the dirt holding capacity. The filter media can also have multiple layers and a mesh backing to achieve a specific performance. After the media is pleated and cut to the desired length, both ends are fastened together. Filter media is normally categorised as either surface or depth.

SURFACE MEDIA

For surface type filter media, the stream of fluid has a straight through flow path and contaminant is caught on the surface of the element. Elements made from surface media are usually manufactured from woven wire because the manufacturing process of wire is accurate, resulting in a consistent pore size. The element is then given a pore size rating which is the diameter of the largest spherical particle that will pass through. The build up of contaminant on the surface of the element does, however, allow the media to catch particles smaller than the rated size. Particles that are smaller in diameter though may well pass downstream of the surface media, e.g. a fibre which has a smaller diameter but a longer length.

DEPTH MEDIA

For this type of media particles are caught in the puzzle of openings within the media. Due to the way it is made, the depth type filter media has a variety of different sized pores. It can capture very high proportions of contaminant at very small particle sizes, depending on the distribution of pore sizes.

Some elements last longer than others due to the make up of the media and the contaminnt loading process. Generally though, filter media is made up of millions of pores in variety of sizes and are connected throughout the media layers through which the fluid has to flow.

FILTER PERFORMANCE RATINGS

When evaluating the performance of hydraulic filter elements, the most important parameters to consider are:

(a) efficiency
(b) beta stability
(c) dirt holding capacity
(d) pressure drop vs. flow

(a) The efficiency or filtration ratio, often expressed by "Beta" (B) presents how well an element removes contamination from a given fluid. The higher the efficiency the cleaner the oil, system components are better protected and downtime, repair and maintenance costs are minimal.

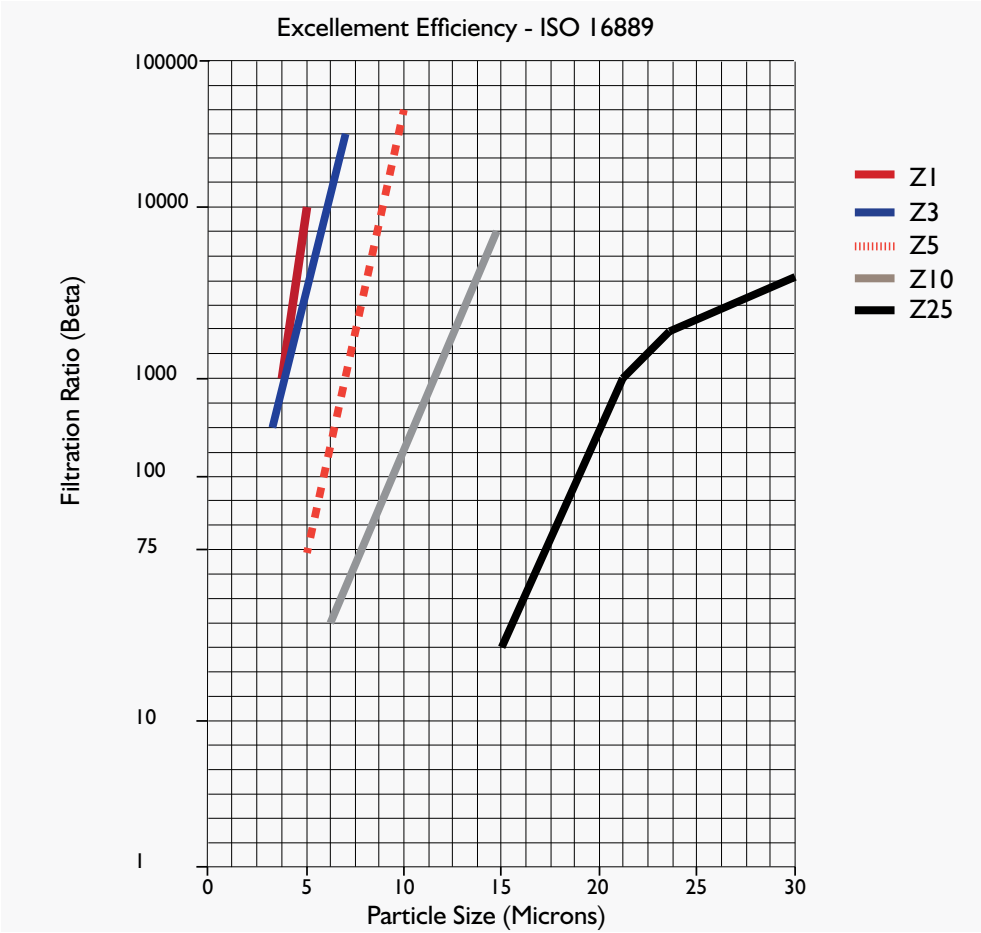
(b) Beta stability refers to the ability of an element to maintain efficiency as differential pressure increases across the element. Differential pressure will increase as contamination is trapped, or with an increase in fluid viscosity. This is an important indicator because it relates to the element's performance over time.

(c) Dirt Holding Capacity (DHC) simply means the volume of contamination that a filter element can catch before 'terminal' differential pressure is reached. Dirt holding capacity is directly related to the element's life. Elements with better DHC need less maintenance and therefore directly influences overall cost. Always look at the DHC before purchasing a filter element.

(d) Pressure Drop vs. Flow is simply a measure of resistance to fluid flow in a system. It is important to consider the initial pressure drop (Δp) across the filter element (and housing). Ideally, a filter element should be sized so that the initial pressure drop across the clean element (plus the filter housing drop) is less than half the bypass valve setting in the filter housing.

The special class of micro-glass and other fibres used in Z-Media® are manufactured with utmost precision, to specific thicknesses and densities, and bonded with select resins to create material with extra fine passages.

FILTRATION RATIO PER ISO 16889				
ELEMENT MEDIA	ßx(c) ≥ 75 (98.7%)	ßx(c) ≥ 10 (99%)	ßx(c) ≥ 200 (99.5%)	ßx(c) ≥ 1000 (99.9%)
Z1	<4.0	<4.0	<4.0	4.2
Z3	<4.0	<4.0	<4.0	4.8
Z5	<4.0	4.2	4.8	6.3
Z10	6.8	7.1	8.0	10.0
Z25	16.3	17.1	19.0	24.0



TYPICAL DIRT HOLDING CAPACITIES FOR Z-MEDIA® ELEMENTS IN GRAMS					
ELEMENT SIZE	MEDIUM				
	Z1	Z3	Z5	Z10	Z25
3TA	9	7	10	8	8
3TB	27	11	12	11	11
5TB	40	18	21	17	18
KB	110	99	138	110	112
KI	85	88	130	104	106
KKI	181	185	263	174	214
27KI	336	345	357	324	279
16Q	258	283	254	280	234
39Q	593	1001	691	940	537
39QCLQF	1259	1293	869	1214	1102
39QPML	1485	1525	1235	1432	1299
BBI	306	N/A	341	272	N/A
KG	112	115	119	108	93
KKG	224	230	238	216	186
27KG	336	345	357	247	279
4Y	6	5	6	5	5
8Y	12	10	12	11	9
8R	33	26	51	29	30
K	112	115	119	108	93
KK	224	230	238	216	186
27K	336	345	357	324	279
FZX	6	5	7	5	5
SVZX	27	21	30	24	24
5CT	27	22	31	24	25
8CT	44	35	49	39	40
14CT	94	75	105	84	85
6G	38	30	42	34	34
9G	64	51	71	57	58
5H	26	28	39	47	48
9H	51	42	59	42	48
16QCLQF	307	315	364	306	278
16QPML	307	315	364	330	299

SCHROEDER BESTFIT RANGE

Filtertechnik offer thousands of Bestfit cross over filter elements from stock. No matter the severity of oil contamination, the speed of flow or pressure drop, we will find a suitable filter element to 'best fit' the application.

We use the latest up to date Schroeder BestFit database which is continually updated to find alternative elements for many brands including but not limited to:

- MP Filtri
- Pall
- EPE
- Internormen
- Donaldson
- Stauff
- Parker
- Hydac
- Baldwin
- Many more

ORDERING INFORMATION

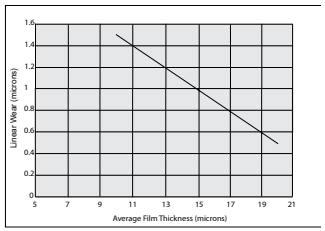
Feel free to call our expert team for more Bestfit cross over filter elements in stock

ARE YOUR EXISTING FILTERS EFFICIENT ENOUGH?

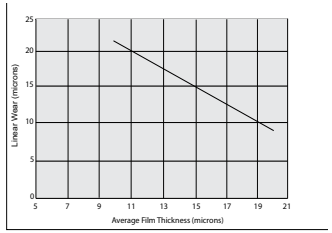
Particle Size vs. Bearing Wear: Are You Removing the Right Particle Sizes?

There is a direct relationship between the minimum film thickness for a journal bearing and the most damaging particle sizes. Minimum film thicknesses range from 1 – 20 μm. Schroeder elements provide 99.9% efficiency for particles sizes > 15 μm, whereas the two competitive elements only have an efficiency of ≤ 50% for particles > 20 μm.

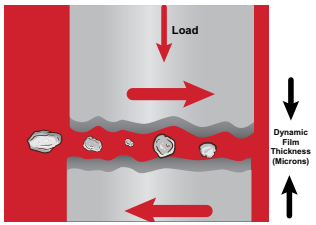
Bearing Wear vs. Film Thickness Contaminated Oil[1]



Bearing Wear vs. Film Thickness Clean Oil[1]

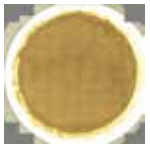


Film Thickness Should Be ≥ Largest Particle Size



Why Does Better Filtration Matter?

New vs. Used Media Comparison

Competitor A	Competitor B	Schroeder
 Competitor A Media at 5X magnification	 Aftermarket Competitor B Media at 5X magnification	 Schroeder Media at 5X Magnification
 Total Contamination Captured – 198.47 mg/in^2 of media	 Total Contamination Captured – 219.37 mg/in^2 of media	 Total Contamination Captured – 335.24 mg/in^2 of media
 Contamination captured downstream of the main "working" layers – 112.8 mg/in^2 of media	 Contamination captured downstream of the main "working" layers – 130.35 mg/in^2 of media	 Contamination captured downstream of the main "working" layers – 1.71 mg/in^2 of media
Conclusion: 57% of the contaminant was not being captured by the main "working" layers of the media.	**Conclusion: 60% of the contaminant was not being captured by the main "working" layers of the media.**	**Conclusion: < 1% of the contaminant was not being captured by the main "working" layers of the media.**

FILTER HOUSINGS SELECTION GUIDE/HELP

Throughout this guide you will find the recommended applications for each filter. Please note that all of the filters we supply go through regular performance tests to ensure they are suitable for the application.

AUTOMOTIVE MANUFACTURING

BULK OIL FILTRATION

AGRICULTURE

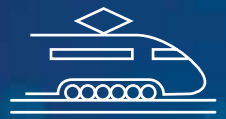
PULP & PAPER

MARINE

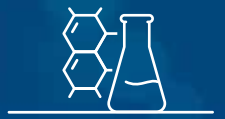
MINING

OFFSHORE

STEEL MAKING



RAIL ROAD



CHEMICALS

POWER GENERATION

INDUSTRIAL

WASTE WATER TREATMENT

MACHINE TOOLS

MOBILE VEHICLES

CONSTRUCTION

FILTER HOUSING SELECTION

A filter housing is the pressure vessel which contains the filter element, normally consisting of the head along with a bowl to allow the filter element to be fitted or changed. A filter housing has both inlet and outlet ports so it can be installed into a fluid system.

Some additional features that a housing may have are bypass valves, mounting holes and Dirt Alarms or clogging indicators, but there are many more options available. When choosing a filter housing, it is important to consider several aspects, including port sizes, indicator options, mounting methods, flow rate and pressure rating. The most important of these to consider is the pressure rating and this should be checked before the housing is selected. The other aspects will depend on the physical system design and customer preference.

Pressure Ratings

Generally, filter housings are designed for three circuit locations - suction, pressure or return lines. Each of these have different characteristics, the main one to consider in this case being maximum operating pressures. Suction and return line filters are generally designed for lower pressures, whereas pressure filter locations may require much higher ratings, from 100 bar to in excess of 414 bar. When specifying a housing, it is also crucial to check the circuit for frequent pressure spikes in addition to steady state. As some housings have restrictive or lower fatigue pressure ratings, another housing may need to be specified.

SELECTING THE RIGHT HYDRAULIC OR LUBE SYSTEM FILTER

Pressure filtration: Pressure filters usually produce the lowest system contamination levels as they clean fluid for sensitive high-pressure components and provide protection of downstream components in the event of catastrophic failures. Systems with intermittent return line flows need to be sized to match the output of the pump, where the return line may require a much larger filter for the higher intermittent flows.

Return line filtration: Return line filters are often considered when initial cost is a concern. Special care is needed for surge flows. Large cylinders and other components can cause return line flows to be much greater than pump output. Return lines can have substantial pressure surges, which need to be considered.

In-Tank filters: In-tank filters are used to continually filter contaminant built up over time.

Off-line filtration: Off-line filters (kidney loop) are often used to supplement in-line filters when adequate cleanliness cannot be obtained with system filters or water ingress is an issue.

Breather filtration: Efficient filter breathers are required for effective contamination control on non pressurised reservoirs and should complement the liquid filtration component. These remove airbourne particles and can also remove water from the atmosphere (dessicant).

FILTER HOUSINGS

Housing and Element Sizing:

When sizing the filter housing, it is important to ensure it is big enough to achieve at least a 2:1 ratio between the bypass valve setting and the pressure differential of the filter with a clean element installed. 3:1 or even higher is preferable for longer element life.

