



DU03

Oil filter



The Olaer Group is a global player specialising in innovative, efficient system solutions for temperature optimisation and energy storage. All over the world, our products operate in the most diverse environments and applications, e.g. the aircraft, engineering, steel and mining industries, as well as in sectors such as oil and gas, contracting and transport, farming and forestry, renewable energy, etc.

Off-line oil filter

Filters your system 24 hours a day independently of the main system

Greater reliability

The DU03 off-line oil filter increases the availability and reliability of hydraulic and lubricant oil systems. For optimum oil filtration performance, more often than not filtering takes place in off-line circuits, where the oil filter can operate 24 hours a day independently of the main system, avoiding any changes in pressure and flow.

Extended service life

Not only does clean oil extend the oil's service life, it also extends the lifetime of the entire system. We recommend that you think about installing a DU03 in your system whether it's a new installation or you're rebuilding an existing system. The extra cost is negligible when you bear in mind how much you'll gain from greater system availability, improved reliability and the longer service life of both the oil and the components.

Ideal design

Its low noise level and compact size make the DU03 ideal for use in many different machines and working environments. For uniform and good circulation and oil filtration, the DU03 has been fitted with a low pressure pump from our QPM range. This pump has few moving parts and is designed to have a long service life and consume little power.

The DU03 comes as standard with a pump capacity of 10, 20, 40, 60 or 80 l/min.

Fields of application

The DU03 is ideal in equipment with:

- low oil flow
- unfiltered return and drainage flows
- instantaneous high oil flow

DU03 oil filters are suitable for use

- in contaminated environments
- as part of a filling system

The DU03 is designed to meet the industry's strict requirements for clean oil. Whatever the application, a retrofit installation of a DU03 will give you cleaner oil, leading to improved reliability.

Oil side standard parts

- Pump with integrated pressure relief valve with opening pressure of 10 bar.
- Bypass valve in the filter housing.
- Visual or electric pressure drop indicator for monitoring filter status.

Options

- Socket with G $\frac{1}{4}$ connection for measurement nipple e.g. to control working pressure/make oil tests.
- Electric motor protective shield.

