

Product Description

STAUFF Off-Line and Bypass Filter Systems are designed to keep hydraulic and lubrication systems free of particles and water contamination. STAUFF OLS and BPS Units utilize the STAUFF Systems concept for the removal of contamination from hydraulic and lubrication systems. Desiccant Air Breathers, which clean and dry the air entering the reservoir, are also part of this contamination removal system.

STAUFF Systems will provide optimal system cleanliness for today's sophisticated hydraulic and lubrication systems.



Technical Data

Construction

- OLS: Off-Line Filter System with integrated motor / pump unit
- BPS: Bypass Filter System

Materials

- Housing: Anodized Aluminium
- Sealings: NBR (Buna-N®)

Port Connection

- OLS: G3/8, G1/2, G3/4 and 18 L
- BPS: G1/4 and G1/2

Differential Pressure

- Max. 6,2 bar / 90 PSI

Nominal Flow

- 2,1 ... 17 l/min / .55 ... 4.5 US GPM

Max. System Volume

- Up to 10800 l / 2853 gal

Temperature Range

- Max. +80 °C / +176 °F media temperature

Media Compatibility

- Mineral and lubrication oils, other fluids on request

Options and Accessories

Valve

- Bypass valve: Setting 6,2 bar / 90 PSI integrated in filter head

Clogging Indicator

- Visual clogging indicator

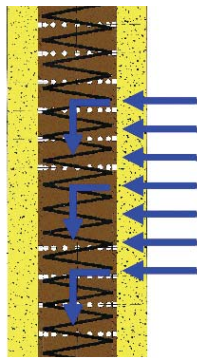
Motor Types (only OLS)

- Several motor types available
for more information please have a look at page C156

The STAUFF System



Filter Element SRM-30



Filter Element Design



Air Conditioners SDB / SVDB

System Contamination

In today's hydraulic market it is an accepted fact that contamination causes 70 % of all mechanical failures. This contamination results from the presence of solid particles such as metal, sand and rubber.

Changes in temperature cause water vapour to condense, resulting in unwanted water in the oil, the presence of this water accelerates the deterioration of the oil.

Mainstream filters are incapable of removing particles, smaller than 2 micron (better known as silt). Fluctuations in pressure and flow result in changing conditions preventing these filters from carrying out fine filtration; most of the silt remains in the system affecting the chemical composition of the oil.

All these problems lead to reduced oil life and increased component wear, maintenance costs and machine down time.

Removing silt and preventing the formation of free water will combat these problems.

Micro Filtration

At the heart of the STAUFF Off-Line and Bypass Filter Unit is the unique microfilter element. This filter is designed with a radial flow path.

The element is constructed with 0,5 micron media and is therefore able to remove the smallest particles (silt) from the oil.

The filter material is composed primarily of cellulose, which is applied by a special wrapping method. Glass fibre and water absorbing elements are available on request.

The cellulose material is capable of retaining solid particles and absorbing water. This helps to prevent chemical deterioration of the oil and the formation of various acids and sludge.

Hydraulic cylinder extension for example, can draw air, solid contamination particles and water vapour into the oil reservoir.

The water vapour condenses due to temperature changes and causes not only oxidation of the oil, but can also lead to serious mechanical wear in the system.

Air Conditioning

Standard air filters remove a certain amount of solid particle contamination from the air but allow water vapour, to pass through.

The STAUFF "Air conditioners" type SDB and SVDB ensure that incoming air is first dried and then filtered. The SDB and SVDB units should be used in conjunction with the OLS / BPS Systems in order to provide a more complete filtering system. See Hydraulic Accessories section of this catalog, pages E30 to E33 for more details.

Advantages

- Less malfunction
- Protection of expensive main stream filters
- Less frequent oil changes
- Extended Usable life of the oil
- Less machine downtimes

Characteristics

- A filter fineness of 0,5 micron $\beta_{0,5} \geq 200$, $\beta_2 \geq 2330$
- Large particle collection capacity
- High filtration capacity due to depth effect
- Large water adsorption capacity
- Do not adversely affect viscosity or additives
- Do not remove additives
- Reduce the oxidation process
- Reduce the forming of acids
- With two measuring points for particle counter or oil sampling
- Save Cost

Applications

- | | |
|---------------------|---------------------------------------|
| ▪ Mining | ▪ Presses |
| ▪ Harvesting | ▪ Automotive industry |
| ▪ Forestry | ▪ Timber plants |
| ▪ Agricultural | ▪ Plastic and rubber |
| ▪ Off-road | ▪ Metal industry |
| ▪ Fishing | ▪ Cement and concrete |
| ▪ Road construction | ▪ Material handling |
| ▪ Cranes | ▪ Bridges/Hydraulic locks/Water works |
| ▪ Airport equipment | ▪ Petrochemical industry |
| ▪ Flight simulators | ▪ Power stations |
| ▪ Pulp and paper | ▪ Marine |
| ▪ Food processing | ▪ Steel |

Off-Line Filters ■ Type OLS

Product Description

STAUFF Off-Line Filter Units can be applied to every imaginable industrial application where hydraulic or lubrication systems are present.

An integrated motor/pump unit draws fluid out of the tank, filters it and pumps clean oil back into the system. Off-Line Filter Units can continue to work even when the main system is not in use. The standard range offers filter units for reservoirs with a capacity of up to 10800 l / 2853 gal.

Over the years, STAUFF Systems have developed considerable experience in the hydraulic and lubrication market cleaning systems to levels not previously possible with conventional methods.

With its integrated motor/pump unit STAUFF OLS Filter Systems are specially designed for Off-Line filtration of a hydraulic main system. This allows continuous filtration of the fluid even when the main system has been shut down.

The OLS is available with one, two or four filter housings and in two different lengths. The maximum flow for the Off-Line Unit goes from 2,1 ... 17 l/min / .55 ... 4.5 US GPM at a viscosity between 20 ... 160 cSt. For the OLS you can choose several different motor/pump units, for more information please see page C156 (Order code).

All Off-Line Filter Systems are available with air driven motors.
These units are ideal for areas where electric power is unavailable
or for hazardous locations.

Single Length (see page C152 / C153)

OLS - 1A - 30 - H - B



OLS - 2A - 30 - H - B



OLS - 4A - 30 - H - B



Double Length (see page C154 / C155)