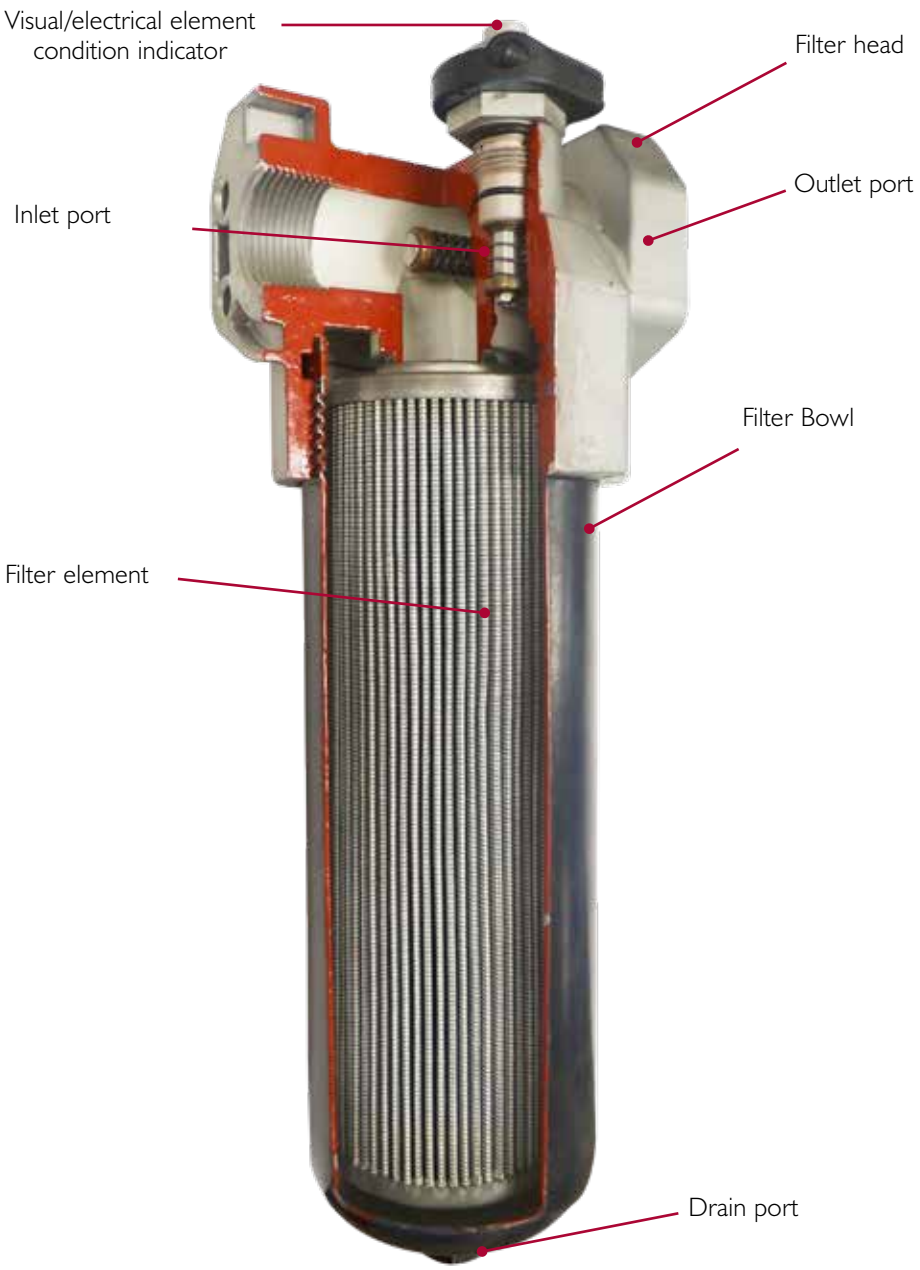
Dirt Alarm or Clogging Indicator:

These indicators signal or 'alarm' when the element needs to be cleaned or replaced. They usually have calibration marks indicating if the filter bypass valve has opened. Indicators can be mechanically linked to the bypass valve, or it may be entirely independant, sensing differential pressure.

Bypass valves & settings:

A bypass valve is usually used in the most standard filter assemblies in order to limit the maximum pressure drop across the element. As contaminant blocks the filter element, the pressure differential increases until the cracking pressure of the bypass valve has reached. The flow will then begin to bypass the filter element and pass through the bypass valve. This limits the maximum pressure differential across the filter element. It is important to note that some contamination also bypasses the element, reducing its effectiveness. Standard assemblies normally have a bypass valve cracking pressure between 1.7 and 6.9 bar.

A TYPICAL FILTER ASSEMBLY



HIGH PRESSURE FILTER HOUSINGS

Filtertechnik stock a wide range of high pressure filter housings suitable for a variety of applications. With Filtertechnik's 25 years combined experience and expertise we will always provide no-nonsense advice to ensure the right filter is selected for the specific application.

If you need additional help selecting a suitable body please call or email the sales team.

Product Matrix - High Pressure Filter Housings

Part number	Pressure (bar)	Flow (l/min)
HS60	415	380
KF50	345	380/570
KF30	210	380/570
VF60	415	265
CF60	415	190
DF40	275	115
NF30	210	75
FOF60	415	45

TOP-PORTED HYDROSTATIC REVERSE FLOW HIGH PRESSURE FILTER UP TO 415 bar FLOW RATES UP TO 380 l/min


Model Shown: HS60

Model	HS60
Features & Benefits	• Full flow reverse flow check valve diverts the element in hydrostatic applications • Thread on bowl with drain plug for easy element service • Offered in SAE straight thread and flange porting
Flow Rating	Up to 380 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	415 bar only for flange ported models
Fatigue Pressure	415 bar only with 4 bolt flange options
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 5.9 bar
Application	Industrial, Machine Tool, Offshore & Mining Technology

How to Build a Valid Model Number for Schroeder HS60

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	EQUALS
HS60	13HZ3		F24	D13	HS6013HZ3F24D13

BOX 1	
Filter Series	
HS60, HSN60 (no bypass in forward) flow)	

BOX 2	
Element Part Number	
13HZ3 = 3μ Excellement® Z-Media® (synthetic)	
13HZ5 = 5μ Excellement® Z-Media® (synthetic)	
13HZ10 = 10μ Excellement® Z-Media® (synthetic)	
13HZ25 = 25μ Excellement® Z-Media® (synthetic)	
13HZX3 = 3μ Excellement® Z-Media® (high collapse centre tube)	
13HZX5 = 5μ Excellement® Z-Media® (high collapse centre tube)	
13HZX10 = 10μ Excellement® Z-Media® (high collapse centre tube)	
13HZX25 = 25μ Excellement® Z-Media® (high collapse centre tube)	

BOX 3	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR

BOX 4	
Porting Options	
S24	SAE-24
F24	1 1/2" SAE 4-bolt flange Code 62
F32	2" SAE 4-bolt flange Code 62

BOX 5	
Dirt Alarm® Options	
Omit	None
Visual	D*
Electrical	MS*

*Contact us for full dirt alarm options

BASE-PORTED HIGH PRESSURE FILTER UP TO 345 bar FLOW RATES UP TO 570 l/min


Model Shown: KF50

Model	KF50
Features & Benefits	• Element changeout from the top minimises oil spillage • Offered in pipe, SAE straight thread, flanged and ISO 228 porting • Offered in conventional subplate porting • GeoSeal® patented element technology
Flow Rating	Two options: 380 l/min or 570 l/min the later is only available with 2" ports for 150 SUS (32 cSt) fluids
Max Operating Pressure	345 bar
Min Yield Pressure	1070 bar per NFPA T2.6.1
Fatigue Pressure	240 bar per NFPA T2.6.1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.8 bar • Full Flow: 4.2 bar
Application	Industrial, Automotive Manufacturing, Machine Tools, Mining, Pulp & Paper, Steel Making, Waste Water Treatment, Agriculture & Mobile Vehicles

How to Build a Valid Model Number for Schroeder KF50

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	EQUALS
KF50	1K	Z	10			S		D5		KF501KZ10SD5

BOX 1	
Filter Series	
KF50 KFN50 (Non-bypassing: requires ZX high collapse elements)	

BOX 2	
No & Size of Elements	
1	K, KK, 27K
2	K
3	K

BOX 3	
Element Part Number	
Omit	E media (cellulose)
AS	Anti-Static Media (Synthetic)
Z	Excellement® Z-Media® (synthetic)
ZW	Aqua-Excellement® ZW Media
ZX	Excellement® Z-Media® (High Collapse centre tube)
W	W Media (water removal)
M	M Media (reusable metal mesh)

BOX 4		
Micron Rating		
1	1 Micron	(Z, ZW, ZX media)
3	3 Micron	(AS, E, Z, ZW, ZX media)
5	5 Micron	(AS, Z, ZW, ZX media)
10	10 Micron	(AS, E, M, Z, ZW, ZX media)
25	25 Micron	(E, Z, ZW, ZX, M media)
60	60 Micron	(M media)
150	150 Micron	(M media)
260	260 Micron	(M media)

BOX 5	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR
H.5	Skydrol® compatibility

BOX 6	
Magnetic Options	
Omit	None
M	Magnet Inserts (not available with indicator in cap)

BOX 7	
Porting	
P	1 1/2" NPTF
P32	2" NPTF
S	SAE-24
F	1 1/2" SAE, 4-bolt flange & Code 62
O	Subplate
B24	ISO 228 G-1 1/2"

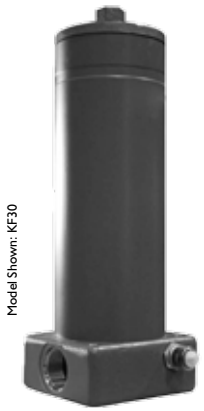
BOX 8	
Options	
Omit	None
50	3 bar
X	Blocked bypass
L	Two 1/4" NPTF inlet & outlet female test ports
U	Series 1215 7/16" - UNF Schroeder Check Test Point installed in cap (upstream)
UU	Series 1215 7/16" UNF Schroeder Check Test Point installed in block (upstream and downstream)

BOX 9	
Dirt Alarm® Options	
Omit	None
Visual	D*
Electrical	MS*

BOX 10	
Additional Options	
Omit	None
N	No Element Indicator (not available with KFN50)
G509	Dirt Alarm and drain opp. standard
G588	Electric Switch & drain opp. standard

*Contact us for full dirt alarm options

BASE-PORTED HIGH PRESSURE FILTER UP TO 210 bar FLOW RATES UP TO 570 l/min


Model Shown: KF30

Model	KF30
Features & Benefits	• Meets HF4 automotive standard • Element changeout from the top minimises oil spillage • Offered in pipe, SAE straight thread, flanged and ISO 228 porting • GeoSeal® patented element technology
Flow Rating	Two options: 380 l/min or 570 l/min the later is only available with 2" ports for 150 SUS (32 cSt) fluids
Max Operating Pressure	210 bar
Min Yield Pressure	830 bar per NFPA T2.6.1
Fatigue Pressure	170 bar per NFPA T2.6.1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.8 bar • Full Flow: 4.2 bar • Non-bypassing model has a blocked bypass
Application	Industrial, Automotive Manufacturing, Machine Tools, Mining, Pulp & Paper, Agriculture, Mobile Vehicles and Waste Water Treatment

How to Build a Valid Model Number for Schroeder KF30

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	EQUALS
KF30	1K	Z	10		S			D5		KF301KZ10SD5

BOX 1	
Filter Series	
KF30 KFN30 (Non-bypassing: requires ZX high collapse elements)	

BOX 2	
No & Size of Elements	
1	K,KK, 27K
2	K
3	K

BOX 3	
Element Part Number	
Omit	E media (cellulose)
AS	Anti-static Media (synthetic)
Z	Excellement® Z-Media® (synthetic)
ZW	Aqua-Excellement® ZW Media
ZX	Excellement® Z-Media® (High Collapse centre tube)
W	W Media (water removal)
M	Media (reusable metal mesh) N size only

BOX 4		
Micron Rating		
1	1 Micron	(Z, ZW, ZX media)
3	3 Micron	(AS, E, Z, ZW, ZX media)
5	5 Micron	(AS, Z, ZW, ZX media)
10	10 Micron	(AS, E, M, Z, ZW, ZX media)
25	25 Micron	(E, Z, ZW, ZX media)
60	60 Micron	(M media)
150	150 Micron	(M media)
260	260 Micron	(M media)

BOX 5	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR
H.5	Skydrol® compatibility

BOX 6	
Magnetic Options	
Omit	None
M	Magnet Inserts (not available with indicator in cap)

BOX 7	
Porting	
P	1 1/2" NPTF
P32	2" NPTF
S	SAE-24
F	1 ½" SAE, 4-bolt flange & Code 61
F32	2" SAE, 4-bolt flange & Code 61
O	Subplate
B24	ISO 228 G-1 ½"

BOX 8	
Options	
Omit	None
50	3 bar
X	Blocked bypass
L	Two 1/4" NPTF inlet & outlet female test ports
U	Series 1215 7/16" - UNF Schroeder Check Test Point installed in cap (upstream)
UU	Series 1215 7/16" UNF Schroeder Check Test Point installed in block (upstream and downstream)

BOX 9	
Dirt Alarm® Options	
Omit	None
Visual	D®
Electrical	MS*

BOX 10	
Additional Options	
Omit	None
N	No Element Indicator (not available with KFN30)
G509	Dirt Alarm and drain opp. standard
G588	Electric Switch & drain opp. standard

Contact us for full dirt alarm options

TOP-PORTED HIGH PRESSURE FILTER UP TO 415 bar FLOW RATES UP TO 265 l/min


Model Shown: VF60

Model	VF60
Features & Benefits	• Offered in pipe, SAE straight thread, flange and ISO 228 porting • Threaded bowl for easy element servicing • Various dirt alarm options available
Flow Rating	Up to 265 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	415 bar
Min Yield Pressure	1070 bar NFPA T2.6.1-2005
Fatigue Pressure	230 bar NFPA T2.6.1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 3.5 bar • Full Flow: 4.5 bar
Application	Industrial, Automotive Manufacturing, Machine Tools, Mining, Pulp & Paper, Agriculture & Mobile Vehicles

How to Build a Valid Model Number for Schroeder VF60

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	EQUALS
VF60	9	VZ1		5		VF609VZ1S

BOX 1	
Filter Series	
VF60	

BOX 2	
Element Length (in)	
9	

BOX 3	
Element Part Number	
V3	3μ E media (cellulose)
V10	10μ E media (cellulose)
VZ1	1μ Excellement® Z-Media® (synthetic)
VZ3	3μ Excellement® Z-Media® (synthetic)
VZ5	5μ Excellement® Z-Media® (synthetic)
VZ10	10μ Excellement® Z-Media® (synthetic)
VZ25	25μ Excellement® Z-Media® (synthetic)
VM150	150μ M media (reusable metal)

BOX 4	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR

BOX 5	
Inlet Port	
P	1 1/4" NPTF
S	SAE-20
B	ISO 228 G-1 1/4"

BOX 6	
Dirt Alarm® Options	
Omit	None
Visual	D®
Electrical	MS*

Contact us for full dirt alarm options

TOP-PORTED HIGH PRESSURE FILTER UP TO 415 bar FLOW RATES UP TO 190 l/min


Model Shown: CF60

Model	CF60
Features & Benefits	• Available with non-bypass option with high collapse element • Offered in pipe, SAE straight thread, flange and ISO 228 porting
Flow Rating	Up to 190 l/min for 150 SUS (32 cSt) fluids
Min. Yield Pressure	1070 bar per NFPA T2.6.1
Max Operating Pressure	415 bar only for flange ported models
Fatigue Pressure	276 bar, per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.8 bar • Full Flow: 5.2 bar
Application	Industrial, Automotive Manufacturing, Machine Tool, Mining Technology, Steel Making, Pulp & Paper, Agriculture and Mobile Vehicles