Suitable for

- Mineral oils
- Vegetable oils
- Synthetic oils
- Turbine oils

Low initial pressure drop

across the filter for economical filter performance

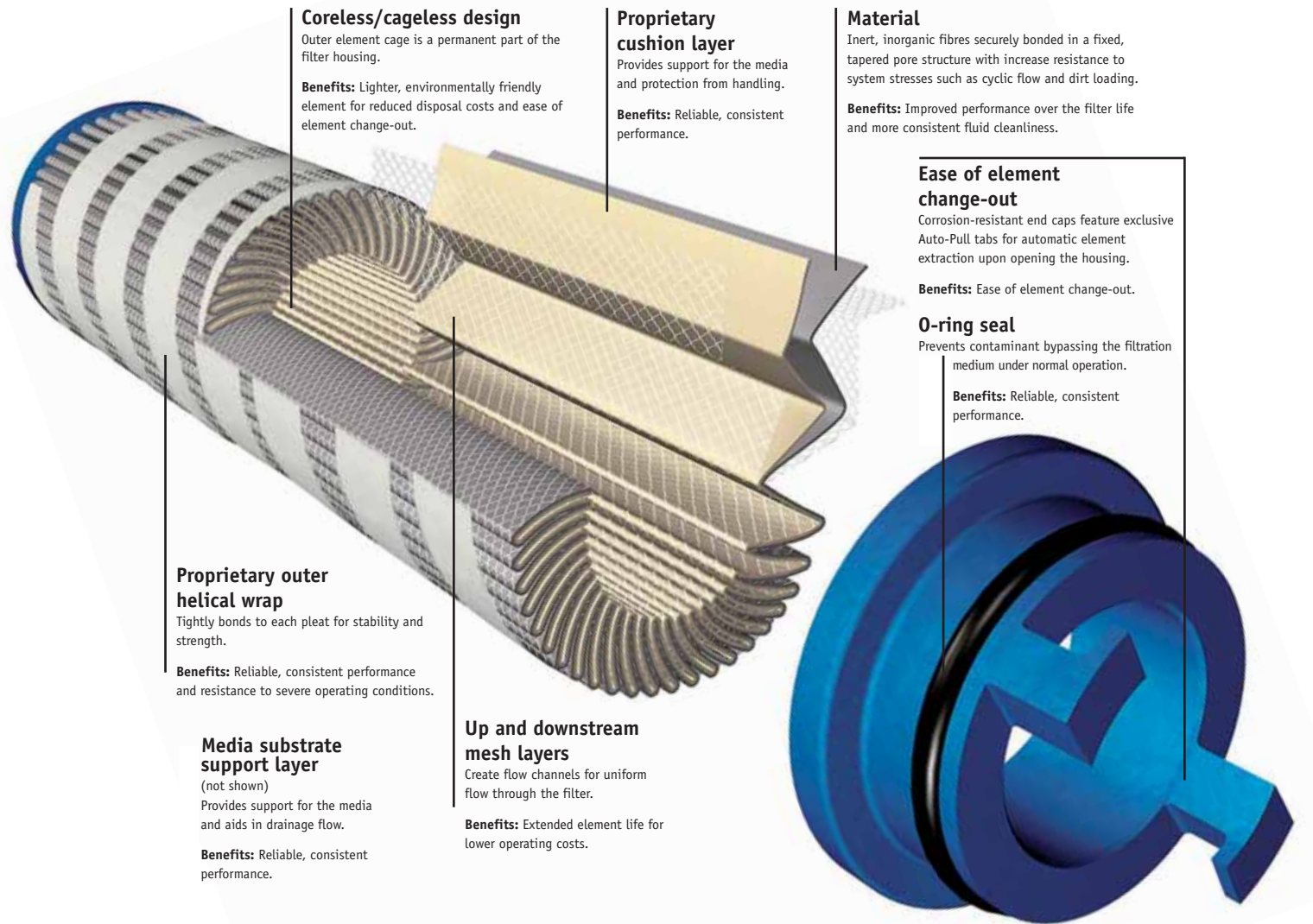


Correct oil flow

The correct oil flow is a prerequisite for effective filtration. When choosing the size of the oil filter you should bear in mind the cleanliness requirements, the environment, the tank volume and volume flow rate and also how much dirt the system generates.

Filtration flow in l/min. as a percentage of the system volume in litres

Low	5%
Medium	10%
High	20%



Coreless/cageless design

Outer element cage is a permanent part of the filter housing.

Benefits: Lighter, environmentally friendly element for reduced disposal costs and ease of element change-out.

Proprietary cushion layer

Provides support for the media and protection from handling.

Benefits: Reliable, consistent performance.

Material

Inert, inorganic fibres securely bonded in a fixed, tapered pore structure with increase resistance to system stresses such as cyclic flow and dirt loading.

Benefits: Improved performance over the filter life and more consistent fluid cleanliness.

Ease of element change-out

Corrosion-resistant end caps feature exclusive Auto-Pull tabs for automatic element extraction upon opening the housing.

Benefits: Ease of element change-out.

O-ring seal

Prevents contaminant bypassing the filtration medium under normal operation.

Benefits: Reliable, consistent performance.

Proprietary outer helical wrap

Tightly bonds to each pleat for stability and strength.

Benefits: Reliable, consistent performance and resistance to severe operating conditions.

Media substrate support layer

(not shown)
Provides support for the media and aids in drainage flow.

Benefits: Reliable, consistent performance.

Up and downstream mesh layers

Create flow channels for uniform flow through the filter.

Benefits: Extended element life for lower operating costs.

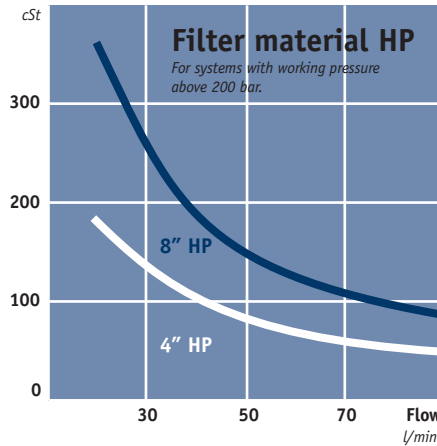
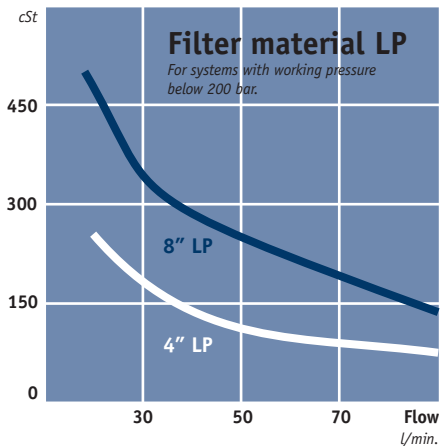
Good things come in small packages...