OLS - 1B - 30 - H - B



OLS - 2B - 30 - H - B

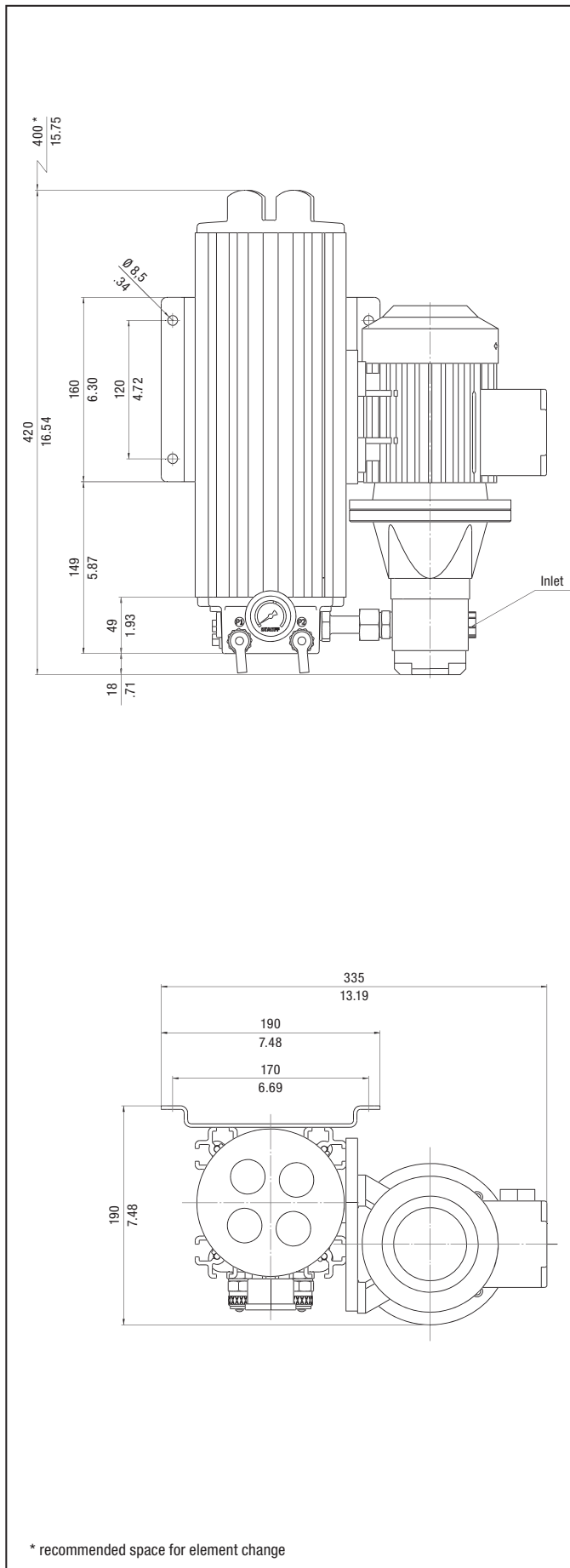


OLS - 4B - 30 - H - B

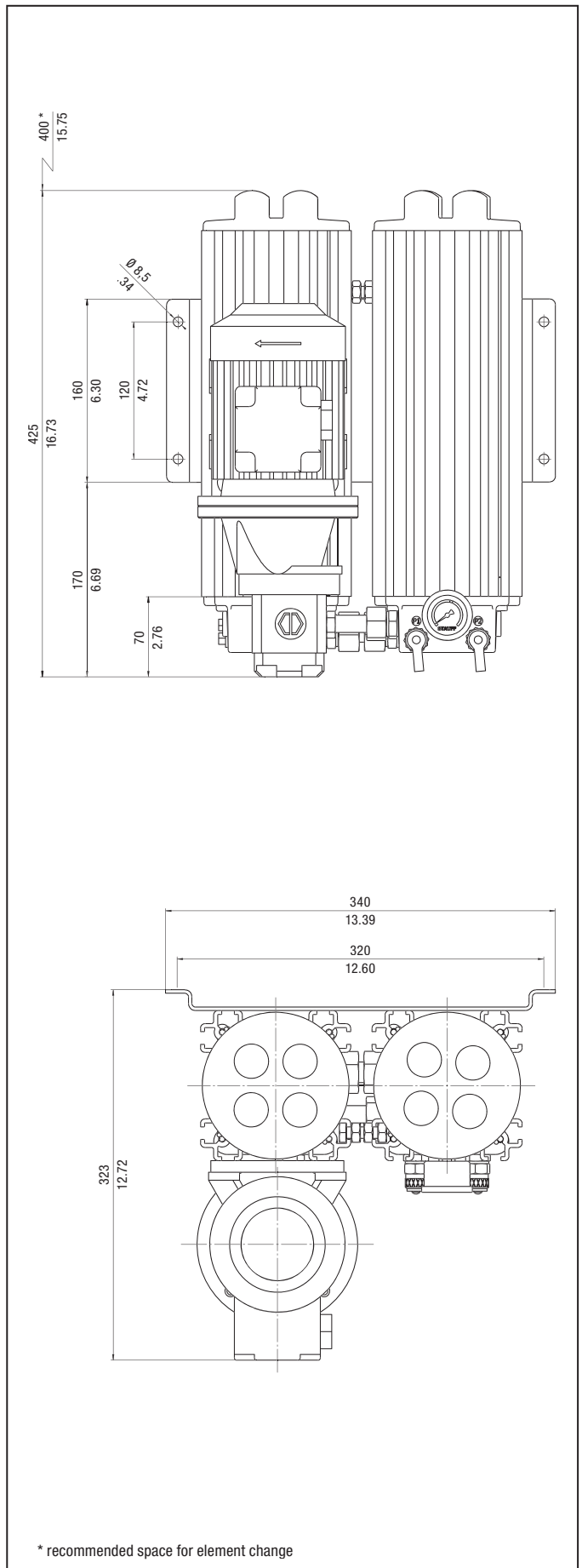


Off-Line Filters ■ Type OLS

Dimensions OLS - 1A - 30 - H - B



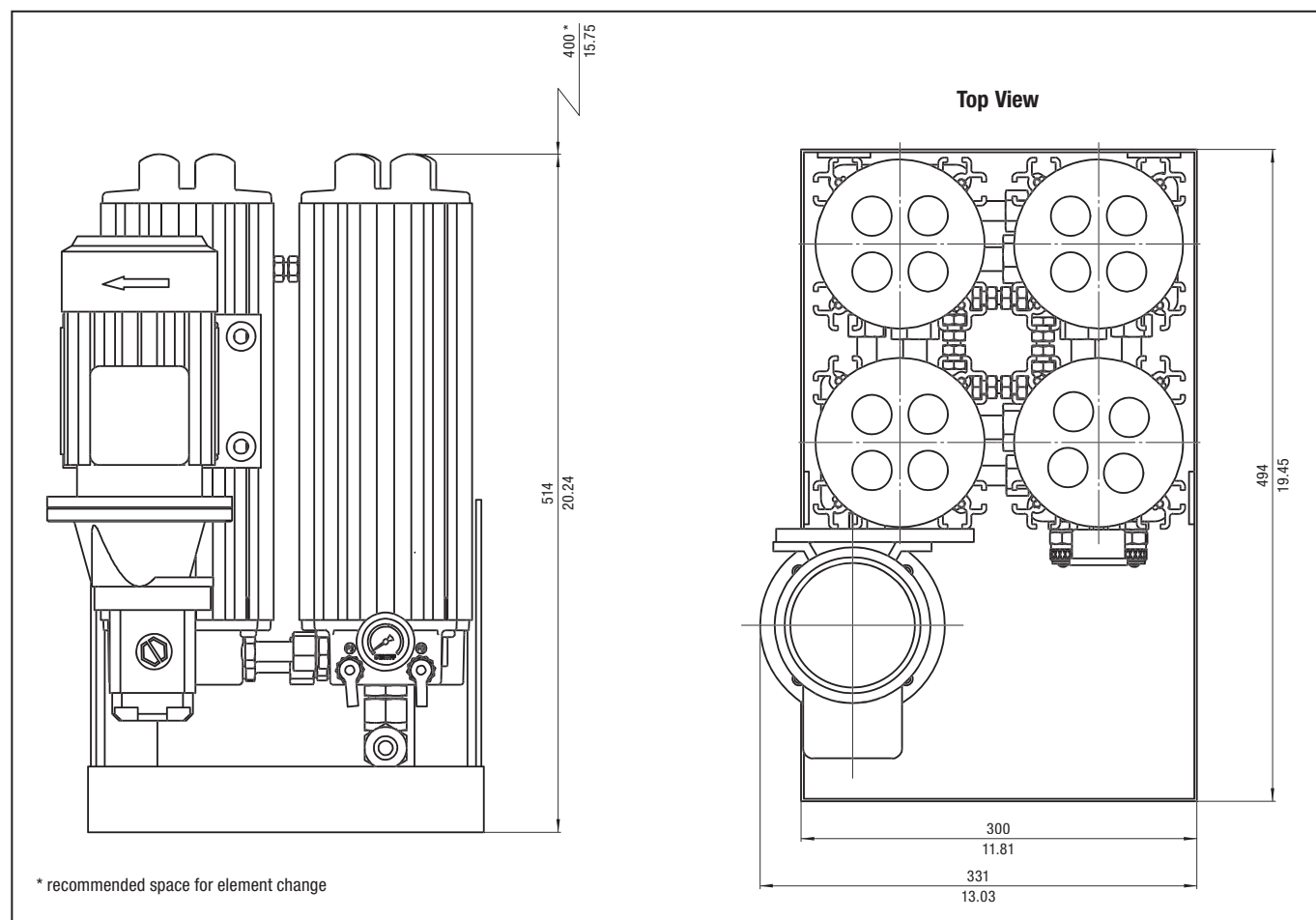
Dimensions OLS - 2A - 30 - H - B



All dimensions in mm / in

Off-Line Filters ■ Type OLS

Dimensions OLS - 4A - 30 - H - B



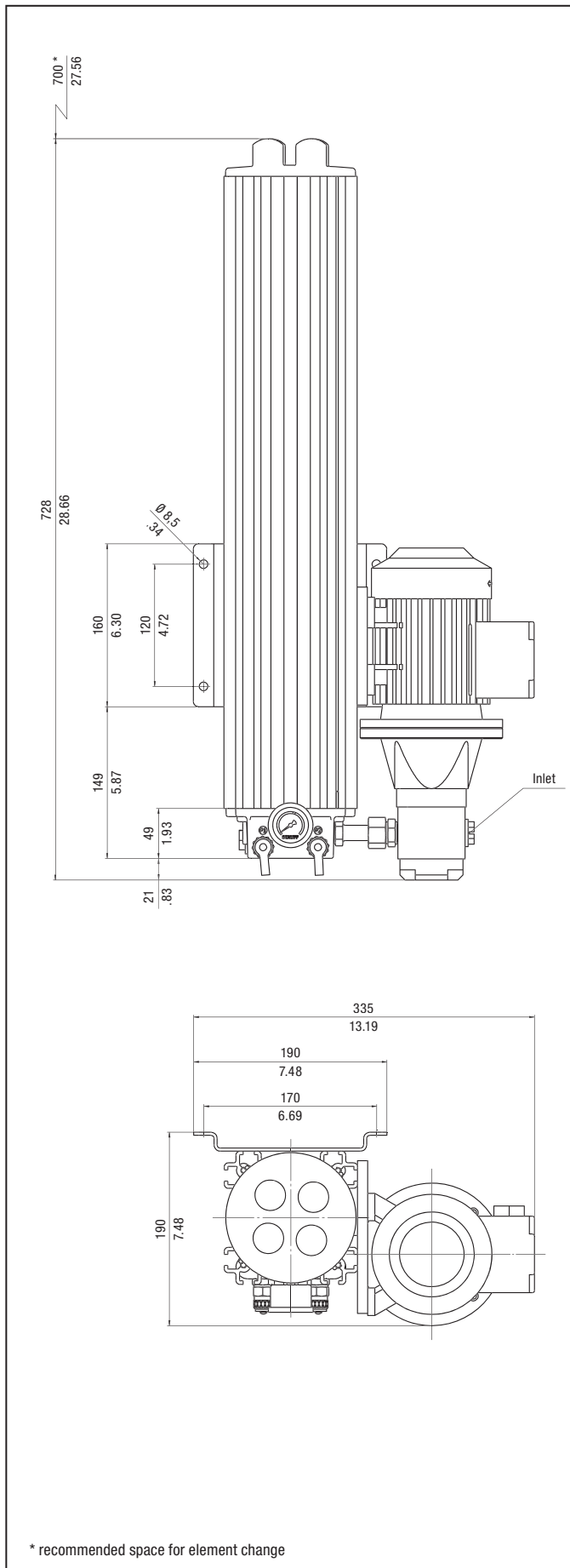
All dimensions in mm / in

Technical Data

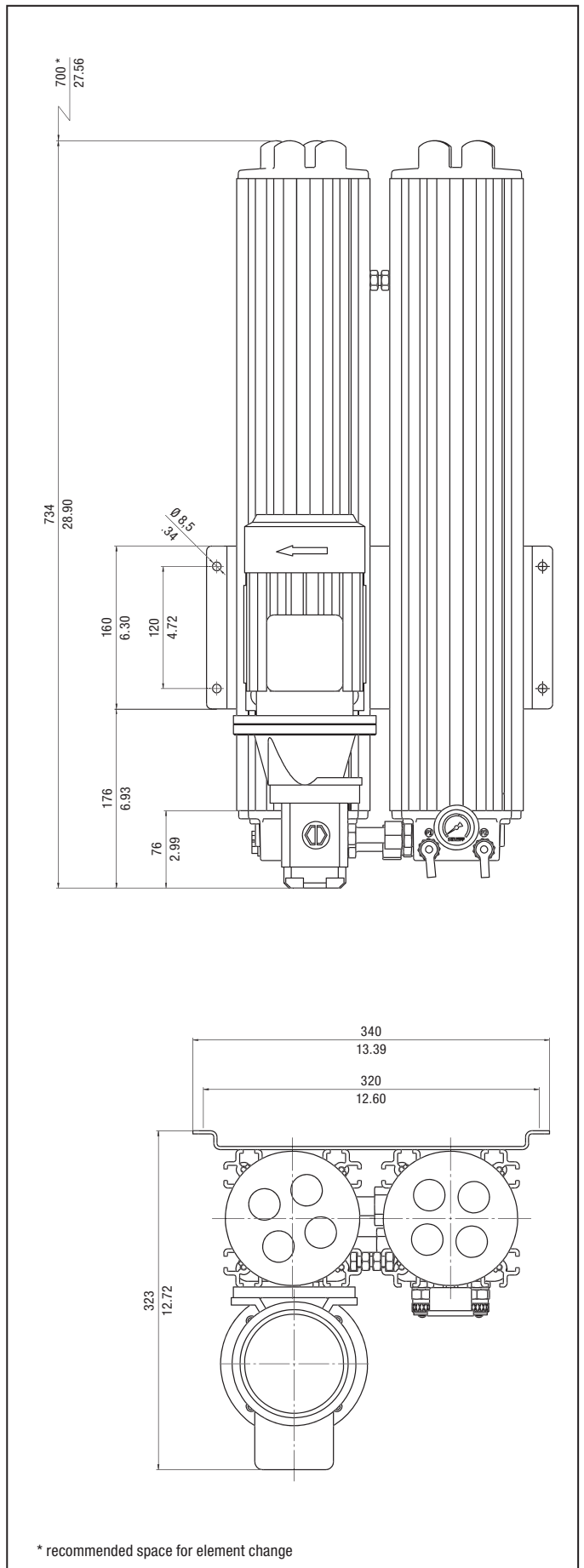
	OLS-1A-30-H-B	OLS-2A-30-H-B	OLS-4A-30-H-B
Number of Filter Housings	1	2	4
Nominal Flow	2,1 l/min .55 US GPM	4,2 l/min 1.1 US GPM	8,4 l/min 2.22 US GPM
Max. Differential Pressure	Max. 6,2 bar 90 PSI over the filter element without backpressure		
Max. Fluid Temperature	+80 °C +176 °F		
Max. Housing Pressure	20 bar 290 PSI		
Viscosity Range	20 ... 160 cSt 100 ... 750 SUS		
Connection Suction Side	G3/8	G1/2	
Connection Return Line Side	G1/2		EW 18L-3/4
Hose Diameter	1/2 in (inner diameter) flexible hose		3/4 in (inner diameter) flexible hose
Weight (Including Element)	14 kg 30.9 lbs	21 kg 46.3 lbs	39 kg 86 lbs
Max. System Volume	1350 l 356 gal	2700 l 713 gal	5400 l 1426 gal
Dimensions	420 x 335 x 190 mm	425 x 340 x 323 mm	514 x 494 x 331 mm
HxWxD	16.54 x 13.19 x 7.48 in	16.73 x 13.39 x 12.72 in	20.24 x 19.45 x 13.03 in
Connection for Online Particle Counter	STAUFF Test (M16 x 2)		
Pump	Gear pump		
Motor	See page C156 for electric motor details		

Off-Line Filters ■ Type OLS

Dimensions OLS - 1B - 30 - H - B



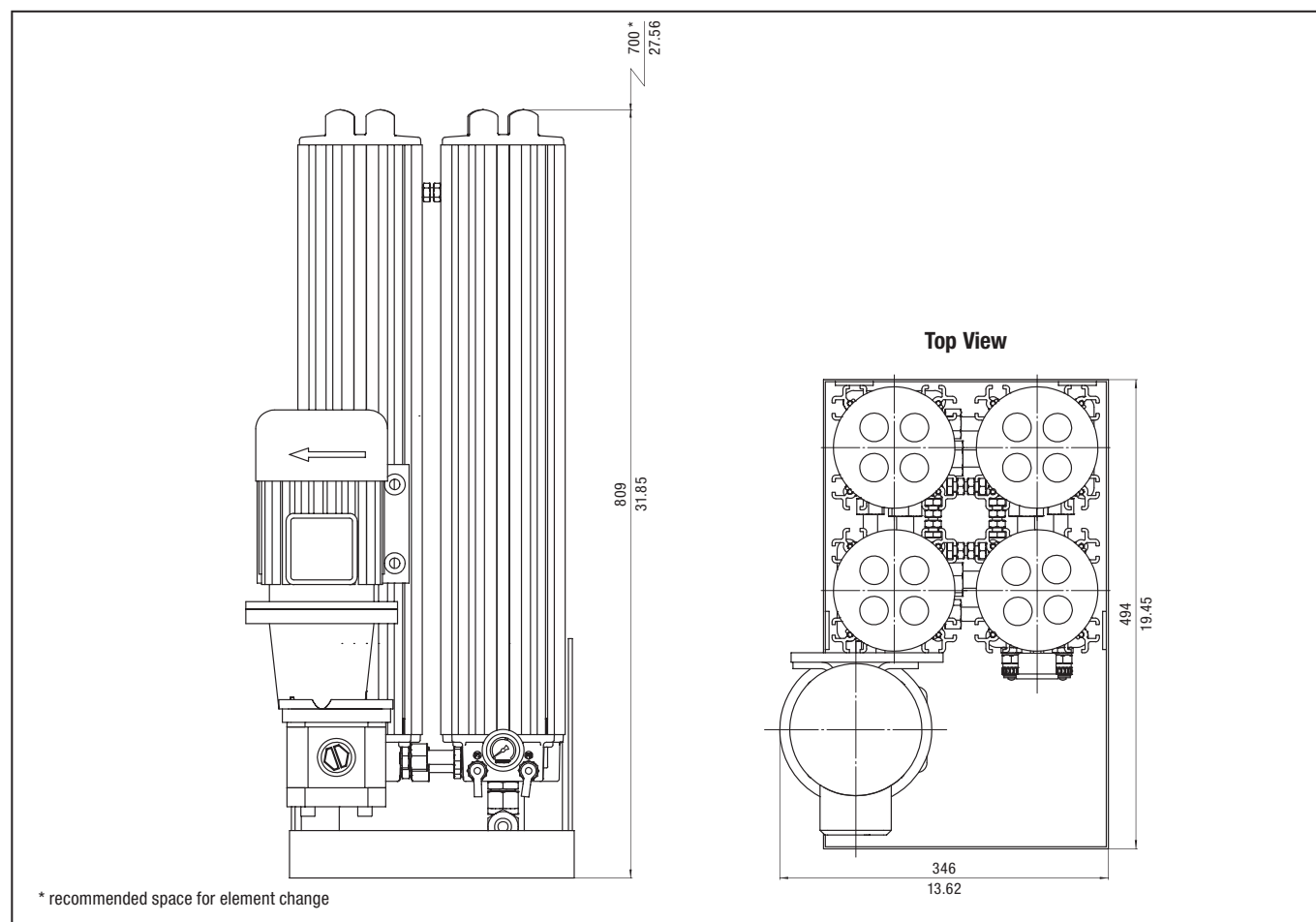
Dimensions OLS - 2B - 30 - H - B



All dimensions in mm / in

Off-Line Filters ■ Type OLS

Dimensions OLS - 4B - 30 - H - B



All dimensions in mm / in

Technical Data

	OLS-1B-30-H-B	OLS-2B-30-H-B	OLS-4B-30-H-B
Number of Filter Housings	1	2	4
Nominal Flow	4,2 l/min 1.1 US GPM	8,4 l/min 2.22 US GPM	17 l/min 4.5 US GPM