How to Build a Valid Model Number for Schroeder CF60

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	EQUALS
CF60	ICC	Z	10		S		D5		CF601CCZ10SD5

BOX 1	
Filter Series	
CF60 CFN60 (Non-bypassing requires ZX high collapse elements)	

BOX 2	
NO & Size of Elements	
1	CC

BOX 3	
Media Type	
Omit	E (Cellulose)
Z	Excellement® Z-Media® (synthetic)
ZX	Excellement ® Z-Media® (high collapse centre tube)
AS	Anti-Stat Media (synthetic)

BOX 4		
Micron Rating		
1	1 Micron	(Z media)
3	3 Micron	(AS, E, Z and ZX media)
5	5 Micron	(AS, Z and ZX media)
10	10 Micron	(AS, E, Z and ZX media)
25	25 Micron	(E,Z and ZX media)

BOX 5	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR
H.5	Skydrol® compatibility

BOX 6	
Porting	
S	SAE-20
P	1 ¼" NPTF, 1 ¼" SAE, 4-bolt
F	Flange code 62
B	ISO 228 , G-1 1/4"

BOX 7	
Options	
Omit	None
50	3 bar bypass setting

BOX 8	
Dirt Alarm® Options	
Omit	None
Visual	D*
Electrical	MS*

BOX 9	
Additional Options	
Omit	None
N	No Element Indicator (CF60 only)

Contact us for full dirt alarm options

TOP-PORTED HIGH PRESSURE FILTER UP TO 275 bar FLOW RATES UP TO 115 l/min


Model Shown: DF40

Model	DF40
Features & Benefits	• Available with non-bypass option with high collapse element • Offered in pipe, SAE straight thread, flanged and ISO 228 porting • Offered in conventional subplate porting
Flow Rating	Up to 115 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	275 bar
Min Yield Pressure	828 bar per NFPA T2.6.1
Fatigue Pressure	125 bar per NFPA T2.6.1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.8 bar • Full Flow: 3.9 bar • Non-bypassing model has a blocked bypass
Application	Industrial, Automotive Manufacturing, Machine Tools, Mining, Pulp & Paper, Steel Making, Agriculture and Mobile Vehicles

How to Build a Valid Model Number for Schroeder DF40

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	EQUALS
DF40	1C	Z	10		S			D5	DF401CZ10SD5

BOX 1	
Filter Series	
DF40 DFN40 (Non by-passing: requires ZX high collapse elements)	

BOX 2	
No & Size of Elements	
1	C
2	D
3	CC
4	DD

BOX 3	
Media Type	
Omit	E media (cellulose)
Z	Excellement® Z-Media® (synthetic)
ZX	Excellement® Z-Media® (High Collapse centre tube)
AS	Anti-Stat Media (synthetic)
M	Media (reusable metal mesh) D/DD size only

BOX 4		
Micron Rating		
1	1 Micron	(Z, ZW, ZX media)
3	3 Micron	(AS, E, Z, ZW, ZX media)
5	5 Micron	(AS, Z, ZW, ZX media)
10	10 Micron	(AS, E, M, Z, ZW, ZX media)
25	25 Micron	(E and Z media)
60	60 Micron	(M media)

BOX 5	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR
H.5	Skydrol® compatibility
W	Buna N

BOX 6	
Porting	
O	Manifold mounting
S	SAE-16
P	1 1/4" NPTF
B	ISO 228 G-1"

BOX 7	
Options	
Omit	None
50	3 bar
X	Blocked bypass
L	Two 1/4" NPTF inlet & outlet female test ports
U	Series 1215 7/16" - UNF Schroeder Check Test Point installed in cap (upstream)

BOX 8	
Dirt Alarm® Options	
Omit	None
Visual	D®
Electrical	MS*

BOX 9	
Additional Options	
Omit	None
N	No Element Indicator (DF40 only)

Contact us for full dirt alarm options

TOP-PORTED HIGH PRESSURE FILTER UP TO 210 bar FLOW RATES UP TO 75 l/min


Model Shown: NF30

Model	NF30
Features & Benefits	• All aluminium assembly • Available with non-bypass option with high collapse element • Offered in pipe, SAE straight thread, flanged and ISO 228 porting
Flow Rating	Up to 75 l/min 150 SUS (32 cSt) fluids
Max Operating Pressure	210 bar
Min Yield Pressure	690 bar per NFPA T2.6.1
Fatigue Pressure	165 bar per NFPA T2.6.1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.8 bar • Full Flow: 5.9 bar • Non-bypassing model has blocked bypass
Application	Industrial, Automotive Manufacturing, Machine Tools, Mining, Pulp & Paper, Agriculture and Mobile Vehicles and Steel Making

How to Build a Valid Model Number for Schroeder NF30

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	EQUALS
NF30	1N	Z	10		S		D5		NF301NZ10SD5

BOX 1	
Filter Series	
NF30 NFN30 (Non-bypassing requires ZX high collapse elements)	

BOX 2	
No & Size of Elements	
1	N, NN

BOX 3	
Media Type	
Omit	E media (cellulose)
AS	Anti-static Media (synthetic)
Z	Excellement® Z-Media® (synthetic)
ZX	Excellement® Z-Media® (High Collapse centre tube)
M	Media (reusable metal mesh) N size only

BOX 4		
Micron Rating		
1	1 Micron	(Z, ZW, ZX media)
3	3 Micron	(AS, E, Z, ZW, ZX media)
5	5 Micron	(AS, Z, ZW, ZX media)
10	10 Micron	(AS, E, M, Z, ZW, ZX media)
25	25 Micron	(E, Z, ZW, ZX media) only N
60	60 Micron	(M media)

BOX 5	
Seal Material	
Omit	Buna N
V	Viton®
W	Buna N

BOX 6	
Porting	
B	ISO 228 G 3/4"
P	3/4" NPTF
S	SAE-12

BOX 7	
Options	
Omit	None
X	Blocked bypass (N/A with NFN30)

BOX 8	
Dirt Alarm® Options	
Omit	None
Visual	D®
Electrical	MS*

BOX 9	
Additional Options	
Omit	None
G792	7/16" - 20 UNF drain or housing

Contact us for full dirt alarm options

SERVO-PROTECTED HIGH PRESSURE FILTER UP TO 415 bar FLOW RATES UP TO 45 l/min


Model Shown: FOF60-03

Model	FOF60-03
Features & Benefits	• Sandwich filter configured for D03 subplate • Withstands high pressure surges, high static pressure loads • 210 bar collapse
Flow Rating	Up to 45 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	415 bar
Min Yield Pressure	1790 bar NFPA T2.6.1-2005
Fatigue Pressure	275 bar NFPA T2.6.1-2005
Temperature Range	-29°C to 107°C
Non-Bypass Model	• High collapse elements as standard
Application	Industrial, Automotive Manufacturing, Machine Tools, Mining, Pulp & Paper & Mobile Vehicles

How to Build a Valid Model Number for Schroeder FOF60-03

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	EQUALS
FOF60	1	FZX3		03	A	D5	FOF601FZX303AD5

BOX 1	
Filter Series	
FOF60	

BOX 2	
Number of Elements	
1	

BOX 3	
Element Part Number	
FZX3	F size 3μ high collapse media
FZX10	F size 10μ high collapse media

BOX 4	
Seal Material	
Omit	Buna N
V	Viton®

BOX 5	
Porting	
03	D03 subplate pattern

BOX 6	
Filter Bowl Location	
A	Bowl Adjacent to Port "A"
B	Bowl Adjacent to Port "B"

BOX 7	
Dirt Alarm® Options	
Omit	None
Visual	D®
Electrical	MS*

Contact us for full dirt alarm options

MEDIUM PRESSURE FILTER HOUSINGS

Filtertechnik stock a wide range of medium pressure filter housings suitable for a variety of applications.

With Filtertechnik's 25 years combined experience and expertise we will always provide no-nonsense advice to ensure we select the right filter for the specific application.

If you need additional help selecting a suitable body please call the sales team.

Product Matrix - Medium Pressure Filter Housings		
Part number	**Pressure (bar)**	**Flow (l/min)**
QLF15	**100**	1900
QF15	**100**	1700
K9	**60**	380
FTB-B-6-XX	**100**	100
FTB-B-XX	**69**	265

BASE-PORTED MEDIUM PRESSURE FILTER
UP TO 100 bar FLOW RATES UP TO 1900 l/min

Model Shown: QLF15

Model	QLF15
Features & Benefits	• Element changeout from the top minimises oil spillage • Integral inlet and outlet test points are standard on all models • Available with optional core assembly to accommodate coreless elements
Flow Rating	Up to 1900 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	100 bar
Min Yield Pressure	340 bar per NFPA T2.6.1-R1
Fatigue Pressure	55 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2 bar • Full Flow: 4 bar
Application	Industrial, Automotive Manufacturing, Machine Tool, Steel Making, Mobile Vehicles, Agriculture, Power Generation, Pulp & Paper and Mining

How to Build a Valid Model Number for Schroeder QLF15

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	EQUALS
QLF15	16	Q	Z	3		P48		D5C	QLF1516QZ3P48D5C

BOX 1	
Filter Series	
QLF15	

BOX 2	
Element Length (in)	
16	
39	

BOX 3	
Element Style	
Q	
QCLQF	
QPML	

BOX 4		
Media Type		
Z	Excellement® Z-Media® (synthetic)	
AS	Anti-Static Media (synthetic)	
W	W Media (water removal)	

BOX 5		
Micron Rating		
1	1 Micron	Z-Media®
3	3 Micron	AS and Z-Media®
5	5 Micron	AS and Z-Media®
10	10 Micron	AS and Z-Media®
25	25 Micron	Z-Media®

BOX 6	
Seal Material	
Omit	Buna N
V	Viton®

BOX 7		
Porting Options		
P24 = 1½" NPTF	F24 = 1 1/2" SAE 4-bolt flange Code 61	
P32 = 2" NPTF	F32 = 2" SAE 4-bolt flange Code 61	
P40 = 2 1/2" NPTF	F40 = 2 1/2" SAE 4-bolt flange Code 61	
P48 = 3" NPTF	F48 = 3" SAE 4-bolt flange Code 61	
S32 = SAE-32	F24M = 1 1/2" SAE 4-bolt flange Code 61	
B24 = ISO 228 G-1½"	F32M = 2" SAE 4-bolt flange Code 61	
B32 = ISO 228 G-2"	F40M 2 1/2" = SAE 4-bolt flange Code 61	
B40 = ISO 228 G-2 ½"	F48M = 3" SAE 4-bolt flange Code 61	
B48 = ISO 228 G-3"	-	

BOX 8	
Bypass Options*	
Omit	2 bar cracking
50	3 bar cracking
X	Blocked bypass

BOX 9	
Dirt Alarm® Options	
Omit	None
Visual	D**
Electrical	MS**

*Contact us for full dirt alarm options

BASE-PORTED MEDIUM PRESSURE FILTER
UP TO 100 bar FLOW RATES UP TO 1700 l/min

Model Shown: QF15

Model	QF15
Features & Benefits	• Element changeout from the top minimises oil spillage • Integral inlet and outlet test points are standard on all models • WQF15 model for water service also available • Available with optional core assembly to accommodate coreless elements
Flow Rating	Up to 1700 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	100 bar
Min Yield Pressure	340 bar per NFPA T2.6.1-R1
Fatigue Pressure	55 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.1 bar • Full Flow: 3.8 bar
Application	Industrial, Automotive Manufacturing, Machine Tool, Steel Making, Mobile Vehicles, Agriculture, Power Generation, Pulp & Paper and Mining

How to Build a Valid Model Number for Schroeder QF15

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	EQUALS
QF15	16	Q	Z	3		B24	B24	D5C	QF1516QZ3B24B24D5C

BOX 1	
Filter Series	
QF15	

BOX 2	
Element Length (in)	
16	
39	

BOX 3	
Element Style	
Q	
QCLQF	
QPML	

BOX 4		
Media Type		
Z	Excellement® Z-Media® (synthetic)	
AS	Anti-Static Media (synthetic)	
W	W Media (water removal)	

BOX 5		
Micron Rating		
1	1 Micron	Z-Media®
3	3 Micron	AS and Z-Media®
5	5 Micron	AS and Z-Media®
10	10 Micron	AS and Z-Media®
25	25 Micron	Z-Media®

BOX 6	
Seal Material	
Omit	Buna N
V	Viton®

BOX 7		
Porting Options		
P24 = 1½" NPTF	F24 = 1 1/2" SAE 4-bolt flange Code 61	
P32 = 2" NPTF	F32 = 2" SAE 4-bolt flange Code 61	
P40 = 2 ½" NPTF	F40 = 2 1/2" SAE 4-bolt flange Code 61	
P48 = 3" NPTF	F48 = 3" SAE 4-bolt flange Code 61	
S32 = SAE-32	F24M = 1 1/2" SAE 4-bolt flange Code 61	
B24 = ISO 228 G-1½"	F32M = 2" SAE 4-bolt flange Code 61	
B32 = ISO 228 G-2"	F40M = 2 1/2" SAE 4-bolt flange Code 61	
B40 = ISO 228 G-2 ½"	F48M = 3" SAE 4-bolt flange Code 61	
B48 = ISO 228 G-3"	-	

BOX 8	
Bypass Options*	
Omit	2 bar cracking
50	3 bar cracking
X	Blocked bypass

BOX 9	
Dirt Alarm® Options	
Omit	None
Visual	D**
Electrical	MS**

*Contact us for more options

**Contact us for full dirt alarm options

BASE-PORTED MEDIUM PRESSURE FILTER
UP TO 60 bar FLOW RATES UP TO 380 l/min


Model Shown: K9

Model	K9
Features & Benefits	• Top loading for easy access for element change • Allows consolidation of inventoried replacement elements by using K-size elements • Multiple inlet and outlet porting options reduce the need for additional adaptors on installation
Flow Rating	Up to 380 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	60 bar
Min Yield Pressure	220 bar per NFPA T2.6.1-R1
Fatigue Pressure	52 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.8 bar • Full Flow: 5.5 bar
Application	Industrial, Automotive Manufacturing, Machine Tool, Steel Making, Mobile Vehicles, Agriculture, Power Generation & Pulp & Paper

How to Build a Valid Model Number for Schroeder K9

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
K9	IK	Z	10	B	P16N P16N		D5

EQUALS: K9IKZ10BP16NP16ND5

BOX 1

Filter Series
K9

BOX 2

No & Size of Elements
KK, 27K, 1K, 2K, 3K

BOX 3

Media Type	
Omit	E Media (Cellulose)
Z	Excellement® Z-Media® (Synthetic)
AS	Anti-Static Media (Synthetic)
ZX	Excellement® Z-Media® (High Collapse centre tube)
ZW	Aqua-Excellement® ZW media
W	W media (water removal)
M	Media (reusable metal mesh)