Characteristics

- Stress-resistant design
- Uniform pore size control layer
- Tapered pore structure
- Epoxy resin bonded fibre matrix with small fibre size
- Anti-static design

Benefits

- Enhanced performance under cyclic flow and pressure conditions
- Maintained efficiency during the entire life
- Dirt captured throughout the media depth
- High particles removal efficiency
- Minimized static charge generation and electrostatic discharge



Choose the right filter element:

- 1) Filter material HP or LP** – depends on pressure level, i.e. the system's average pressure.
- 2) The filter's flow capacity** – the oil flow is determined by the DU03 oil filter model.
- 3) The length of the filter element** – depends on the operating viscosity. The pressure drop over the filter element is proportional to the viscosity, e.g. oil that is three times as thick produces a pressure drop that is three times as high.



The FX3 original filter gives you constantly cleaner oil, more lasting system protection and greater stability during operation at varying flow and pressure.

The FX3 captures dirt along the whole length of the filter material and retains efficiency throughout its useful life.

The element is easy to replace, it comes out when you unscrew the cover - it couldn't be simpler.

FX3 Original Filter

element makes difference

Why not clean the oil while cooling it? Equipped with our filter unit FX3 the oil will be cleaned in a separate circuit, an ideal complement to the system filter. Our filter unit FX3 is available as option.

Filter technique

Designing filter media has traditionally been a question of balance. By making the medium finer, more efficient and cleaner, a pressure drop occurs and/or the serviceable life is sacrificed. To get a lower cleaner

pressure drop the removal efficiency is sacrificed.

With FX3 filter media has improved the filter's ability to maintain fluid cleanliness, while at the same time increasing flow capacity (reducing pressure drop).

The result is a better and more consistent system protection, i.e. high flow capacity in a small envelope size, optimum performance at stages of filter life, i.e. optimum performance under cyclic flow and pressure conditions for consistently cleaner fluid.



FX3 FILTER UNIT

- Compact
- Environmentfriendly
- Highly efficient

Key to DU03 oil filters

All positions must be filled in when ordering.

EXAMPLE:

DU03 - 10 - 8 - D - 0.75 - H - A - D - 0
1 2 3 4 5 6 7 8 9

1. TYPE OF OIL FILTER

2. PUMP SIZE

Pump flow 10 l/min.*	10
Pump flow 20 l/min.	20
Pump flow 40 l/min.	40
Pump flow 60 l/min.	60
Pump flow 80 l/min.	80

* = Refers to 8-pole motor.

3. NUMBER OF POLES

4-pole	4
8-pole (only for DU03 10 l/min.)	8

4. ELECTRIC MOTOR

Three-phase 220-240/380-420 50 Hz 440/480 60 Hz	= D
Three-phase 500 50 Hz	= E
Three-phase 400/690 50 Hz 440/480 60 Hz	= F
Three-phase 525 50 Hz	= G
Motor for special voltage (stated in plain text)	= X

5. OUTPUT

0.25 kW (only for 10 l/min.)	0.25
0.75 kW	0.75
1.50 kW	1.50

6. BUILT-IN BYPASS VALVE

Built-in bypass valve 10 bar	= H
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7. FILTER UNIT FX3 (sizing, see page 4)