Max. Differential Pressure	Max. 6,2 bar 90 PSI over the filter element without backpressure		
Max. Fluid Temperature	+80 °C +176 °F		
Max. Housing Pressure	20 bar 290 PSI		
Viscosity Range	20 ... 160 cSt 100 ... 750 SUS		
Connection Suction Side	G1/2	G1/2	G3/4
Connection Return Line Side	G1/2		EW 18L-3/4 in
Hose Diameter	1/2 in (inner diameter) flexible hose		3/4 in (inner diameter) flexible hose
Weight (Including Element)	18 kg 39.7 lbs	30 kg 66.1 lbs	61 kg 134.5 lbs
Max. System Volume	2700 l 713 gal	5400 l 1426 gal	10800 l 2853 gal
Dimensions	728 x 335 x 190 mm	734 x 340 x 323 mm	809 x 494 x 346 mm
HxWxD	28.66 x 13.19 x 7.48 in	28.90 x 13.39 x 12.72 in	31.85 x 19.45 x 13.62 in
Connection for Online Particle Counter	STAUFF Test (M16 x 2)		
Pump	Gear pump		
Motor	See page C156 for electric motor details		

Off-Line Filter Housings / Complete Filters ■ Type OLS

OLS - 1A - 30 - H - B - 0 - 01 - 0 - 0

1 2 3 4 5 6 7 8 9

1 Type

Off-Line Filter Unit **OLS**
(for industrial applications)

2 Housing Configuration

Single Length	Max. Reservoir Size	Quantity of Elements	Code
Single housing	1350 l / 356 gal	1x1	1A
Twin housing	2700 l / 713 gal	2x1	2A
Quadruple housing	5400 l / 1426 gal	4x1	4A

Double Length	Max. Reservoir Size	Quantity of Elements	Code
Single housing	2700 l / 713 gal	1x2	1B
Twin housing	5400 l / 1426 gal	2x2	2B
Quadruple housing	10800 l / 2853 gal	4x2	4B

3 Filter Element Length

300 mm / 11.81 in **30**

4 Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

5 Sealing Material

NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

6 E-motor Options

Motor Type	Code
230/400 V AC, 50 Hz, three phases, 1360 r/min 255/460 V AC, 60 Hz, three phases, 1630 r/min (50 Hz and 60 Hz standard)	0
230 V AC, 50 Hz, single phase, 1360 r/min	A
24 V DC	B
110 V AC, 50 Hz, single phase	C
110 V AC, 60 Hz, single phase	D
230 V AC, 60 Hz, single phase, 1630 r/min	F

Note: Special motors on request.