BOX 4

Element Part Number		
1	1 Micron	Z, ZW, ZX Media®
3	3 Micron	AS, E, Z, ZW, ZX Media®
5	5 Micron	AS, Z, ZW, ZX Media®
10	10 Micron	AS, E, M, Z, ZW, Z Media®
25	25 Micron	E, M, Z, ZW, Z Media®
60	60 Micron	M Media
150	150 Micron	M Media
260	260 Micron	M Media

BOX 5

Seal Material	
Omit	Buna N
V	Viton®
H	EPR
H.5	Skydrol® compatibility

BOX 6 SPECIFICATION OF ALL 4 PORTS IS REQUIRED

Porting Options			
Port 1 (standard)	**Port 2**	**Port 3**	**Port 4**
N = None	N = None	N = None	N = None
P16 = 1" NPTF	P16 = 1" NPTF	P16 = 1" NPTF	P16 1" NPTF
P20 = 1¼" NPTF	P20 = 1¼" NPTF	P20 = 1¼" NPTF	P20 1" NPTF
P24 = 1½" NPTF	P24 = 1½" NPTF	P20 = 1½" NPTF	P20 = 1½" NPTF
S16 = SAE-16	F16 = 1" SAE 4-bolt flange Code 61	S16 = SAE-16	F16 = 1" SAE 4-bolt flange Code 61
S20 = SAE-20	F20 = 1¼" SAE 4-bolt flange Code 61	S20 = SAE-20	F20 = 1¼" SAE 4-bolt flange Code 61
S24 = SAE-20	F24 = 1½" SAE 4-bolt flange Code 61	S24 = SAE-24	F24 = 1½" SAE 4-bolt flange Code 61
B16 = ISO 228 G-1"	S16 = SAE-16	B16 = ISO 228 G-1"	S16 = SAE-16
B20 = ISO 228 G-1¼"	S20 = SAE-20	B20 ISO 228 G-1¼"	S20 = SAE-20
B24 = ISO 228 G - 1½"	S24 = SAE-24	B24 = ISO 228 G- 1½"	S24 = SAE-24
	B16 = ISO 228 G-1¼"		B16 = ISO 228 G-1"
	B20 = ISO 228 G-1¼"		B20 = ISO 228 G-1¼"
	B24 = ISO 228 G-1½"		B24 = ISO 228 G-1½"

BOX 7

Bypass Options*	
X	Blocked bypass
U	Test point in cap (upstream)
UU	Test points in block (upstream & downstream)

BOX 8

Dirt Alarm® Options	
Omit	None
Visual	D**
Electrical	MS**

***Contact us for full dirt alarm options*

TOP-PORTED MEDIUM PRESSURE FILTER
UP TO 100 bar FLOW RATES UP TO 100 l/min


Model Shown: FTB-B-6-XX

Model	FTB-B-6-XX
Features & Benefits	• Smaller, compact version of FTB-B-XX • Quick and easy cartridge element changeouts • Offered in pipe, SAE straight thread, flange & ISO 228 porting
Flow Rating	Up to 100 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	100 bar
Min Yield Pressure	276 bar per NFPA T2.6.1-R1-2005
Fatigue Pressure	52 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.8 bar • Full Flow: 3.8 bar
Application	Industrial, Automotive Manufacturing, Machine Tool, Steel Making & Mobile Vehicles

STOCK OPTION: FTB-B-6-XX 100 bar, 100 l/min, 3/4" BSP ports, 10μ absolute element with pop up indicator

BOX 1

Filter Element Options	
6R3	3μ E media (cellulose)
6R10	10μ E media (cellulose)
FTB-6-01	1μ Excellement® Z-media (synthetic)
FTB-6-03	3μ Excellement® Z-media (synthetic)
FTB-6-05	5μ Excellement® Z-media (synthetic)
FTB-6-10	10μ Excellement® Z-media (synthetic)
FTB-6-25	25μ Excellement® Z-media (synthetic)
6RW	W Media (water removal)

BOX 2

Seal Material	
Omit	Buna N
V	Viton®
H	EPR®
H.5	Skydrol® compatibility

BOX 3

Porting Options	
P12	3/4" NPTF
S12	SAE-12
B12	3/4" BSP

BOX 4

Dirt Alarm® Options	
Omit	None
Visual	D**
Electrical	MS**

**Contact us for full dirt alarm options*

TOP-PORTED MEDIUM PRESSURE FILTER
UP TO 69 bar FLOW RATES UP TO 265 l/min 9 OR 14" OPTIONS


Model Shown: FTB-B-XX

Model	FTB-B-XX
Features & Benefits	• Quick & easy cartridge element changeouts • Available in 9" & 14" element lengths • Available with NPTF inlet & outlet female test ports
Flow Rating	Up to 265 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	69 bar
Min Yield Pressure	290 bar per NFPA T2.6.1-R1-2005
Fatigue Pressure	29 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2.8 bar for all porting • Full Flow: 3.9 bar for P20 & S20 porting • Full Flow: 5.2 bar for P16, S16, F16 & F20 porting
Application	Industrial, Automotive Manufacturing, Machine Tool, Steel Making, Pulp & Paper Mobile Vehicles

STOCK OPTION: FTB-B-XX = 9" - 69 bar, 190 l/min, 1" BSP ports with pop up indicator

STOCK OPTION: FTB-B-14-XX-MS10 = 14" - 69 bar, 190 l/min, 1" BSP ports with electric indicator

BOX 1	
9" Filter Element Options	
9VZ1	1μ Excellement® Z-Media® (synthetic)
FTB-03	3μ Excellement® Z-Media® (synthetic)
FTB-05	5μ Excellement® Z-Media® (synthetic)
FTB-10	10μ Excellement® Z-Media® (synthetic)
FTB-25	25μ Excellement® Z-Media® (synthetic)
9VM60	60μ recleanable metal mesh
9VM150	150μ recleanable metal mesh
9VM260	260μ recleanable metal mesh
9VW	W Media (water removal)

BOX 2	
14" Filter Element Options	
14VZ1	1μ Excellement® Z-Media® (synthetic)
FTB-14-03	3μ Excellement® Z-Media® (synthetic)
14VZ5	5μ Excellement® Z-Media® (synthetic)
FTB-14-10	10μ Excellement® Z-Media® (synthetic)
14VZ25	25μ Excellement® Z-Media® (synthetic)
14VM60	60μm recleanable metal mesh
14VM150	150μm recleanable metal mesh
14VW	W Media (water removal)

BOX 3	
Dirt Alarm® Options	
Omit	None
Visual	D**
Electrical	MS**

BOX 4	
Options	
Omit	None
L	Two 1/4" NPTF inlet & outlet female test ports

BOX 5	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR®
H.5	Skydrol® compatibility

BOX 6
Porting Options
Port 1 (standard)
1" NPTF
1 ¼" NPTF
SAE-16
SAE-20
1 ¼" SAE, 4-bolt flange Code 61
ISO 228 G-1 1/4"

*Contact us for full dirt alarm options

LOW PRESSURE FILTER HOUSINGS

Filtertechnik stock a wide range of low pressure filter housings suitable for a variety of applications. With Filtertechnik's 25 years combined experience and expertise we will always provide no-nonsense advice to ensure we select the right filter for the specific application.

If you need additional help selecting a suitable body please call the sales team.

Product Matrix - Low Pressure Filter Housings		
Part number	Pressure (bar)	Flow (l/min)
MTA	7	55
PAF1	7	75
ST	Suction Filter	75
ZT	7	150
MAF1	7	190
RT	7	380
RLD	24	380
KF3	20	380
WKF3	20	380
LRT	7	570
BFT	7	1135

TANK MOUNTED LOW PRESSURE FILTER
UP TO 7 bar FLOW RATES UP TO 55 l/min

Model Shown: MTA

Model	MTA
Features & Benefits	• Compact size minimises space requirements • Minimiser is a cost-effective alternative to spin-on filters • Special filter element design provides aftermarket benefits
Flow Rating	Up to 55l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	7 bar
Min Yield Pressure	18 bar NFPA T2.6.1-R1
Fatigue Pressure	Contact us
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2 bar • Full Flow: 3.3 bar
Application	Industrial, Automotive Manufacturing, Mobile Vehicles, Agriculture, Pulp & Paper

How to Build a Valid Model Number for Schroeder MTA

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	EQUALS
MTA	3	TA25	P8	Y5	MTA3TA25P8Y5

BOX 1	
Filter Series	
MTA	

BOX 2	
Element Length (in)	
3	

BOX 3	
Element Size & Media	
TA10	10μ E media (cellulose)
TA25	25μ E media (cellulose)
TAZ1	1μ Excellement® Z-media® (synthetic)
TAZ3	3μ Excellement® Z-media® (synthetic)
TAZ5	5μ Excellement® Z-media® (synthetic)
TAZ10	10μ Excellement® Z-media® (synthetic)
TAZ25	25μ Excellement® Z-media® (synthetic)

BOX 4	
Porting Options	
P8	1/2" NPTF
S8	SAE-8

BOX 5	
Dirt Alarm® Options	
Omit	None
Visual	Y*
Electrical	E*

*Contact us for full dirt alarm options

SPIN ON LOW PRESSURE FILTER
UP TO 7 bar FLOW RATES UP TO 75 l/min

Model Shown: PAF1

Model	PAF1
Features & Benefits	• Spin-On with full ported die cast aluminum head for minimal pressure drop • Offered in pipe and SAE straight thread porting • Visual gauge or electrical switch dirt alarms • Small profile for use in limited space
Flow Rating	Up to 75l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	7 bar
Min Yield Pressure	18 bar NFPA T2.6.1-R1-2005
Fatigue Pressure	Contact us
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2 bar • Full Flow: 2 bar
Application	Industrial, Automotive Manufacturing, Mobile Vehicles, Agriculture, Pulp & Paper, Steel Making and Machine Tools

How to Build a Valid Model Number for Schroeder PAF1

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	EQUALS
PAF1	6	P10		P	Y2	PAF16P10PY2

BOX 1	
Filter Series	
PAF1	

BOX 2	
Element Length (in)	
6	

BOX 3	
Element Size & Media	
P10	P size 10μ E media (cellulose)
PZ10	P size 10μ Excellement® Z-Media® (synthetic)
PZ25	P size 25μ Excellement® Z-Media® (synthetic)

BOX 4	
Seal Material	
Omit	Buna N

BOX 5	
Inlet Porting	
P	3/4" NPTF
S	SAE-12
B	3/4" BSP

BOX 6	
Dirt Alarm® Options	
Omit	None
Visual	Y*
Electrical	E*

*Contact us for full dirt alarm options

TANK MOUNTED SUCTION FILTER
FLOW RATES UP TO 75 l/min

Model Shown: ST

Model	ST
Features & Benefits	• Tank-mounted suction filter for hydrostatic suction service • Optional check valve prevents reservoir siphoning • Inlet filter protects pump, reduces start-up failures
Flow Rating	Up to 75l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	Suction Filter
Temperature Range	-29°C to 107°C
Bypass Setting	• Non-bypassing
Application	Industrial and Mobile Vehicles

How to Build a Valid Model Number for Schroeder ST

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	EQUALS
ST	1	K25		P		Y		ST1K25PY

BOX 1	
Filter Series	
ST	

BOX 2	
Number of Elements	
1	
2	

BOX 3	
Element Part Number	
K10	10μ E media (cellulose)
K25	25μ E media (cellulose)
KTZ3	3μ Excellement® Z-media® (synthetic) inside-out flow
KTZ5	5μ Excellement® Z-media® (synthetic) inside-out flow
KTZ10	10μ Excellement® Z-media® (synthetic) inside-out flow
KTZ25	25μ Excellement® Z-media® (synthetic) inside-out flow

BOX 4	
Seal Material	
Omit	Buna N
H	EPR
W	Buna N
H.5	Skydrol® compatibility

BOX 5	
Outlet Porting	
P	1 1/2" NPTF
PP	Dual 1 1/2" NPTF
S	SAE-24
SS	Dual SAE-24
B	ISO 228 G-1 1/2"
BB	Dual ISO 228 G-1 1/2"

BOX 6	
Optional Check Valve	
Omit	None
C	Check Valve

BOX 7	
Dirt Alarm* Options	
Omit	None
Visual	Y*
Electrical	VS*

BOX 8	
Additional Options	
Omit	None
G2293	Cork Gasket
G547	Two 1/8" gauge ports

Contact us for full dirt alarm options

TANK MOUNTED SUCTION FILTER
UP TO 7 bar FLOW RATES UP TO 150 l/min

Model Shown: ZT

Model	ZT
Features & Benefits	• Available with dual inlet porting • Offered in pipe, SAE straight thread and BSP porting • GeoSeal® patented element technology • Various dirt alarms available
Flow Rating	Up to 150l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	7 bar
Min. Yield Pressure	21 bar per NFPA T2.6.1-R1
Fatigue Pressure	6 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 1.7 bar • Full Flow: 2.7 bar
Application	Industrial, Automotive Manufacturing, Mobile Vehicles and Machine Tool

How to Build a Valid Model Number for Schroeder ZT:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	EQUALS
ZT	8	Z10		S	Y2		ZT8Z10SY2

BOX 1	
Filter Series	
ZT	

BOX 2	
Element Length (in)	
8	

BOX 3	
Element Size and Media	
Z3	3μ E media (cellulose)
Z10	10μ E media (cellulose)
Z25	25μ E media (cellulose)
ZZ1	1μ Excellement® Z-Media® (synthetic)
ZZ3	3μ Excellement® Z-Media® (synthetic)
ZZ5	5μ Excellement® Z-Media® (synthetic)
ZZ10	10μ Excellement® Z-Media® (synthetic)
ZZ25	25μ Excellement® Z-Media® (synthetic)

BOX 4	
Seal Material	
Omit	Buna N
H	EPR

BOX 5	
Inlet Porting	
P	1" NPTF
PP	Dual 1" NPTF
S	SAE-16
SS	Dual SAE-16
B	ISO 228-G1"
BB	Dual ISO 228 G-1"

BOX 6	
Dirt Alarm* Options	
Omit	Non-threaded
Visual	Y*
Electrical	E*

BOX 7	
Options	
Omit	None
A	Dipstick
B	Breather
AB	Dipstick & Breather
M	Mounting Gasket (Buna N)