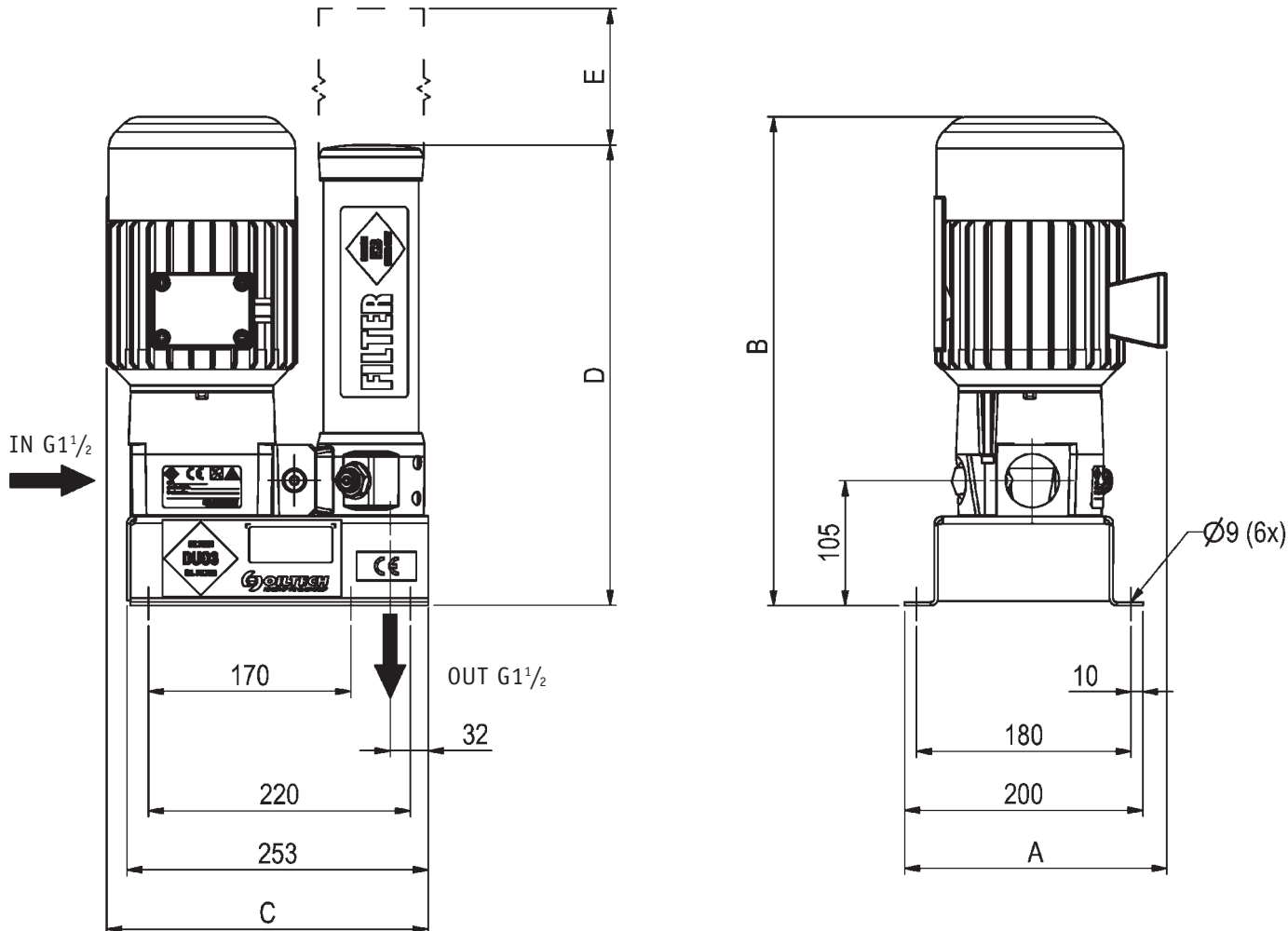
Filter unit with 4" element HP	= A
Filter unit with 4" element LP	= B
Filter unit with 8" element HP	= E
Filter unit with 8" element LP	= F

8. PRESSURE DROP INDICATOR

Visual pressure drop indicator with manual reset.	= D
Visual pressure drop indicator with thermo guard and manual reset No signal below 0°C, signal above +29°C	= P
Electric pressure drop indicator with automatic reset. Connection in accordance with DIN 43650 ISO 4400 (Hirschmann) IP 65.	= M
Electric pressure drop indicator with 2-pole AMP contact.	= U

9. STANDARD/SPECIAL

Standard	= 0
Special	= Z



TYPE	DIMENSIONS				
	A	B	C	D	E
DU03 10-8-D-0,25-H-A	220	411	270	288	150
DU03 10-8-D-0,25-H-E	220	411	270	387	250
DU03 20-4-D-0,75-H-A	220	411	270	288	150
DU03 20-4-D-0,75-H-E	220	411	270	387	250
DU03 40-4-D-1.50-H-A	235	486	275	288	150
DU03 40-4-D-1.50-H-E	235	486	275	387	250
DU03 60-4-D-0,75-H-A	220	410	270	288	150
DU03 60-4-D-0,75-H-E	220	410	270	387	250
DU03 60-4-D-1.50-H-A	235	486	275	288	150
DU03 60-4-D-1,50-H-E	235	486	275	387	250
DU03 80-4-D-1.50-H-A	235	486	275	288	150
DU03 80-4-D-1.50-H-E	235	486	275	387	250



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The Olaer Group develops, manufactures and markets products and systems in six business areas.

Global perspective

and local entrepreneurial flair



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The Group develops, manufactures and markets products and systems for a number of different sectors, e.g. the aircraft, engineering, steel and mining industries, as well as for sectors such as oil and gas, contracting and transport, farming and forestry, renewable energy, etc. All over the world, our products operate in the most

diverse environments and applications. One constantly repeated demand in the market is for optimal energy storage and temperature optimisation.

We work at a local level with the whole world as our workplace – local entrepreneurial flair and a global perspective go hand in hand.

Our local presence, long experience and a wealth of knowledge combined with our cutting-edge expertise to give you the best possible conditions for making a professional choice.



The Professional Choice – in Fluid Management

Olaer Group Network



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