7 Pump Options

50 Hz Motor	Standard in	Code
10 C 1,6X053G / 1,6 cc/rev.	OLS-1A	00
10 C 3,6X053G / 3,15 cc/rev.	OLS-2A/1B	10
10 C 6,1X053G / 6,1 cc/rev.	OLS-4A/2B	20
20 C 8,2X016G / 8,2 cc/rev.		30
20 C 11X016G / 11,3 cc/rev.	OLS-4B	40
MLPD/G 108C / 0,8 cc/rev.		50

60 Hz motor	Standard in	Code
10 C 1,25X053G / 1,25 cc/rev.	OLS-1A	01
10 C 2,5X053G / 2,5 cc/rev.	OLS-2A/1B	11
10 C 5X053G / 5,0 cc/rev.	OLS-4A/2B	21
20 C 6,3X016G / 6,3 cc/rev.		31
20 C 10X016G / 10 cc/rev.	OLS-4B	41

8 Clogging Indicator

Visual clogging indicator **0**

9 Mounting Options

No options (standard) **0**
Motor / pump right side mounted **1**
Motor / pump left side mounted **2**
Motor / pump horizontal front **3**

Filter Elements ■ Type SRM

SRM - 30 - H - B - 1

1 2 3 4 5

1 Type

Filter Element Series **SRM**

2 Group

Element length 300 mm / 11.81 in **30**

3 Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

4 Sealing Material

NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

5 Quantity

One piece filter element **1**
Box with 15 pieces filter element **15**

Technical Data on Electric Motors used for OLS Filters (For air driven motors contact STAUFF)

E-motor	Standard Configuration	Description	Power in kW	Power in HP	Voltage 50 Hz	Amp 50 Hz	RPM 50 Hz	Voltage 60 Hz	Amp 60 Hz	RPM 60 Hz
C, D	OLS-1A OLS-2A OLS-1B	M63 B3/B5 4P 110V MULTIVOLT	0,18	0.24	110 V AC	3,30		110 V AC	2,70	
A, F	OLS-1A OLS-2A OLS-1B	M63 B3/B5 4P 230 MULTIVOLT	0,18	0.24	230 V AC	1,57		230 V AC	1,34	
0	OLS-1A OLS-2A OLS-1B	M63 B3/B5 4P 3PH MULTIVOLT	0,18	0.24	230/400 V AC	1,03 / 0,60		254/440 V AC	0,90 / 0,52	
0	OLS-2B OLS-4A	M63 B3/B5 4P 3PH MULTIVOLT	0,29	0.39	230/400 V AC	1,65 / 0,95	1460	254/440 V AC	1,47 / 0,85	1740
C, D	OLS-2B OLS-4A OLS-4B	M71 B3/B5 4P 110V MULTIVOLT	0,37	0.50	110 V AC	6,10		110 V AC	5,20	
A, F	OLS-2B OLS-4A OLS-4B	M71 B3/B5 4P 230V MULTIVOLT	0,37	0.50	230 V AC	3,00		230 V AC	2,65	
0	OLS-4B	M71 B3/B5 4P 3PH MULTIVOLT	0,37	0.50	230/400 V AC	1,90 / 1,10		254/440 V AC	1,60 / 0,93	

Water Absorbing Off-Line Filter ■ Type OLSW

Product Description

STAUFF Systems Units are characterized by their extremely efficient filter elements which are rated to 0,5 micron. Specially designed for industrial hydraulic installations the STAUFF Off-Line Filters are available in single or double length configurations. The Off-Line Filter Units can easily be mounted to new and existing hydraulic installations. By means of an integrated motor/pump unit and an Off-Line Filter, the oil is pumped from the reservoir through the filter unit and after filtering the oil is then returned to the tank.

Economical

The hydraulic market accepts that 70 % of mechanical failures are caused by contamination in the system. The STAUFF Water Absorbing Off-Line Filters attack this contamination at source and in addition to solid particles, these filters are also capable of removing large quantities of water from the oil. This prevents the catalytic reaction of water and solid particle contamination, resulting in extended useable oil life.

The application of STAUFF Filters results in lower component failure rates, less down time and less system maintenance.

Water Absorbing

STAUFF Water Absorbing Filters are Off-Line Units that use special water absorbing Spin-On Filter Elements as a pre-filter. The fluid is pumped through the pre-filter which removes most water and larger solid contamination, in the second stage the fluid passes through the STAUFF Micro Filter where final water removal takes place as well as solid removal down to 0,5 micron.

In recent years STAUFF Systems have developed a great deal of experience in cleaning and drying hydraulic and lubrication systems in the following markets:

- Steel industry
- Maritime industry
- Petrochemical industry
- Paper industry

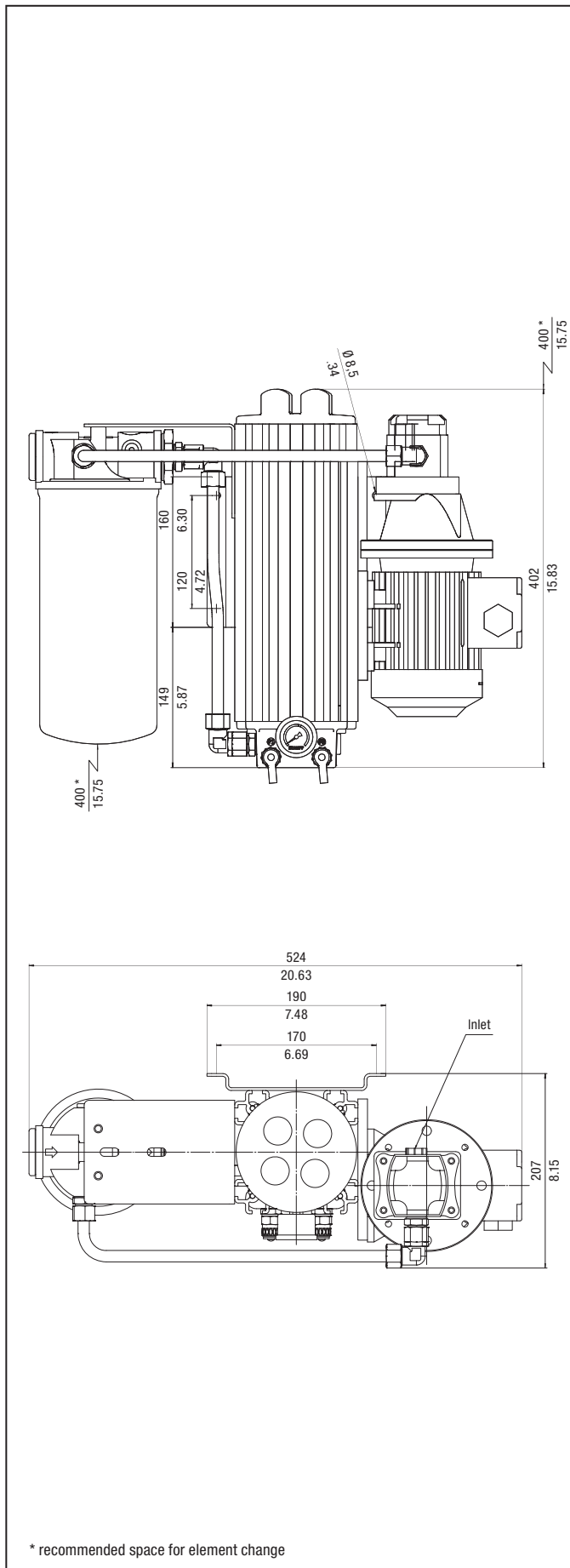
Advantages

- Extremely clean oil due to the high filtration efficiency $\beta_2 > 2330$
- Prevention of channel forming by radial filtration direction
- Increased flow capacity
- Increased dirt-hold capacity
- Large water holding capacity
- Compact and easy-maintenance design
- Longer usage life for oil and components