Contact us for full dirt alarm options

SPIN ON LOW PRESSURE FILTER
UP TO 7 bar FLOW RATES UP TO 190 l/min


Model Shown: MAF1

Model	MAF1
Features & Benefits	• Spin-On with full ported die cast aluminum head for minimal pressure drop • Offered in pipe, SAE straight thread porting • Visual gauge or electrical switch dirt alarms • Available with NPTF & BSP inlet and outlet female test ports
Flow Rating	Up to 190l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	7 bar
Min. Yield Pressure	10 bar per NFPA T2.6.1-R1-2005
Fatigue Pressure	Contact us
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2 bar • Full Flow: 3 bar
Application	Industrial, Mobile Vehicles, Automotive Manufacturing, Machine Tool, Steel Making, Agriculture and Pulp & Paper

How to Build a Valid Model Number for Schroeder MAF1:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	EQUALS
MAF1	7	M3		P	Y2		MAF17M3PY2

BOX 1
Filter Series
MAF1

BOX 2
Element Length (in)
7
10

BOX 3	
Element Size and Media	
M3	3μ E media (cellulose)
M10	10μ E media (cellulose)
MZ3	3μ Excellement® Z-Media® (synthetic)
MZ10	10μ Excellement® Z-Media® (synthetic)
MZW10	10μ Aqua-Excellement® ZW-Media® (synthetic)
MW	W Media® (water removal)

BOX 4	
Seal Material	
Omit	Buna N
V	Viton®

BOX 5	
Inlet Porting	
P	1 1/4" NPTF
S	SAE-20
B	ISO 228-G-1 1/4"

BOX 6	
Dirt Alarm® Options	
Omit	None
Visual	Y*
Electrical	ES*

BOX 7	
Additional Options	
Omit	None
L	Two 1/8" NPTF inlet and outlet female test ports

**Contact us for full dirt alarm options*

TANK MOUNTED LOW PRESSURE FILTER WITH THREE INLET PORTS UP TO 7 bar FLOW RATES UP TO 380 l/min


Model Shown: RT

Model	RT
Features & Benefits	• Top, side or bottom mounting • Optional check valve prevents reservoir siphoning • GeoSeal® patented element technology • RTW model allows filters to be welded to tank, instead of bolted
Flow Rating	Up to 380 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	7 bar
Min. Yield Pressure	21 bar per NFPA T2.6.1
Fatigue Pressure	6 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 1.7 bar • Full Flow: 3.3 bar
Application	Industrial, Automotive Manufacturing, Machine Tool, Steel Making and Mobile Vehicles

How to Build a Valid Model Number for Schroeder RT:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	EQUALS
RT	1K	Z	10		S24 S24 N		Y2		RT1KZ10S24S24NY2

BOX 1
Filter Series
RT RTW

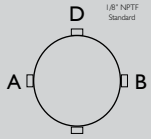
BOX 2
Element Size & Length
KK, 27K, 1K, 2K, 3K

BOX 3	
Media Type	
Omit	E Media (Cellulose)
Z	Excellement® Z-Media® (Synthetic)
AS	Anti-Static Media (Synthetic)
ZW	Aqua-Excellement® ZW media
DZ	Dirtcatcher® with Excellement® Z-Media®
W	W media (water removal)
M	Media (reusable metal mesh)

BOX 4		
Element Part Number		
1	1 Micron	Z, ZW and DZ Media®
3	3 Micron	AS, E, Z, ZW and DZ Media®
5	5 Micron	AS, Z, ZW and DZ Media®
10	10 Micron	AS, E, M, Z, ZW & DZ Media®
25	25 Micron	E, M, Z, ZW and DZ Media®
60	60 Micron	M Media

BOX 5	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR
H.5	Skydrol® compatibility

BOX 6 SPECIFICATION OF ALL 3 PORTS IS REQUIRED		
Porting Options		
Port 1 (standard)	**Port 2**	**Port 3**
N = None	N = None	N = None
P16 = 1" NPTF	P16 = 1" NPTF	P2 = 1/8" NPTF
P20 = 1¼" NPTF	P20 = 1¼" NPTF	P16 = 1" NPTF
P24 = 1½" NPTF	P24 = 1½" NPTF	S16 = SAE-16
P32 = 2" NPTF	P32 = 2" NPTF	BSP options also available
S16 = SAE-16	S16 = SAE-16	
S20 = SAE-20	S20 = SAE-20	
S24 = SAE-24	S24 = SAE-24	
S32 = SAE-32	S32 = SAE-32	
F20 = 1¼" SAE 4-bolt flange Code 61	F20 = 1 1/4" SAE 4-bolt flange Code 61	
F24 = 1 1/2" SAE 4-bolt flange Code 61	F24 = 1 1/2" SAE 4-bolt flange Code 61	
F32 = 2" SAE 4-bolt flange Code 61	F32 = 2" SAE 4-bolt flange Code 61	
B24 = ISO 228 G-1 1/2"	B24 = ISO 228 G-1 1/2"	



BOX 7	
Outlet Porting Options	
Omit	1½ NPT Male
C	Check valve
D	Diffuser
CD	Check valve & diffuser
T	13" Tube extension
A	Non-threaded outlet

BOX 8	
Dirt Alarm® Options	
Omit	None
Visual	Y**
Electrical	E**

BOX 9	
Additional Options* **	
Omit	None
G2293	Cork gasket
G547	Two 1/8" gauge ports
G820	Stamped cap
N	No element indicator
M	Metric thread for SAE 4-bolt flange mounting holes (specify after each port designation).

** Contact us for more options **Contact us for full dirt alarm options ***Contact us for full additional options*

TOP-PORTED LOW PRESSURE DUPLEX FILTER UP TO 24 bar FLOW RATES UP TO 380 l/min


Model Shown: RLD

Model	RLD
Features & Benefits	• Lightweight duplex filter constructed of aluminium • Filter housings are designed to withstand pressure surges as well as high static pressure loads • Screw-in bowl allows the filter element to be easily removed for replacement or cleaning • Filter contains an integrated equalisation valve
Flow Rating	Up to 380 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	24 bar
Min. Yield Pressure	Contact us
Fatigue Pressure	24 bar per NFPA T2.6.1-R1-2005
Temperature Range	-30°C to 121°C
Bypass Setting	• Cracking: 7 bar • Optional: 3 bar
Application	Industrial, Automotive Manufacturing, Machine Tool, Steel Making, Pulp & Paper and Power Generation

How to Build a Valid Model Number for Schroeder RLD:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	EQUALS
RLD	25	DNZ3	V	F24	40	VM	RLD25DNZ3VF2440VM

BOX 1	
Filter Series	
RLD	

BOX 2	
Element Length (cm)	
25	
40	

BOX 3	
Element Size & Media	
DNZ3	DN size 3µ synthetic media
DNZ10	DN size 10µ synthetic media
DNZ25	DN size 25µ synthetic media
DNM25	DN size 25µ M media (reusable metal)
DNM50	DN size 50µ M media (reusable metal)
DNM100	DN size 100µ M media (reusable metal)
DNM200	DN size 200µ M media (reusable metal)

BOX 4	
Element Seal Material	
Omit	Buna N
V	Viton®

BOX 5	
Porting	
F24	1 1/2" SAE 4-bolt flange Code 61
S24	SAE-24 (1 1/2")

BOX 6	
Bypass setting	
Omit	7 bar cracking
40	2.9 bar cracking

BOX 7	
Dirt Alarm® Options*	
Omit	None
Visual	VM = Visual pop-up w/manual reset
Electrical	DW = AC/DC 3-wire (No or NC)

Contact us for full dirt alarm options

TOP-PORTED LOW PRESSURE RETURN LINE FILTER UP TO 20 bar FLOW RATES UP TO 380 l/min


Model Shown: KF3

Model	KF3
Features & Benefits	• Offered in pipe, SAE straight thread, flange and BSP porting • Available with No-Element indicator and magnet inserts • GeoSeal® patented element technology • NPTF inlet and outlet female test ports • Allows consolidation of inventoried replacement elements by using K-size elements
Flow Rating	Up to 380 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	20 bar
Min. Yield Pressure	70 bar per NFPA T2.6.1
Fatigue Pressure	6 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 2 bar • Full Flow: 4 bar
Application	Industrial, Automotive Manufacturing, Steel Making and Mobile Vehicles

How to Build a Valid Model Number for Schroeder KF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	EQUALS
KF3	1K	Z	10			S		D5		KF31KZ10SD5

BOX 1	
Filter Series	
KF3	

BOX 2	
Number & size of elements	
KK,	
27K,	
1K,	
2K	
3K	

BOX 3	
Media Type	
Omit	E Media (Cellulose)
ASP	Anti-Stat Pleat Media
Z	Excellement® Z-Media® (Synthetic)
ZW	Aqua-Excellement® ZW media® (Synthetic)
W	W Media (water removal)
M	Media (reusable metal mesh)
DZ	Dirtcatcher® with Excellement® Z-Media®

BOX 4	
Micron Rating	
1	1µ (Z, ZW and DZ Media)
3	3µ (E, AS, Z, ZW and DZ Media)
5	5µ (AS, Z, ZW and DZ Media)
10	10µ (E, AS, Z, ZW, M and DZ Media)
25	25µ (E, Z, ZW, M, and DZ Media)
60	60µ (M Media)

BOX 5	
Seal Material	
Omit	Buna N
V	Viton®
H	EPR
H.5	Skydrol® compatibility
W	Buna N

BOX 6	
Magnet Option	
Omit	None
M	Magnet

BOX 7	
Porting	
P	1 1/2" NPTF
S	SAE-24
F	1 1/2" SAE 4-bolt flange Code 61
B24	ISO 228 G-1 1/2"

BOX 8	
Bypass setting	
Omit	1.7 bar cracking
50	3.3 bar cracking (HF4)

BOX 9	
Dirt Alarm® Options	
Omit	None
Visual	D*
Electrical	MS*

BOX 10	
Additional Options**	
Omit	None
L	Two 1/4" NPTF inlet and outlet test ports
N	No-Element Indicator
G426	3/4" drain on bottom of housing
G440	1/2" drain on bottom of housing

* Contact us for full dirt alarm options*
***Contact us for full additional options*

LOW PRESSURE RETURN LINE FILTER UP TO 20 bar
FLOW RATES UP TO 380 l/min

Model	WKF3
Features & Benefits	• Removes solid contaminants from water • Suitable filter media down to 25μm • Offered in pipe, SAE straight thread, flange and ISO 228 porting • Available with NPTF inlet and outlet female test ports • Available with magnet inserts • Available with housing drain plug
Flow Rating	Up to 380 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	20 bar
Min. Yield Pressure	70 bar
Fatigue Pressure	20 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Application	Industrial, Automotive Manufacturing, Machine Tool, Mining Technology, Power Generation, Steel Making, Pulp & Paper, Agriculture and Mobile Vehicles

How to Build a Valid Model Number for Schroeder WKF3:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	EQUALS
WKF3	1	KM150		P		WKF31KM15OP

BOX 1
Filter Series
WKF3

BOX 2
Number of Elements
1
2
3

BOX 3	
Element Size & Media	
KM25	K size 25μ M Media (reusable metal)
KM60	K size 60μ M Media (reusable metal)
KM150	K size 150μ M Media (reusable metal)
KM260	K size 260μ M Media (reusable metal)

BOX 4	
Seal Material	
Omit	Buna N
H	EPR
V	Viton®

BOX 5	
Porting Options	
P	1 1/2" NPTF

BOX 6	
Dirt Alarm® Options	
Omit	None
Visual	D*
Electrical	MS*

TANK MOUNTED LOW PRESSURE FILTER UP TO 7 bar
FLOW RATES UP TO 570 l/min

Model Shown: LRT

Model	LRT
Features & Benefits	• Multiple inlet/outlet porting options • Visual gauge or electrical switch dirt alarms • Offered in pipe, SAE straight thread, flanged and ISO 228 porting
Flow Rating	Up to 570 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	7 bar
Min. Yield Pressure	28 bar
Fatigue Pressure	6 bar per NFPA T2.6.1-R1-2005
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 1.7 bar • Full Flow: 2.3 bar
Application	Industrial, Mobile Vehicles, Railroad, Steel Making, Construction and Agriculture

How to Build a Valid Model Number for Schroeder LRT:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	EQUALS
LRT	18	LZ10		S24 S24 N		Y2		LRT18LZ10S24S24NY2

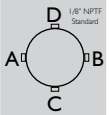
BOX 1
Filter Series
LRT

BOX 2
Element Length (in)
18

BOX 3	
Element Size and Media	
L3	3μ E media (cellulose)
L10	10μ E media (cellulose)
LZ1	1μ Excellement® Z-Media® (synthetic)
LZ3	3μ Excellement® Z-Media® (synthetic)
LZ5	5μ Excellement® Z-Media® (synthetic)
LZ10	10μ Excellement® Z-Media® (synthetic)
LZ25	25μ Excellement® Z-Media® (synthetic)
LDZ1	DirtCatcher® 1μ Excellement® Z-Media®
LDZ3	DirtCatcher® 3μ Excellement® Z-Media®
LDZ5	DirtCatcher® 5μ Excellement® Z-Media®
LDZ10	DirtCatcher® 10μ Excellement® Z-Media®
LDZ25	DirtCatcher® 25μ Excellement® Z-Media®

BOX 4	
Seal Material	
Omit	Buna N
H	EPR
W	Buna N
H.5	Skydrol® compatibility

BOX 5 SPECIFICATION OF ALL 3 PORTS IS REQUIRED		
Inlet Porting Options		
Port A (standard)	**Port B**	**Port C**
P16 = 1" NPTF	P16 = 1" NPTF	P2 = 1/8" NPTF
P20 = 1¼" NPTF	P20 = 1¼" NPTF	P16 = 1" NPTF
P24 = 1½" NPTF	P24 = 1½" NPTF	S16 = SAE-16
P32 = 2" NPTF	P32 = 2" NPTF	BSP options also available
S16 = SAE-16	S16 = SAE-16	Inlet Porting Location
S20 = SAE-20	S20 - SAE-20	
S24 = SAE-24	S24 = SAE-24	
S32 = SAE-32	S32 = SAE-32	
F20 = 1¼" SAE 4-bolt flange Code 61	F20 = 1 1/4" SAE 4-bolt flange Code 61	
F24 = 1½" SAE 4-bolt flange Code 61	F24 = 1 1/2" SAE 4-bolt flange Code 61	
F32 = 2" SAE 4-bolt flange Code 61	F32 = 2" SAE 4-bolt flange Code 61	
B24 = ISO 228 G-1 1/2"	B24 = ISO 228 G-1 1/2"	



BOX 6	
Outlet Porting Options	
Omit	2" NPT male
C	Check Valve
D	Diffuser
T	13" Tube extension
A	Non-threaded outlet

BOX 7	
Dirt Alarm® Options*	
Omit	None
Visual	Y*
Electrical	E*

BOX 8	
Additional Options*	
Omit	None
G2293	Cork gasket
G547	Two 1/8" gauge ports
G820	Stamped cap
M	Metric thread for SAE 4-bolt flange mounting holes (specify after each port designation).