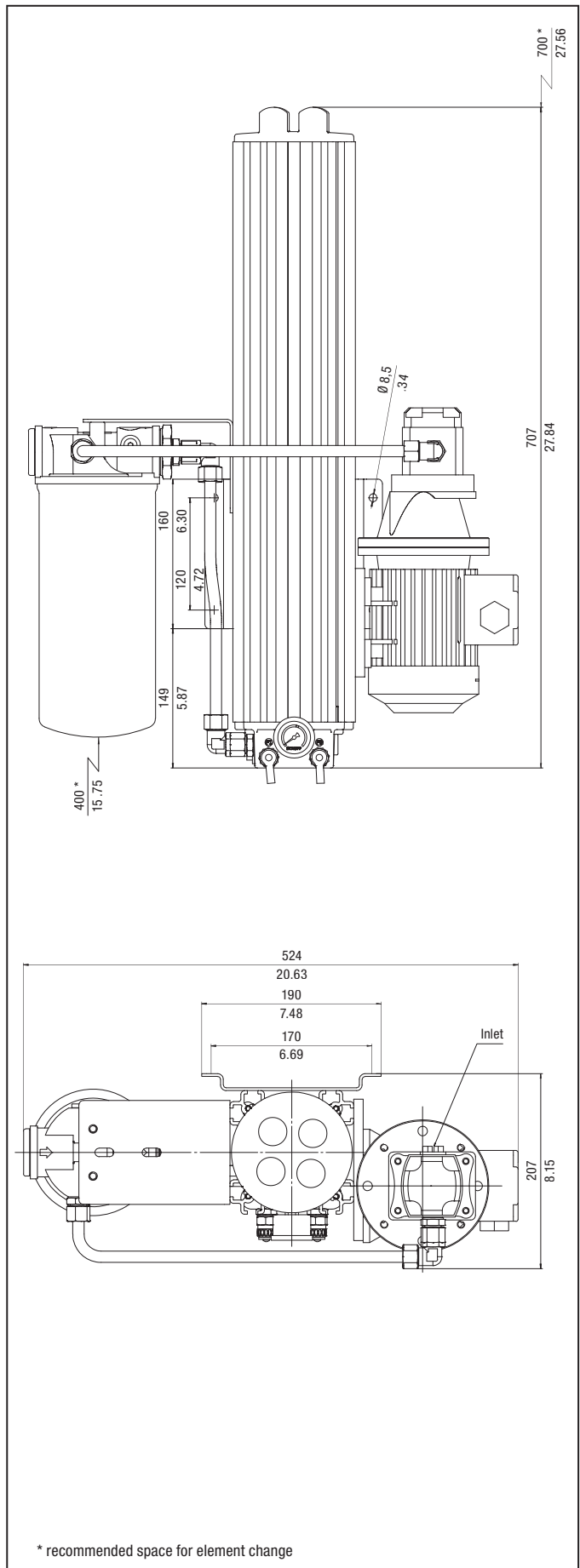


Water Absorbing Off-Line Filter - Type OLSW

Dimensions OLSW - 1A - 30



Dimensions OLSW - 1B - 30



All dimensions in mm / in

Water Absorbing Off-Line Filter ■ Type OLSW

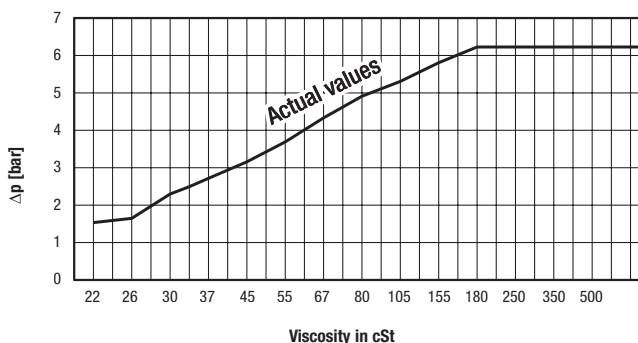
Technical Data OLSW

Type Filter	OLSW - 1A - 30 - H - B	OLSW - 1B - 30 - H - B
Number of Filter Housings	1	1
Material Filter Housings	Anodized Aluminum	
Sealing Material	Buna-N® (standard)	
Nominal Flow	2,1 l/min .6 US GPM	4,2 l/min 1.1 US GPM
Bypass Opening Pressure	6,2 bar 90 PSI over the filter element without backpressure	6,2 bar 90 PSI over the filter element without backpressure
Number of Standard Filter Elements	1 pcs.	2 pcs.
Number of Pre-Filter Elements	1 pcs.	1 pcs.
Water Absorbing Capacity	650 ml 22 oz.	800 ml 27 oz.
Max. Pressure Filter Housing	20 bar 290 PSI	
Max. Oil Temperature	+80 °C +176 °F	
Max. Viscosity	20 ... 160 cSt 100 ... 750 SUS	
Indicator Type	Visual clogging indicator	
Connection Pump Suction	G1/2 female	G1/2 female
Diameter Hose Suction Side	1/2 in	
Filter Return Connection	G1/2 female	
Diameter Hose Return Side	1/2 in	
Dimensions	402 x 524 x 207 mm	707 x 524 x 207 mm
H x B x L	15.83 x 20.63 x 8.15 in	27.84 x 20.63 x 8.15 in
Pump type	Gear pump	
Power Supply E-Motor	Various electrical power supplies possible	
Weight (including Element)	18 kg 39.7 lbs	22 kg 48.5 lbs
Max. System Volume	1350 liter 356 gal	2700 liter 713 gal
Standard Units for larger system volumes are also available		
Connection Oil-Analysis:		
P1 filter inlet side	Test connector (M16 x 2) Red	
P2 filter outlet side	Test connector (M16 x 2) Red	



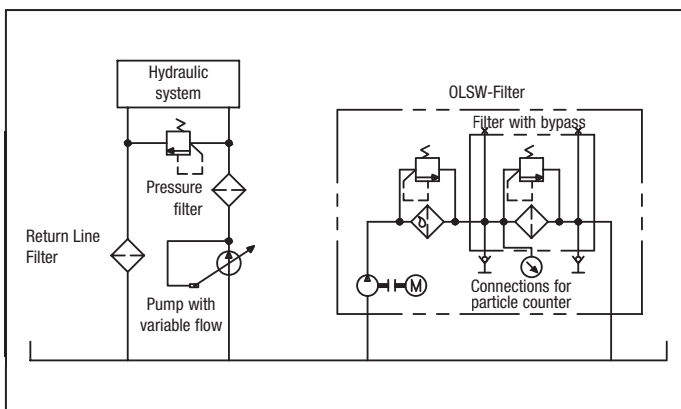
Water absorbing spin-on filter element

Δp / Viscosity for OLSW-Filter



System Example

Schematic Off-Line Filtration incl. Water Absorption



Water Absorbing Off-Line Filter Housings / Complete Filters ■ Type OLSW

OLSW - 1A - 30 - H - B - 0 - 01 - 0 - 0 - A

1 2 3 4 5 6 7 8 9 10

1 Type

Off-Line Filter Unit incl. water absorption **OLSW**
(for industrial applications)

2 Housing Configuration

Length	Suitable for Reservoir Size	Quantity of Elements Standard	Pre-filter	Code
Single housing Single length	1350 l / 356 gal	1x1 pcs	1 pcs	1A
Single housing Double length	2700 l / 713 gal	1x2 pcs	1 pcs	1B

3 Filter Element Length

300 mm / 11.81 in **30**

4 Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

5 Sealing Material

NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

6 E-motor Options

Motor Type	Code
230/400 V AC, 50 Hz, three phases, 1360 r/min 255/460 V AC, 60 Hz, three phases, 1630 r/min (50 Hz and 60 Hz standard)	0
230 V AC, 50 Hz, single phase, 1360 r/min	A
24 V DC	B
110 V AC, 50 Hz, single phase	C
110 V AC, 60 Hz, single phase	D

Note: Other motors on request, technical data see page C156.

7 50 Hz Motor

	Standard in	Code
10C1,6X053G / 1,6 cc/rev.		00
10C3,6X053G / 3,15 cc/rev.		10
MLPD/G 108C / 0,8 cc/rev.		50

60 Hz Motor

	Standard in	Code
10C1,25X053G / 1,25 cc/rev.	OLSW-1A	01
10C2,5X053G / 2,5 cc/rev.	OLSW-1B	11

8 Clogging Indicator

Visual clogging indicator **0**

9 Mounting Options

No options (standard) **0**

10 Pre-Filter Elements

Water absorption element	
SF6721-W (10 micron water absorbing, capacity 540 ml water)	A
Pre-filter elements (particles)	
without pre-filter element	0
SF6702-MG (inorganic glass fibre, 1 micron)	B
SF6704-MG (inorganic glass fibre, 3 micron)	C
SF6707-MG (inorganic glass fibre, 6 micron)	D
SF6731-MG (inorganic glass fibre, 12 micron)	E
SF6726-MG (inorganic glass fibre, 25 micron)	F
SF6721 (filter paper, 10 micron)	G
SF6711 (filter paper, 25 micron)	H
SF6791 (wire mesh, 125 micron)	J

Filter Elements ■ Type SRM

SRM - 30 - H - B - 1

1 2 3 4 5

1 Type

Filter Element Series **SRM**

2 Group

Element length 300 mm / 11.81 in **30**

3 Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

4 Sealing Material

NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

5 Quantity

One piece filter element **1**
Box with 15 pieces filter element **15**

Pre-Filter Elements ■ Type SF67

SF6721 - W

1

1 Pre-Filter Elements

SF6721-W	Spin-on filter element, water absorbing, 10 micron
SF6702-MG	Spin-on filter element, inorganic glass fibre, 1 micron
SF6704-MG	Spin-on filter element, inorganic glass fibre, 3 micron
SF6707-MG	Spin-on filter element, inorganic glass fibre, 6 micron
SF6731-MG	Spin-on filter element, inorganic glass fibre, 12 micron
SF6726-MG	Spin-on filter element, inorganic glass fibre, 25 micron
SF6721	Spin-on filter element, filter paper, 10 micron
SF6711	Spin-on filter element, filter paper, 25 micron
SF6791	Spin-on filter element, wire mesh, 125 micron

Heated Off-Line Filters ■ Type OLSH

Product Description

STAUFF System Units are characterized by their pre-heating unit and extremely efficient filter elements with a fineness of 0,5 micron.

Specially designed for industrial hydraulic installations, the STAUFF Off-Line Filters are available in single or multiple housing configurations. The Off-Line Filter Units can easily be mounted to new and existing hydraulic installations.

By means of an integrated motor/pump unit and an Off-Line Filter, the oil is pumped from the reservoir through the filter unit and after filtering the oil is then returned to the tank.

Economical

The hydraulic market accepts that 70 % of the mechanical failures are caused by contamination in the system. The STAUFF Off-Line Filters attack this contamination at the source. In addition to solid particles, these filters are also capable of removing water from the oil. This prevents the catalytic reaction of water and solid particle contamination, resulting in extended usable life.

The application of STAUFF Filters results in lower component failure rates, less down time and less system maintenance.

In recent years STAUFF Systems have developed a great deal of experience in cleaning and drying hydraulic and lubrication systems in the following markets:

- Steel industry
- Maritime industry
- Petrochemical industry
- Paper industry

Heated Off-Line Filters

The electric pre-heating ensures that the cold and/or high viscosity fluid is brought to a temperature with a suitable filtration viscosity. Off-Line Filters with pre-heating can be applied to new or existing installations. The integrated pump-motor combination draws fluid from the reservoir, pumps it through a heating element, filters the fluid and returns it to the reservoir.

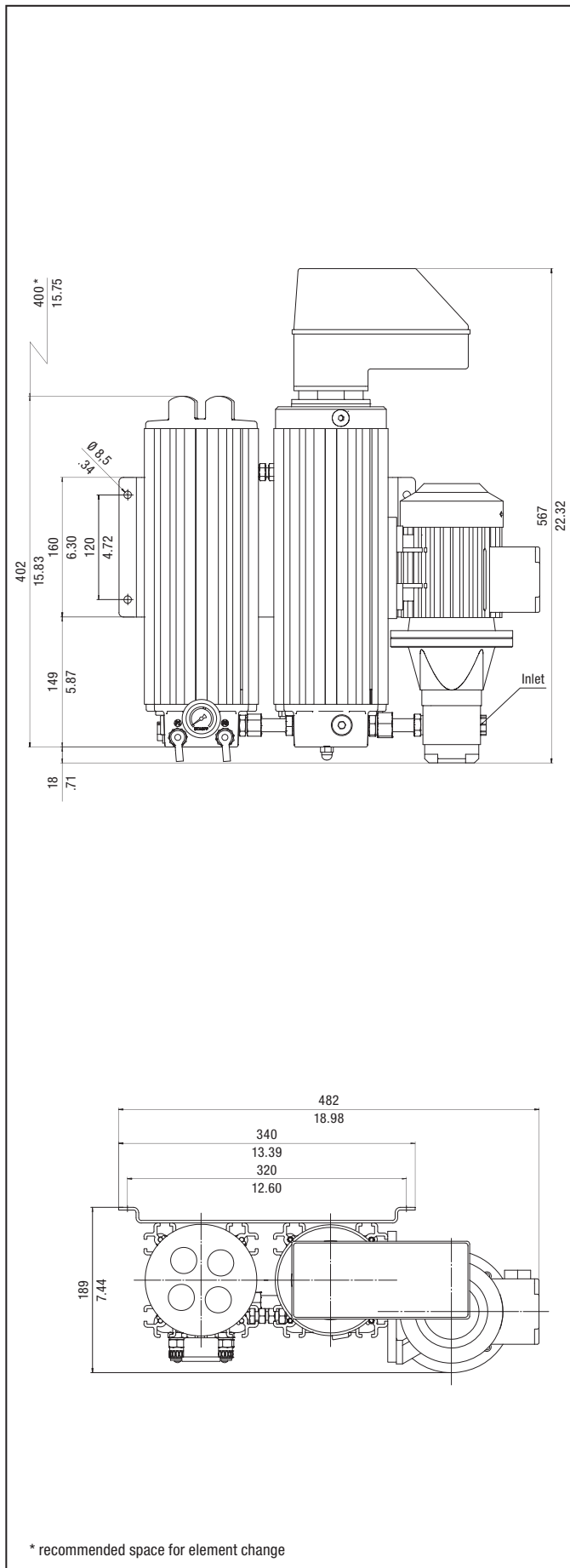
Advantages

- Extremely clean oil due to the high filtration efficiency $\beta_{0,5} \geq 200$, $\beta_2 \geq 2330$
- Prevention of channel forming by radial filtration direction
- Increased flow capacity
- Increased dirt holding capacity
- Large water holding capacity
- Compact and easy maintenance design
- Longer usage life for oil and components

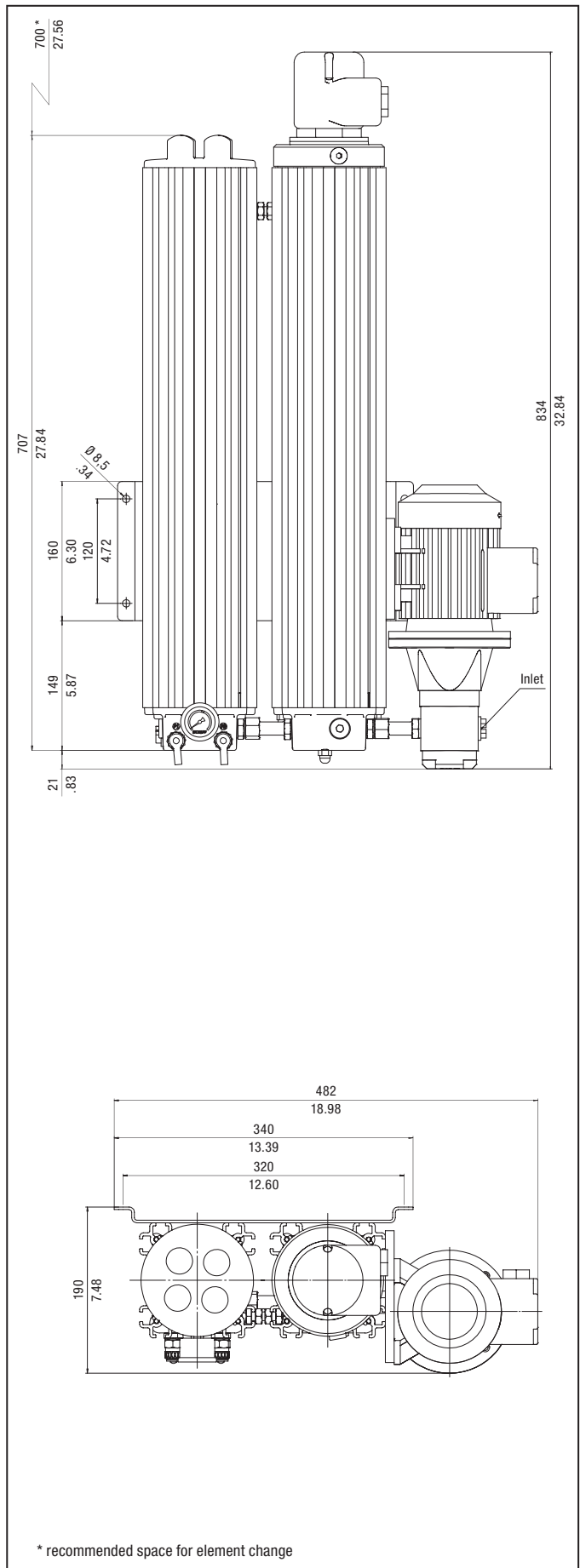


Heated Off-Line Filters ■ Type OLSH

Dimensions OLSH - 1A



Dimensions OLSH - 1B



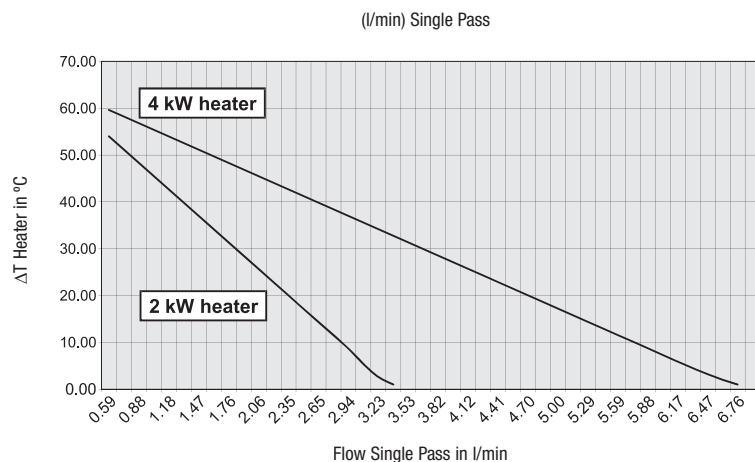
All dimensions in mm / in

Heated Off-Line Filters ▪ Type OLSH

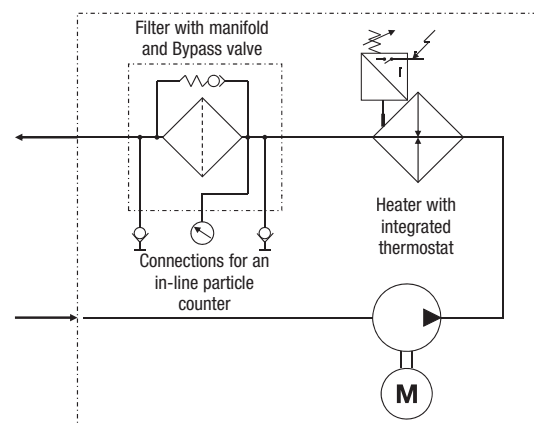
Technical Data Heated Off-Line Filters

	OLSH - 1A - 30	OLSH - 1B - 30
Number of Filter Housings	1	1
Nominal Flow Rate	2,1 l/min .6 US GPM	4,2 l/min 1.2 US GPM
Max. Differential Pressure	Max. 6,2 290 PSI over the filter element without back pressure	
Max. Fluid Temperature	+80 °C +176 °F	
Max. Housing Pressure	20 bar 290 PSI	
Heater Capacity	2 kW	
Connection Suction Side	G3/8	
Connection Return Side	G1/2	
Hose Diameter	1/2 in ... 3/4 in (inner diameter) flexible hose	
Weight (including Element)	24 kg 44 lbs	28 kg 62 lbs
Max. System Volume	1350 l 356 gal	2700 l 713 gal
Dimensions	567 x 482 x 189 mm	834 x 482 x 190 mm
H x W x D	22.32 x 18.98 x 7.44 in	32.84 x 18.98 x 7.48 in
Connection for On-Line Particle Counter	STAUFF Test (M16 x 2)	STAUFF Test (M16 x 2)
Pump	Gear Pump	
Motor	See page C164 for electric motor details	

STAUFF Heating Efficiency Curve



Heated Unit Hydraulic Schematic



Heated Off-Line Filter Housings / Complete Filters ▪ Type OLSH

OLSH - 1A - 30 - H - B - 0 - 00 - 0 - 0

1 2 3 4 5 6 7 8 9

1 Type

Heated Off-Line Filter Unit (for industrial applications) **OLSH**

2 Housing Configuration

Length	Suitable for Reservoir Size	Quantity of Elements	Code
Single housing Single length	1350 l / 356 gal	1 pcs	1A
Single housing Double length	2700 l / 713 gal	2 pcs	1B

3 Filter Element Length

300 mm / 11.81 in **30**

4 Filter Material

Material	Micron Rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

5 Sealing Material

NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

6 E-Motor Options

Type	Code
230/400 V AC, 50 Hz, three phases, 1360 r/min 255/460 V AC, 60 Hz, three phases, 1630 r/min (50 Hz and 60 Hz standard)	0
230 V AC, 50 Hz, single phase	A
230/400 V AC, 50 Hz, three phases, IP65	E
230 V AC, 60 Hz, single phase, 1630 r/min	F

Note: Other motors on request, technical data see page C156.