Contact us for full dirt alarm options

TANK MOUNTED LOW PRESSURE FILTER UP TO 7 bar FLOW RATES UP TO 1135 l/min


Model Shown: BFT

Model	BFT
Features & Benefits	• Designed for high return line flows • Dual inlet porting • Top, side or bottom mounting • Optional check valve prevents reservoir siphoning
Flow Rating	Up to 1135 l/min for 150 SUS (32 cSt) fluids
Max Operating Pressure	7 bar
Min. Yield Pressure	17 bar per NFPA T2.6.1
Fatigue Pressure	Contact us
Temperature Range	-29°C to 107°C
Bypass Setting	• Cracking: 1.7 bar • Full Flow: 3.6 bar
Application	Industrial, Mobile Vehicles, Steel Making, Construction, Agriculture, Pulp and Paper

How to Build a Valid Model Number for Schroeder BFT:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	EQUALS
BFT	1	BB10		P				Y2		BFT1BB10PY2

BOX 1	
Filter Series	
BFT	

BOX 2	
Number of Elements	
1	

BOX 3		
Element Size and Media		
BB Length	**BL Length**	
BB3	-	3μ E media (cellulose)
BB10	-	10μ E media (cellulose)
BB25	-	25μ E media (cellulose)
BBZ1	BLZ1	1μ Excellement® Z-Media® (synthetic)
BBZ3	BLZ3	3μ Excellement® Z-Media® (synthetic)
BBZ5	BLZ5	5μ Excellement® Z-Media® (synthetic)
BBZ10	BLZ10	10μ Excellement® Z-Media® (synthetic)
BBZ25	BLZ25	25μ Excellement® Z-Media® (synthetic)
BBDZ1	-	BB Size DirtCatcher® 1μ Excellement® Z-Media®
BBDZ3	-	BB Size DirtCatcher® 3μ Excellement® Z-Media®
BBDZ5	-	BB Size DirtCatcher® 5μ Excellement® Z-Media®
BBDZ10	-	BB Size DirtCatcher® 10μ Excellement® Z-Media®
BBDZ25		BB Size DirtCatcher® 25μ Excellement® Z-Media®

BOX 4	
Seal Material	
Omit	Buna N
H	EPR
W	Buna N
H.5	Skydrol® compatibility

BOX 5	
Porting	
P	2 ½" NPTF
PP	Dual 2 ½" NPT
S	SAE-32
SS	Dual SAE-32
F	2 ½" SAE 4-bolt flange Code 61
FF	Dual 2 ½" SAE 4-bolt flange Code 61

BOX 6	
Bypass Setting	
Omit	25 psi cracking
40	40 psi cracking

BOX 7	
Outlet Porting Options	
Omit	3" NPT male
T	13" Tube extension

BOX 8	
Optional Check Valve	
Omit	None
C	Check Valve

BOX 9	
Dirt Alarm® Options*	
Omit	None
Visual	Y*
Electrical	E*

BOX 10	
Additional Options	
Omit	None
G547	2 1/8" gauge ports
G1476	Three-terminal electric switch
M	Metric thread for SAE 4-bolt flange mounting holes (specify after each port designation).

Contact us for full dirt alarm options

RESERVOIR ACCESSORIES

In this section there are a selection of accessories suitable for hydraulic oil reservoirs, specialising in removing moisture, reducing the likelihood of water contaminating oil. Feel free to call our filter specialist team for further application information.

If you need additional help selecting a suitable body please call the sales team.

AIR BREATHERS - D-AB DESICCANT FILTER AIR BREATHERS

Schroeder desiccant air breathers are designed to increase operational efficiency while reducing operating costs by protecting industrial systems from moisture and particle contaminants.

As fluid levels drop and pressure changes occur in a system, moist air is drawn through the breather. Air passes through a 2-micron solid contaminant filter and a diffuser to ensure maximum efficiency in the silica gel chamber. Water vapour in the air is absorbed by the silica gel before the dry air passes through a second 2-micron contaminant filter. The filtered air that enters the reservoir is void of moisture and contaminants.

FEATURES

Bi-directional air flow
As moist air flows through the breather's filtration system, it is cleaned of impurities and dried. Expelled air partially regenerates the silica gel and "backflushes" the particulate to prolong the life of the breather.

Durable Construction
The desiccant air breathers are manufactured from rugged ABS plastic and impact modified plexiglas.

Water Vapour Absorbent
Silica gel is chemically inert, non-toxic, non-deliquescent, non-corrosive and environmentally disposable. Its internal structure of interconnected microscopic pores absorbs up to 40% of its weight.

The operating temperature range is -29°C to 93°C (-20°F to 200°F).

Colour Indicator
As the gold silica gel absorbs water, it turns green to indicate that it has reached its functional capacity and that replacement of the breather is required.

Dual anti-static filter system
The solid contaminant filters are designed to reduce the potential for explosion in dusty environments.

BENEFITS

- Prevents rust and oxidation
- Minimises component wear and maintenance
- Curtails freezing and additive depletion
- Environmentally safe disposable silica gel
- Anti-static features to protect against fire ignition
- High water absorbtion capacity (D-AB-2 = 3.3 oz and D-AB-8=18.5 oz)
- Environmentally safe disposable silica gel
- Compatibility with a variety of applications
- Extends oil filter and hydraulic system life

Applications

- Gear Boxes
- Hydraulic Reservoirs
- Storage Tanks

PRODUCT MATRIX - D-AB & R-AB SERIES

MODEL NUMBER	CONNECTION	NORMAL CAPACITY	AIR FLOW / PSI DROP	A (mm)	B (mm)	C (mm)
D-AB-2	.75" NPT Male	20 SCFM	2 psi at 20 SCFM	3.16 (80)	0.95 (24)	3.25 (83)
D-AB-2-F	2.25" SAE J829 Flange	20 SCFM	2 psi at 20 SCFM	3.16 (80)	Contact factory	3.25 (83)
D-AB-4	Adaptor options	35 SCFM	0.70 psi at 35 SCFM	8 (203)	1.75 (44)	0.75 (19)
D-AB-8	2" NPT Male	100 SCFM	Not available	10.0 (254)	1.75 (44)	5.0 (127)
R-AB-4	Adaptor options	35 SCFM	0.70 psi at 35 SCFM	10 (254)	3 (76)	1.50 (38)

D-AB DESICCANT FILTER AIR BREATHERS

Model Shown: D-AB-2

Model Number	D-AB-2
Features & Benefits	• Dual Anti-static Filter System • High water absorption capacity • Long operating life and low maintenance costs
Air Flow / psi drop	2 psi at 20 SCFM
Connection	.75" NPT Male
Nominal Capacity	20 SCFM

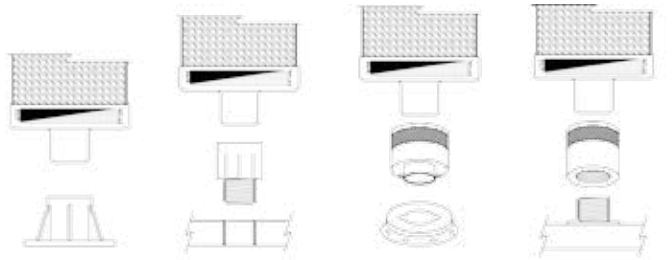
Model Shown: D-AB-4

Model Number	D-AB-4
Features & Benefits	• Dual Anti-static Filter System • High water absorption capacity • Long operating life and low maintenance costs
Air Flow / psi drop	0.70 Psi AT 35 SCFM
Connections	Contact us for more information (see below)
Nominal Capacity	35 SCFM

Call or email our sales team about the connections and the R-AB-4 model

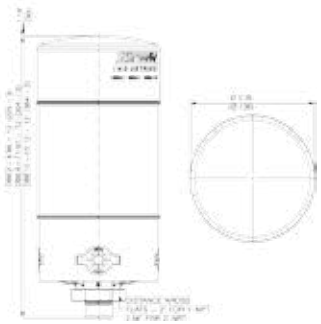
Model Shown: D-AB-8

Model Number	D-AB-8
Features & Benefits	• Dual Anti-static Filter System • High water absorption capacity (up to 18.5 oz) • Long operating life and low maintenance costs
Air Flow / psi drop	Contact us for more details
Connections	2" NPT Male
Nominal Capacity	100 SCFM



DBE DESICCANT FILTER AIR BREATHER

The new breather dryer DBE (with extended service life) was mainly developed for wind industry applications. The special features of the filter are the two separated chambers storing two absorbent types with different water holding capacities and response behaviours. Four check valves can be integrated in the filter bottom in order to protect the absorbent material, avoiding saturation during system downtime. The dirt holding capacity of the filter is increased through the star-pleated air breather filter element. All included new features contribute to an extended lifetime of the breather dryer.



Model Shown: DBE-2

Model Number	**DBE-2, DBE-4, DBE-10**
Features & Benefits	• 2 stages of absorbent provide optimal combination of drying efficiency and water retention • Protection valves prevent absorbents being saturated during system downtime • Unique air flow design with suction tube as splash protection and protection against absorbent getting into the tank • Bypass valves divert out flow away from water removal media to preserve its life • Robust zinc die-casting connection piece with integrated anti-splash baffles • Replacement cartridge available in 3 different sizes • Pleated particle air filter with 2μm filtration rating • Reusable base with protection (intake) and bypass (outflow)
Element Contamination Retention Capacity	2μ, 26G
Dimensions	See diagram above table
Operating Temperature	-29°C to 99°C (-20°F to 210°F)
Storage Temperature	-40°C (-40°F)
Application	New and Retrofit Applications, Gear Boxes, Hydraulic Reservoirs and Wind Turbines

PRODUCT MATRIX - DBE SERIES

MODEL NUMBER	WATER RETENTION CAPACITY (GALLON)		OPTIMAL AIR FLOW RATE (SCFM)	MAX DRYING CAPACITY AT MEDIUM HUMIDITY (SCF)	MAX DRYING CAPACITY AT HIGH HUMIDITY (SCF)
	MAX	ACTUAL			
DBE-2	.06	.05	21	350	210
DBE-4	.13	.08	28	880	530
DBE-10	.20	.13	35	1450	880

HOW TO BUILD A VALID MODEL NUMBER FOR SCHROEDER DBE

*NOTE: **ONE OPTION PER BOX***

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	EQUALS
DBE	4	R	P	2	N	I	R.04		DBE4RP2N1R.04

BOX 1 — MODEL NUMBER

DBE

BOX 2 — SIZE

2
4
10

BOX 3 — REPLACEMENT ELEMENT

R	Replaceable

BOX 4 — CONNECTION TYPE

P	NPT
B	BSPT
F	Flange

BOX 5 — FILTRATION RATING

2μ

BOX 6 — GAUGE OPTIONS

N	None

BOX 7 — CONNECTION SIZE

Omit	Flange
I	I"
2	2" (NPT only)

BOX 8 — CHECK VALVE OPTIONS

Omit	None
R.3	0.3 psi
R.04	0.04 psi

BASE ASSEMBLY ONLY

BOX 1 — MODEL NUMBER

DBE

BOX 2 — CONNECTION TYPE

P	NPT
B	BSPT
F	Flange

BOX 3 — CONNECTION SIZE

Omit	Flange
I	I"
2	2" (NPT only)

BOX 4 — CHECK VALVE OPTIONS

Omit	None
R.3	0.3 psi
R.04	0.04 psi

REPLACEMENT CARTRIDGE ONLY

BOX 1 — REPLACEMENT ELEMENT

R	Replaceable

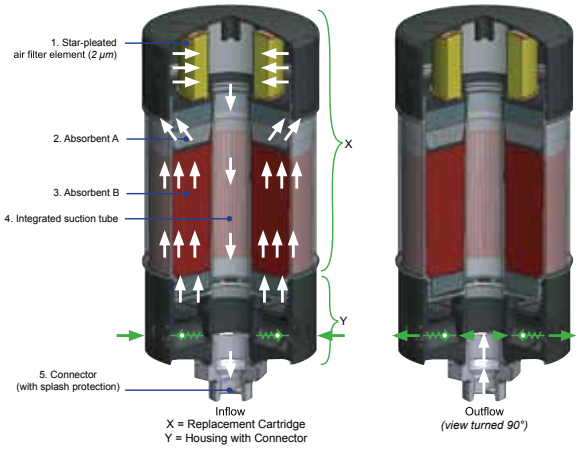
BOX 2 — MODEL NUMBER

DBE

BOX 3 — SIZE

2
4
10

WORKING DIAGRAM



AIR BREATHERS - ABF SERIES WITH NPT ADAPTORS

Model Shown: ABF-3/10

MODEL	ABF-3/10
Features & Benefits	• Durable metal housing • Optional dipstick or filter strainer • Large pleated surface areas offers high dirt holding and air flow capacity • NPT or Flange adaptor available • Available with three micron rating
Dimensions	Contact us for more information
Minimal micron retention	3μ
Nominal Capacity	40 SCFM
Air Flow / psi drop	0.4 psi at 20 SCFM - 1.25 psi at 40 SCFM
Application	Industrial & Automotive Manufacturing, Machine Tool, Mining Technology, Power Generation, Steel Making, Pulp & Paper, Agriculture & Mobile Vehicles

Model Shown: ABF-3/10-M-P12

MODEL	ABF-3/10-M-P-12
Features & Benefits	• Durable metal housing • Optional dipstick or filter strainer • Large pleated surface areas offers high dirt holding and air flow capacity • NPT or Flange adaptor available • Available with three micron rating
Adaptor Type	SAE-Type Flange Adaptor
Minimal micron retention	3μ
Nominal Capacity	40 SCFM
Application	Industrial & Automotive Manufacturing, Machine Tool, Mining Technology, Power Generation, Steel Making, Pulp & Paper, Agriculture & Mobile Vehicles

AIR BREATHERS - ABF SERIES WITH FLANGE ADAPTORS

Model Shown: ABF-3/10-F

MODEL	ABF-3/10-F
Features & Benefits	• Durable metal housing • Optional dipstick or filter strainer • Large pleated surface areas offers high dirt holding and air flow capacity • NPT or Flange adaptor available • Available with three micron rating
Adaptor Type	SAE-Type Flange Adaptor
Minimal micron retention	3μ
Nominal Capacity	40 SCFM
Application	Industrial & Automotive Manufacturing, Machine Tool, Mining Technology, Power Generation, Steel Making, Pulp & Paper, Agriculture & Mobile Vehicles

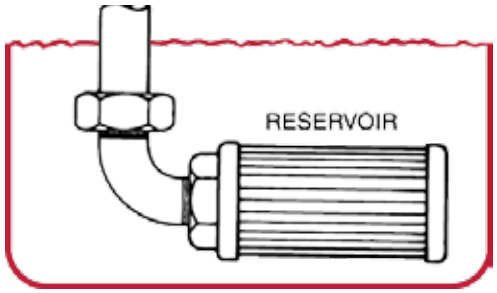
SUCTION STRAINERS

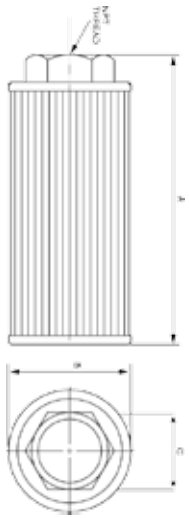
These all metal suction strainers are furnished with optimised pleat size and screen area for extended life and low pressure drop. 100 mesh stainless steel screen (140 micron) has 33.3% open area. Porting head is carbon steel, centre core is plated perforated steel. End cap is heavy gauge zinc plated steel. These strainers can handle temperatures up to 121°C (250°F). 60 mesh (238 micron) and 200 mesh (75 micron) models are also available.