7 Pump Options

Standard for 50 Hz Motor	Standard for	Code
10 C 1,6X053G / 1,6 cc/rev.	OLSH-1A	00
10 C 3,6X053G / 3,15 cc/rev.	OLSH-1B	10
1.0 cc / rev.		60

60 Hz Motor	Standard in	Code
10 C 1,25X053G / 1,25 cc / rev.	OLSH-1A	01
10 C 2,5X053G / 2,5 cc / rev.	OLSH-1B	11

8 Clogging Indicator

Visual clogging indicator **0**
With water sensor **1**

9 Mounting Options

No options (standard) **0**

Filter Elements ▪ Type SRM

SRM - 30 - H - B - 1

1 2 3 4 5

1 Type

Filter Element Series **SRM**

2 Group

Element length 300 mm / 11.81 in **30**

3 Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

4 Sealing Material

NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

5 Quantity

One piece filter element **1**
Box with 15 pieces filter element **15**

Bypass Filters ■ Type BPS

Product Description

STAUFF BPS Bypass Filter can be used for OEM first fit applications as well as for retro-fitting. The filtration is done in a bypass configuration from the main hydraulic system. The STAUFF BPS Filter Systems are available with one filter housing (BPS-1A, maximum flow 2,1 l/min / .6 US GPM) or with two filter housings (BPS-2A, maximum flow 4,2 l/min / 1.1 US GPM) at a viscosity between 20 ... 160 cSt / 100 ... 750 SUS.

The STAUFF Bypass Filter Units are especially designed for mobile applications in hydraulic and/or transmission systems.

In the absence of a pumped system, the oil is drawn from the main system by means of a specially designed and integrated flow valve. The amount of oil extracted at any one time is insignificant therefore ensuring that it will not affect the working of the main system.

Most commonly used biodegradable oils in the mobile sector are suitable for filtration with STAUFF Filter Elements.

STAUFF Systems have been applied on a wide range of mobile hydraulic machinery, cleaning fluids to levels not previously possible with conventional filtration methods, resulting in dramatic increases in component life.

Successful applications include:

- Excavators
- Wheel loaders
- Forestry machines
- Asphaltting machines
- Cement mixers
- Aircraft ground support machinery
- Agricultural machines



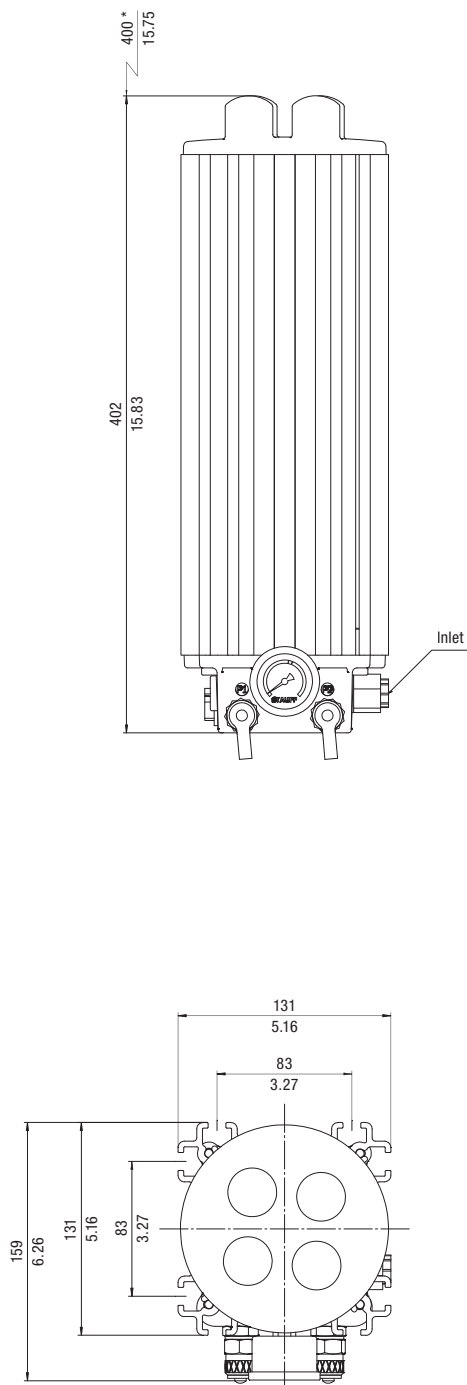
BPS - 1A - 30 - H - B



BPS - 2A - 30 - H - B

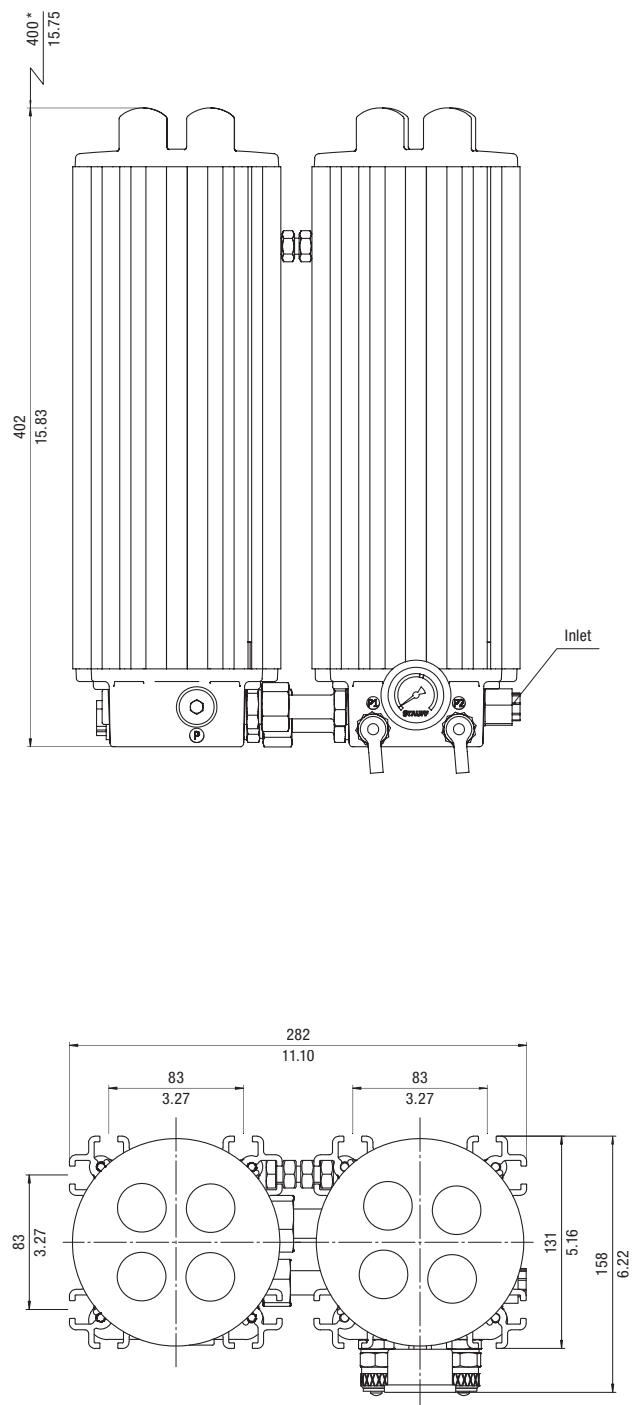
Bypass Filters ■ Type BPS

Dimensions BPS - 1A - 30 - H - B



* recommended space for element change

Dimensions BPS - 2A - 30 - H - B



* recommended space for element change

All dimensions in mm / in

Bypass Filters ■ Type BPS

Technical Data BPS

	BPS - 1A - 30 - H - B	BPS - 2A - 30 - H - B
Number of Filter Housings	1	2
Nominal Flow	2,1 l/min .6 US GPM	4,2 l/min 1.1 US GPM
Max. Differential Pressure	Max. 6,2 90 PSI over the filter element without back pressure	
Max. Fluid Temperature	+80 °C +176 °F	
Max. Housing Pressure	20 bar 290 PSI	
Range of Viscosity	20 ... 160 cSt 100 ... 750 SUS	
Connection Pressure Side	G1/4	
Connection Return Line Side	G1/2	
Hose Diameter	3/8 ... 1/2 in (inner diameter) flexible hose	
Weight	6 kg 13.2 lbs	13 kg 28.7 lbs
Max. Volume of Tank	750 l 200 gal	1500 l 400 gal
Dimensions	402 x 131 x 159 mm	402 x 282 x 158 mm
H x W x D	15.83 x 5.16 x 6.26 in	15.83 x 11.10 x 6.22 in
Connection for On-Line Particle Counter	STAUFF Test (M16 x 2)	
Pressure Range	12 ... 420 bar 180 ... 6200 PSI	

Bypass Filter Housings / Complete Filters ■ Type BPS

BPS - 1A - 30 - H - B - 0 - 0 - 0

1 2 3 4 5 6 7 8

1 Type

Bypass Filter Unit
(for mobile applications) **BPS**

2 Housing Configuration

Length	Suitable for Reservoir Size	Number of Elements	Code
Single housing	750 l / 198 gal	1x1 pcs	1A
Twin housing	1500 l / 396 gal	2x1 pcs	2A

3 Filter Element Length

300 mm / 11.81 in **30**

4 Filter Material and Micron Rating

Material	Micron Rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

5 Sealing Material

NBR (Buna-N®) (standard)	B
FPM (Viton®)	V

6 Clogging Indicator

Visual clogging indicator **0**

7 Valve Options

With flow control valve (standard) **0**
Without flow control valve **1**

8 Mounting Options

No bracket (standard) **0**
With standard foot / bulk head mounting bracket **1**
With "bulk head mounting only" bracket **2**
With standard 'OLS' wall mounting bracket **3**