PRODUCT MATRIX - SUCTION STRAINERS

MODEL NUMBER	OPTIONAL 3 PSI BYPASS	PIPE SIZE	FLOW (l/min)	DIMENSIONS			
				A	B	C	Screen Area in2 (cm2)
SS-.5-100	(Omit) = None	1/2" NPT	19	3.10 (79)	2.63 (67)	1.12 (28)	68 (439)
SS.75-100		3/4" NPT	30	3.55 (90)	2.63 (67)	1.31 (33)	68 (439)
SS-1-100	-3 = Bypass valve	1" NPT	38	5.35 (136)	2.63 (67)	1.62 (41)	112 (723)
SS-1.25-100		1 1/4" NPT	76	6.85 (174)	3.38 (89)	1.88 (48)	165 (1065)
SS-1.5-100		1 1/2" NPT	114	8.01 (204)	3.38 (89)	2.12 (54)	225 (1450)
SS-2-100		2" NPT	189	9.85 (250)	3.94 (100)	2.75 (70)	351 (2265)
SS-2.5-100		2 1/2" NPT	284	10.10 (257)	5.12 (130)	3.22 (82)	405 (2613)
SS-3-100		3" NPT	379	11.83 (300)	5.12 (130)	4.00 (102)	502 (3239)

The suction strainer dimensions are shown below.





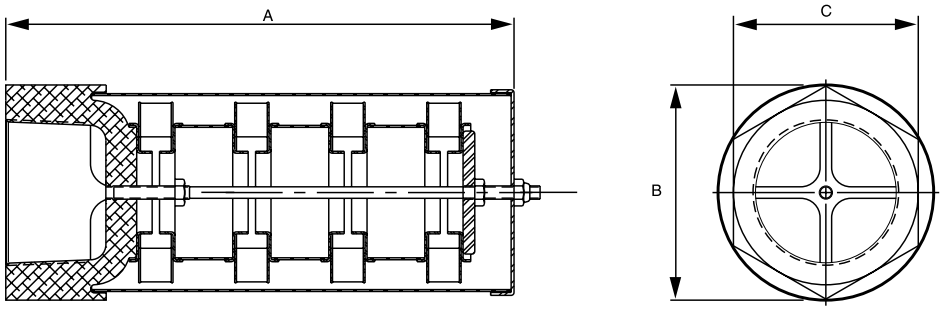
MAGNETIC SUCTION SEPARATORS

PRODUCT MATRIX				DIMENSIONS (MM)		
MODEL NUMBER	PIPE SIZE	FLOW L/MIN	Δ PSI AT MAX. GPM	A	B	C
SKB-1	1"	55	0.05	133	83	41
SKB-1.25	1 1/4"	95	0.05	210	89	76
SKB-1.5	1 1/2"	135	0.08	210	89	76
SKB-2	2"	190	0.10	210	89	76
SKB-3	3"	380	0.02	254	121	102

With the use of Schroeder's Magnetic Suction Separators, suction line filtration is provided without starving the pump. They offer unique protection for pumps from all sizes of ferrous particles, some of which have the potential of destroying a pump in a single pass. Large ceramic magnets are spaced along the length of the separator. All hydraulic fluid entering the pump must move at low velocity through a powerful magnetic field. This field traps large quantities of micronic ferrous particles. The viscous properties of the fluid can cause some non-ferrous particles to adhere to the magnetically trapped particles.

Schroeder SKB's are available in sizes ranging from one to three inches. The chart above shows the part numbers, specifications, and dimensions of available models.

The diagram below indicates the reference points for dimensions.



ALL IN ONE RESERVOIR TANKS

Filtertechnik now offer an all-in-one tank solution that truly delivers for the mobile equipment manufacturer. It's lightweight, versatile, space saving design is the perfect drop-in for hydraulic circuits requiring 45, 70 or 100 litre reservoirs. It is a complete system that can be connected to a circuit, filled with fluid and used immediately.

Mobile applications have unique requirements for hydraulic components. Often, these components need to be small, compact and as lightweight as possible. Making sure these reservoirs are secure is often overlooked. The new plastic tank provides all of the tools required to keep mobile applications clean, with the integrated return filter and mounting straps to ensure it is securely connected to the frame or chassis.

FEATURES

- Patented insertion ring for filter head flange mounting prevents leakage
- Patented integrated baffle wall creates settling zone for returning oil (degassing) with simultaneous cooling effect
- Tested for leakage (no testing is required)
- High degree of cleanliness eliminates time-consuming flushing processes
- Available in three different sizes and configurations
- GeoSeal® patented element technology® ensuring aftermarket is protected for OEMs
- No risk of corrosion

BENEFITS

- Package solution comes complete with all accessories installed
- Lightweight and cost efficient
- Innovative tank strap arrangement for vehicle or horizontal mounting
- No risk of corrosion

OIL TANK COMPLETE WITH 6 bar RETURN LINE FILTER

Model Number	TNK12, TNK18, TNK25
Tank Materials	High Density Polyethylene (HDPE), Nylon 6 (PA6)
Tank Volumes	45 Litres, 70 Litres or100 Litres
Operating Temperature	High Density Polyethylene (HDPE) -29°C to 82°C (-20°F to 180°F) Nylon 6 (PA6) -29°C to 105°C (- 20°F to 220°F)
Return Line Filter	ZT & GZT GeoSeal® available
Max Return Flow	TNK12: 150 l/min TNK18: 150 l/min) TNK25: 150 l/min
Breather	3μ phenolic resin impregnated paper element
Suction Filter	100μ wire mesh
Weight of TNK	TNK12: 21 lbs (9.7 KG) TNK18: 33 lbs (15 KG) TNK25: 42 lbs (19 KG)
Element Change Clearance	TNK12: 254mm (10") TNK18: 254mm (10") TNK25: 254mm (10")
Ultra Violet Light Rating	HPDE = UV-12 PA6 = UV-4 (Tank requires painting or placed out of direct sunlight for PA6 material)

ELEMENT PERFORMANCE INFORMATION

ELEMENT/PART NUMBER	FILTRATION RATIO PER ISO 4572/NFPA T3.10.8.8 USING AUTOMATED PARTICLE COUNTER (APC) CALIBRATED PER ISO 4402			FILTRATION RATIO PER ISO 16889 USING APC CALIBRATED PER ISO 11171	
	B. > 75	B. > 100	B. > 200	B. (c)>200	B. (c)>1000
8Z3	6.8	7.5	10.0	N/A	N/A
8Z10	15.5	16.2	18.0	N/A	N/A
8ZZ1	<1.0	<1.0	<1.0	<4.0	4.2
8ZZ3	<1.0	<1.0	<2.0	<4.0	4.8
8ZZ5	2.5	3.0	4.0	4.8	6.3
8ZZ10	7.4	8.2	10.0	8.0	10.0
8ZZ25	18.0	20.0	22.5	19.0	24.0

ELEMENT	DHC (GM)
8Z3	39
8Z10	32
8ZZ1	51
8ZZ3	52
8ZZ5	59
8ZZ10	55
8ZZ25	77

HOW TO BUILD A VALID MODEL NUMBER FOR SCHROEDER TNK:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX 11
TNK	12	HD	8ZZ10	S	3	Y2	F	S	2	S

EQUALS: TNK12HD8ZZ10S3Y2FS2S

BOX 1 — PRODUCT SERIES

TNK

BOX 2 — SIZE

12	45 litres (12 Gallon)
18	70 litres (18 Gallon)
25	100 litres (25 Gallon)

BOX 3 — MATERIAL

HD	HDPE
PA	Nylon 6 (PA6)

BOX 4 — RETURN FILTER & ELEMENT MICRON SELECTION

GZT (GeoSeal® patented element technology)	ZT
8GTZZ1 (Synthetic)	8Z3 (Cellulose)
8GTZZ3 (Synthetic)	8Z10 (Cellulose)
8GTZZ5 (Synthetic)	8Z25 (Cellulose)
8GTZZ10 (Synthetic)	8ZZ1 (Synthetic)
8GTZZ25 (Synthetic)	8ZZ3 (Synthetic)
-	8ZZ5 (Synthetic)
-	8ZZ10 (Synthetic)
-	8ZZ25 (Synthetic)

BOX 5 — INLET PORTING

P	1" NPTF
PP	Dual 1" NPTF
S	SAE-16
SS	Dual SAE-16
B	ISO 228 G-1"
BB	Dual ISO 228 G-1"

BOX 6 — FILTER INLET PORT ORIENTATION

1	Rear
2	Right
3	Front
4	Left

BOX 7 — FILTER DIRT ALARM®

Omit	None
Visual	Y2 = Back-mounted tri-colour gauge Y2C = Bottom-mounted gauge in cap Y5 = Back-mounted gauge in cap
Electrical	ES = Electric switch ES1 = Heavy-duty electric switch with conduit connection

BOX 8 — FILTER BREATHER

F	PABS3

BOX 9 — SIGHT GLASS

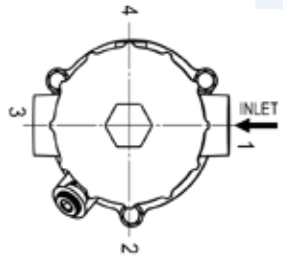
S	SLG-5
N	No sight glass

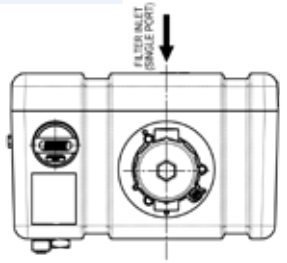
BOX 10 — SIGHT GLASS LOCATION

Omit	No sight glass
1	Left
2	Front

BOX 11 — SUCTION STRAINER

S	SAE-24 100 Mesh Strainer
N	No Strainer / SAE-32 Open Port





STAINLESS STEEL BAG HOUSINGS AND FILTER ELEMENTS

In this section you will find a selection of stainless steel bag housings and bag filter elements Filtertechnik stock and manufacture.

We offer both nominal and absolute rated elements depending on the application.

SIZE 1 STAINLESS STEEL HOUSINGS

Our single length housing is half the length of the efficient double length housing. It is a good option when space or weight is at a premium. Can be fitted with -

- Bag filters
- Filtasorb2®
- 1 micron absolute rated elements (see page 106) with large dirt holding capacity 14/12/10
- New depth media elements (see page 105)

FEATURES

- Positive bag seating mechanism
- Internally and externally pickle-finish as standard
- Naturally coalescing remove free water from oils
- Extensive filtration range to suit most applications and budgets
- Ideal for high flow rates with large dirt holding capacity
- Suitable for up to 10 bar liquid, 3 bar gas and up to 110°C
- Dished bottom end to allow full draining of housing
- Superior sealing arrangements
- Constructed in 304 Stainless Steel
- Drain port at base of housing
- O-ring seal for extra filtration efficiency

ORDERING INFORMATION

Feel free to call our expert team for further application details.

BENEFITS

- Rugged design
- Low cost consumables available in a range of micron ratings
- Increased dirt holding capacity
- In-line pipe connections for easy installation
- Extensive selection of filter cell inserts to suit every clean-up application
- Staged filtration possibilities to reduce element change out
- Flexible filter element selection - water removal options available
- Simple element changeover
- Full housing customisation service available

SIZE 2 STAINLESS STEEL HOUSINGS

The double length process housing is our most popular size and we carry large quantities in stock for immediate delivery. Filtertechnik also carry standard and high efficiency filter inserts for these housings as well as innovative water removal options.

- Bag filters
- Filtasorb2®
- 1 micron absolute rated elements with large dirt holding capacity 14/12/10 (see page 106)
- New depth media elements (see page 105)

FEATURES

- Positive bag seating mechanism
- Internally and externally pickle-finish as standard
- Naturally coalescing, remove free water from oils
- 2" in/out ports
- Ideal for high flow rates with large dirt holding capacity
- Rated at up to 10 bar liquid, 3 bar gas and up to110°C
- Dished bottom end to allow full draining of housing
- Superior sealing arrangements
- Constructed in 304 Stainless Steel
- Drain port at base of housing
- O-ring seal for extra filtration efficiency

ORDERING INFORMATION

Feel free to call our expert team for further application details.

BENEFITS

- Low cost consumables available in a range of micron ratings
- Increased dirt holding capacity
- In-line pipe connections for easy installation
- Extensive selection of filter cell inserts & elements to suit every clean-up application
- Staged filtration possibilities to reduce element change out
- Simple element changeover
- Full housing customisation service available

MULTI-ELEMENT STAINLESS STEEL FILTER HOUSINGS

Our multi element housing, can handle flow rates of 100 - 10,000 L/min. Available in stainless steel our housings can take any size 2 filter cells including our revolutionary Filtasorb2 water removal media. Can be fitted with -

- Bag filters
- Filtasorb2®
- 1 micron absolute rated elements with large dirt holding capacity 14/12/10 (see page 106)
- New depth media elements (see page 105)

FEATURES

- Flow rates of up to 10,000 l/min achievable
- O-ring: Buna N, EP, Viton, Teflon
- Connection standard include: DIN, JLS, ANSI
- Low pressure drops
- Covers secured by eye nut assemblies
- Rated at up to 10 bar liquid, 3 bar gas and up to110°C
- Designed for general-purpose liquid applications
- Superior sealing arrangements
- Constructed in Stainless Steel 304
- Drain port at base of housing
- O-ring seal for extra filtration efficiency

BENEFITS

- Rugged design
- Low cost consumables available in a range of micron ratings
- Increased dirt holding capacity
- In-line pipe connections for easy installation
- Minimise risk of seal bypass
- Extensive selection of filter cell inserts to suit every clean-up application
- Staged filtration possibilities to reduce element change out
- Flexible filter element selection - water removal options available
- Full housing customisation service available

ORDERING INFORMATION

Feel free to call our expert team for further application details.

FILTASORB2® WATER REMOVAL FILTER FOR SIZE 1 & 2 BAG HOUSINGS

Filtasorb 2 Next generation
Water absorbent filtration media

Water affects the performance of oils and fuels, leading to increased degradation and microbial contamination. Absorption is an effective solution for the removal of water from oils and fuels and, in the case of Filtasorb2®, a low cost and rapid cleanup solution.

Third party field trials and our own internal testing has proven that Filtasorb2 is capable of reducing water content in oils rapidly from many thousands of ppm to under 100ppm. There is no other product currently on the market that comes close to matching this cost effective performance.

Filtasorb2® has a voracious appetite for water and absorbs it from diesel through to heavy mineral and bio-based oils. Elements are designed to fit in size 1 & size 2 bag housings.

For Size 1 and Size 2 Bag Housings (see pages 100-101)

FEATURES

- Up to 3x more water absorption capacity than the leading competition
- Impressive high flow rates - 5 to 1,000 l/min
- Versatile cartridge design, retrofits into bag housings (size 1 & size 2)
- Effective filtration down to 10 micron as standard (finer size options also available)
- Designed for use with all mineral and bio-based oils

BENEFITS

- Rigorously tested against competitors
- Universal fitting for all bag housings size 1 & size 2
- Removes water quickly from oils & diesel fuels

ORDERING INFORMATION

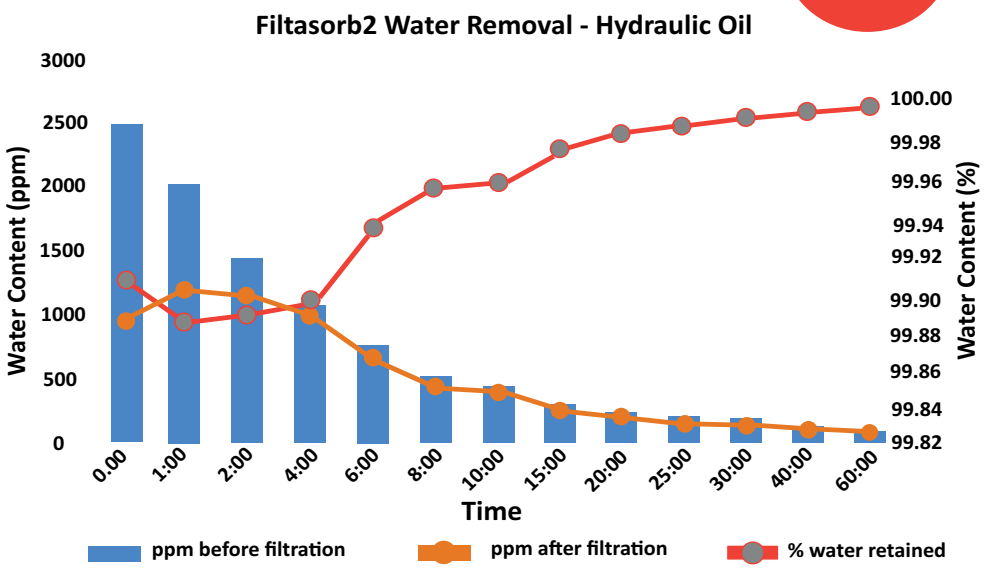
Feel free to call our expert team for further application details.

FILTASORB 2 FIELD TESTING RESULTS

- In 60 minutes Filtasorb2 cleaned 100 litres of hydraulic oil from 2,500ppm down to 65ppm
- Rigorously tested in our world class laboratory
- Within 12 minutes Filtasorb2 reduced harmful water content from 2,500ppm down to 400ppm (See Chart)
- Filtasorb2 delivers unbeatable performance which ensures 100% free water and 99.9% entrained water removal

BEFORE AFTER

Rigorous testing of Filtasorb2 has provided incredible results



BROAD SPECTRUM MEDIA FOR SIZE 1 AND 2 BAG HOUSINGS

The broad spectrum filter media works by capturing particulate when the fluid flows inside the media and capturing the particulate when it flows away from the centre. Each layer captures different size particles. The media is bound slightly differently for each layer resulting in a wide range of particles being captured. The filter can capture particulate down to 1 micron.

FEATURES

- Layered filter media able to remove particulate down to 1 micron
- Universal fit - able to fit into all of our oil trolleys & skids
- Suitable for hydraulic oil

BENEFITS

- Rapidly remove both free and entrained water from oil
- Low cost replacement filter cells
- Single pass cleanliness

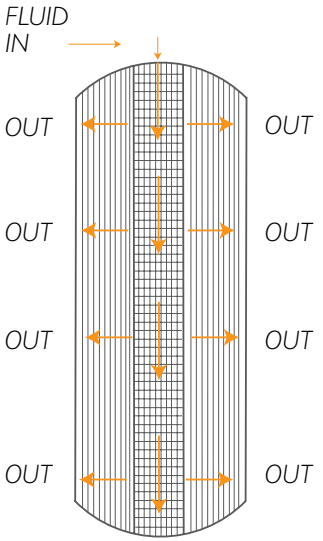
WHY BUY THE BROAD SPECTRUM MEDIA?

This filter media is able to remove particulate down to 1 micron and is absolute rated. The media itself is designed to capture a wide range of particulate from 100 micron down to 1 micron.

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Transformer oils
- Injection Moulding

The diagram below indicates the flow of fluid through the media



ORDERING INFORMATION

Feel free to call our expert team for further application details.

1 MICRON ABSOLUTE RATED PLEATED FILTERS FOR SIZE 1 OR SIZE 2 HOUSINGS

Our next generation filter media provides superior filtration, cleaning contamination in fuels and oils down to 1 micron. With it's universal fitting the filter element can be inserted into our stainless steel filter housings for clean and dry oil in no time and capable of guaranteeing ISO cleanliness 14/12/10 or better.

This cartridge has been designed to fit into all Filtertechnik stainless steel filter housings and our extensive range of oil & fuel filtration systems. Our filter media and cartridge design meets the highest levels of quality and incorporates a crush-protective centre tube to ensure durability and performance in the toughest applications.

BENEFITS

- Cleans a wide range of fuels & oils down to 1 micron absolute
- Dirt holding capacity of 509 grams
- Universal design means it is compatible with all of our standard oil polishing systems
- Available from stock for immediate delivery
- Crush protective centre tube for maximum protection

WHY BUY A 1 MICRON ABSOLUTE RATED PLEATED FILTER?

Filtertechnik have been supplying filters for fuel and oil applications to a wide range of industries over the years. We pride ourselves in supplying the best filter media no matter what the application. Our latest 1 micron absolute filter media is a market leader, able to remove particulate contamination down to 1 micron absolute in a wide range of fuels and oils. The filter has six layers providing maximum efficiency and dirt-holding capacity with minimal pressure drop. The filter media can operate within pressures of 150psi making it suitable for filtering hydraulic fluid in power machinery.

APPLICATIONS

- Automotive industry
- Plant Equipment Hire
- Steel production
- Transformer oils
- Injection Moulding
- Gearbox oils

ORDERING INFORMATION

Feel free to call our expert team for further application details.

1 MICRON ABSOLUTE RATED PLEATED FILTER TESTING RESULTS

PRODUCT CODE	SIZE 1 - FT-CE-01-Z01	SIZE 2 - FT-CE-02-Z01
Flow Rating	250 L/Min	
Dirt Holding Capacity	241 grams	509 grams
Max. Operating Pressure	150 psi (10 bar)	
Operating Temperature	-29°C to 107° (-20°F to 225°F)	
Element Change Clearance	320mm	640mm
Filter Weight	2.2 kg	3.6kg
Boxed Weight	2.5 kg	4.2kg

Size 2 1µm Element - ISO9001 Cleanliness Chart

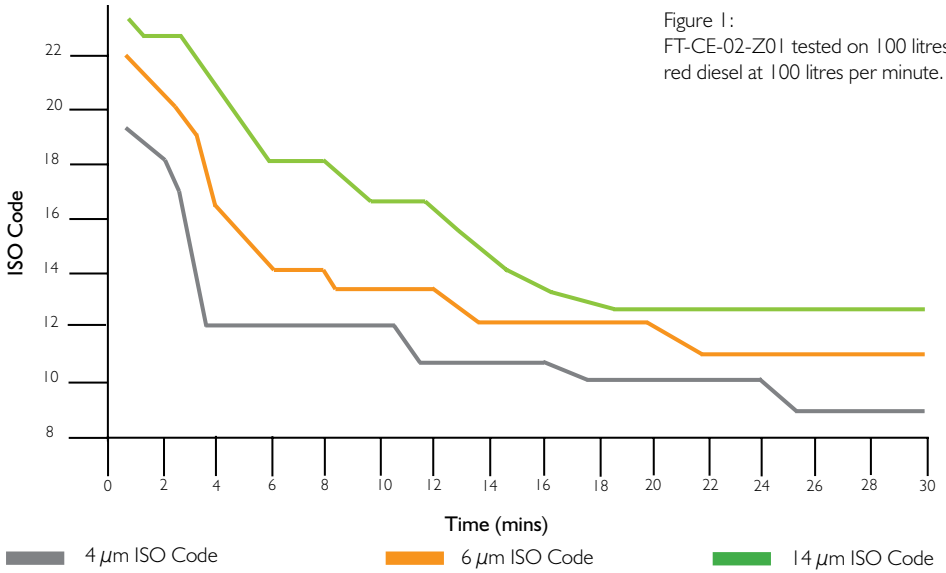


Figure 1:
FT-CE-02-Z01 tested on 100 litres of red diesel at 100 litres per minute.

With a starting ISO cleanliness code of ISO 23/22/19 the filter achieved ISO 16/13/12 in just 9 minutes. This filter can deliver cleanliness of ISO 14/12/10 or better if used in a multi-pass application.

ORDERING INFORMATION

Feel free to call our expert team for further application details.

FT-19PP SERIES FILTER BAGS FOR SIZE 1 OR SIZE 2 HOUSINGS

Filtertechnik supply a standard range of filter bags suitable for corrosive fluids.

FEATURES

- Maximum temperature 95C*
- Maximum differential pressure 4 bar

BENEFITS

- Micron ratings available from 1 to 800μm for wide ranging filtration needs
- Extended life XP version available
- PTFE bags are offered with or without PTFE membrane and are ideal for the filtration of corrosive fluids
- Optional moulded polypropylene flange with handles for superior sealing and ease of handling
- FDA and EC food contact compliant materials available
- Wide selection of filter media and support ring materials available
- Identification supplied with every bag

APPLICATIONS

- Pharmaceutical
- Cosmetics
- Petrochemical
- Metal finishing
- Water treatment
- Automotive
- Chemical

*Please note that operating temperatures greater than ambient will reduce the bags' ability to withstand differential pressure and that the bag should be used with caution at elevated temperatures.

ORDERING INFORMATION

Feel free to call our expert team for further application details.

FT-19HE SERIES FILTER BAGS FOR SIZE 1 OR SIZE 2 HOUSINGS

FEATURES

- Maximum temperature can not exceed 80C*
- Maximum differential pressure 4 bar

BENEFITS

- Micron ratings available from 0.5 to 25μ for wide ranging filtration needs
- Optional moulded polypropylene flange with handles for superior sealing and ease of handling
- Silicone free for use in automotive paint applications
- Wide selection of filter media and support ring material also available
- Identification supplied with every bag
- FDA compliant material

APPLICATIONS

- Pharmaceutical
- Cosmetics
- Metal finishing
- Water treatment
- Automotive

* Please note that operating temperatures greater than ambient will reduce the bags' ability to withstand differential pressure and that the bag should be used with caution at elevated temperatures.

ORDERING INFORMATION

Feel free to call our expert team for further application details.

DUOLINE OIL OUT FILTER BAGS FOR SIZE 1 OR SIZE 2 HOUSINGS

The DuoLine range of filter bags have been designed specifically to remove oil from water or process fluids.

DuoLine Oil Out filter bags have been designed to provide effective oil absorbing capacity in a wide range of applications using a variety of polypropylene media.

DuoLine HO filter bags are designed to give high levels of efficiency and oil retention. The multilayered combinations of needlefelt and microfibre media are supported in a heavyweight scrim. This bag offers longer on service life and significant dirt holding capacity.

FEATURES

- Polypropylene, rated 1 - 25µm
- High efficiency filtration rating
- Double integral handles
- Removes oil from water or process fluids

DuoLine PA filter bags are designed for maximum oil removal retention. The needlefelt bag contains over 1kg of polypropylene micro fibre media. The unique flow path directs the fluid down the body of the bag for maximum contact time resulting in a highly efficient oil retaining device.

FEATURES

- Polypropylene microfibre, rated 50µm
- Up to 25x times its own weight in oil capacity
- Double integral handles

DuoLine OilOut range, 4¼ and 7" all fitted as standard with a top ring locator in various materials and styles.

APPLICATIONS

- Engineering
- Metal finishing
- Water treatment
- Automotive

FEATURES

- Optional moulded polypropylene flange with handles for superior sealing and ease of handling
- Identification supplied with every filter bag housing
- Silicone free for use in automotive paint applications
- High volume microfibre PA grade for maximum oil retention

TECHNICAL SPECIFICATION

DIMENSIONAL DATA						
BAG SIZE	LENGTH (MM)	RING DIAMETER (MM)	CAPACITY (LITRES)	SURFACE AREA (M2)	HO FLOW RATE (M^3/HR) *1	PA FLOW RATE (M^3/HR) *1
1M (P3)	200	108	1.8	0.068	1.5	N/A
2M (P4)	355	108	3.2	0.120	3	N.A
1G (P1)	420	178	10.0	0.235	6	2
2G (P2)	810	178	20.0	0.453	12	4

TECHNICAL SPECIFICATION	
Temperature	80°C
Recommended maximum differential pressure	4 Bar

ORDERING GUIDE							
MEDIA	MICRON RATING	LENGTH	RING TYPE	OPTION 1	OPTION 2	BRANDING	OPTION 3
FT19HO - Oil absorbent PP Meltblown FT19PA - Oil absorbent PP Combination	001 - 1µm 005 - 5 010 - 10 025 - 25 050 - 50 (PA Only)	1 - Single 2 - Double	M - 4.25" G - 7.00"	L - Zinc plated Ring & Loops T - St. Ring & Loops Y - Polypropylene Moulded Sealing Flange	L - Zinc plated Ring & Loops	P = Plain	B = individually bagged

ORDERING INFORMATION

Feel free to call our expert team for further application details.

Filtertechnik

Filtertechnik Ltd
1 Central Park
Lenton Lane
Nottingham
NG7 2NR

Tel: +44 (0) 115 9003 600
Fax: +44 (0) 115 9868 875
Free Phone: 0800 0087 456
Email: sales@filtertechnik.co.uk

www.filtertechnik.co.uk

Your local distributor is