Note: For details see page C168

Filter Elements ■ Type SRM

SRM - 30 - H - B - 1

1 2 3 4 5

1 Type

Filter Element Series **SRM**

2 Group

Element length 300 mm / 11.81 in **30**

3 Filter Material and Micron Rating

Material	Micron Rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

4 Sealing Material

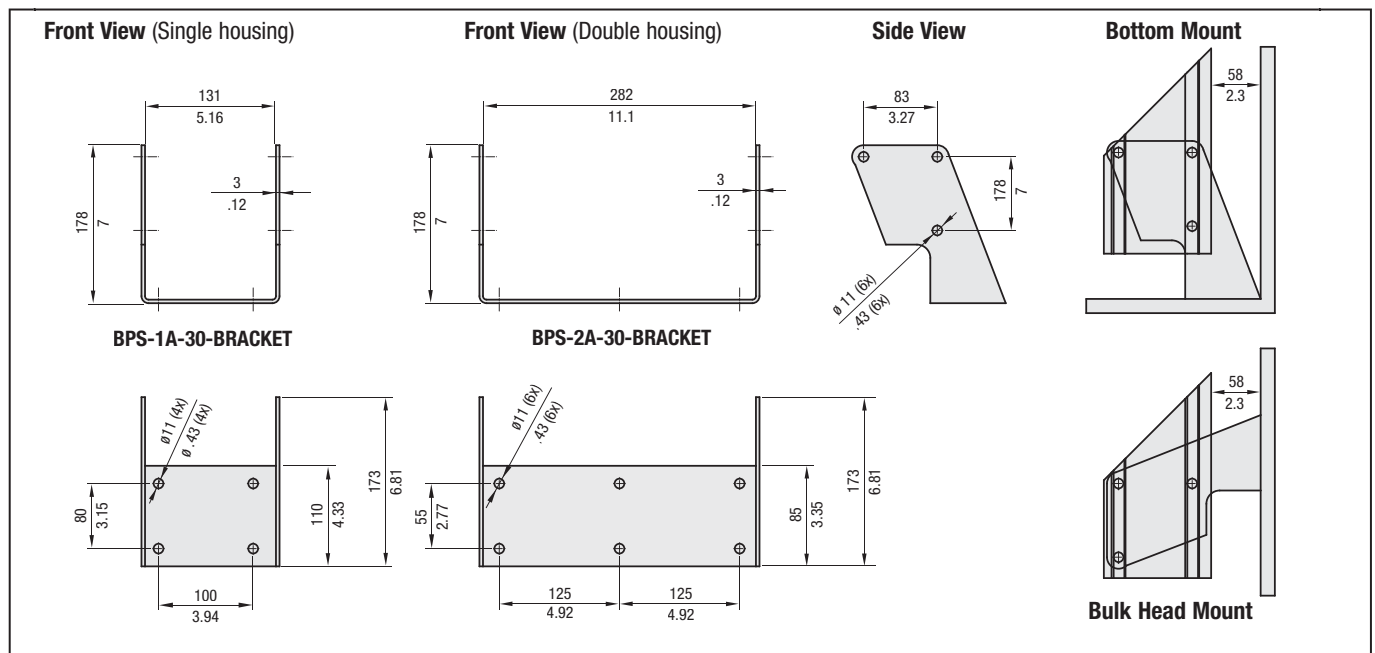
NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

5 Quantity

One piece filter element **1**
Box with 15 pieces filter element **15**

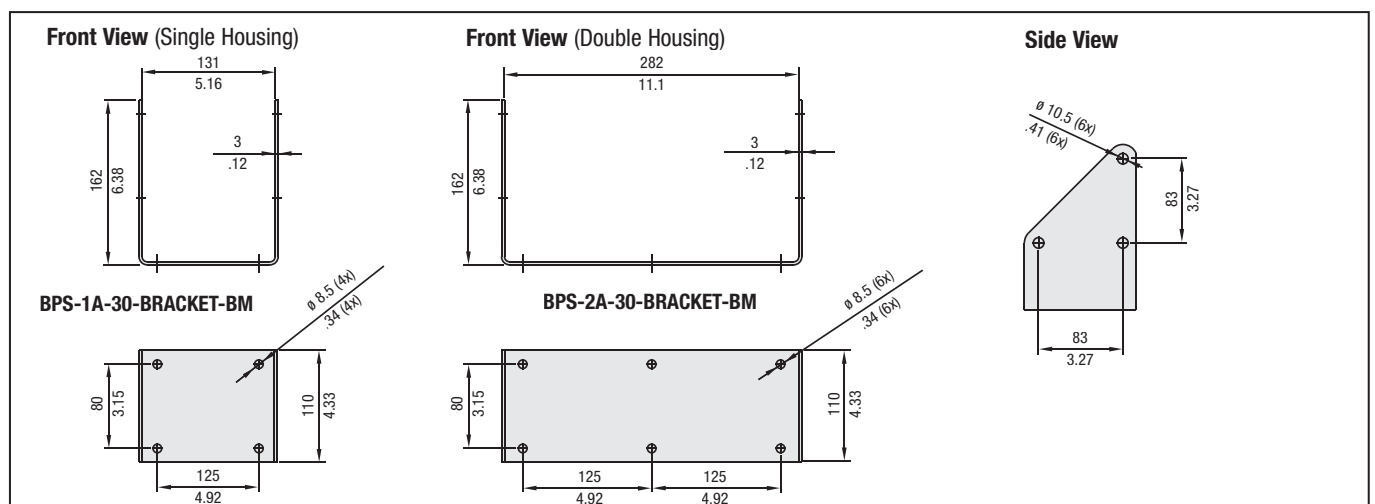
Bypass Filters • Type BPS

With Standard Foot / Bulk Head Mounting Bracket (Code 1)



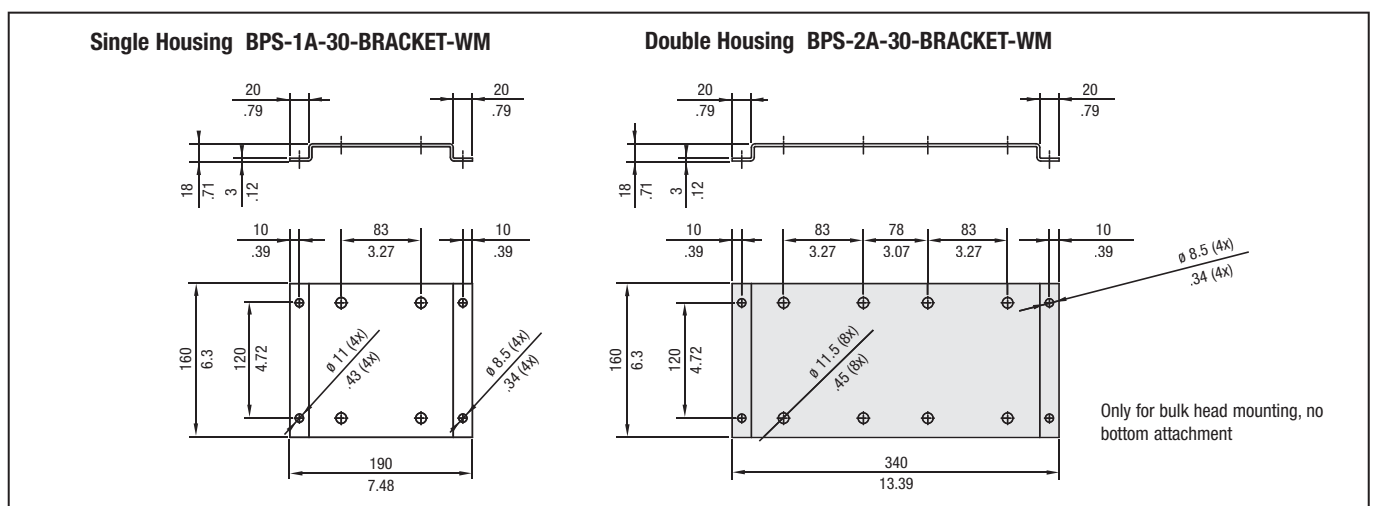
All dimensions in mm / in

With "Bulk Head Mounting Only" Bracket (Code 2)



All dimensions in mm / in

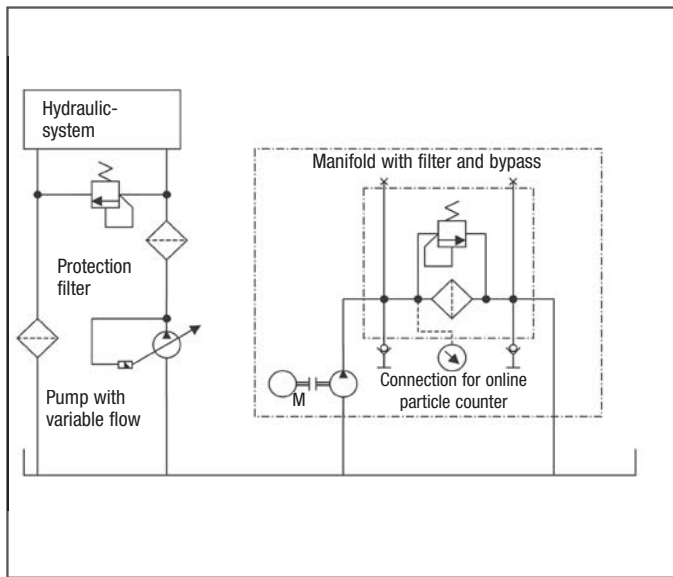
Standard "OLS" Wall Mounting Bracket (Code 3)



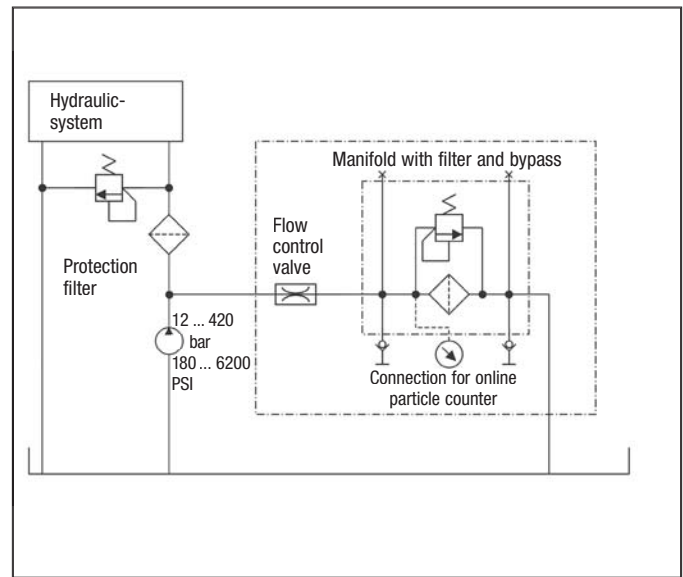
All dimensions in mm / in

Bypass and Off-Line Filters ■ Type OLS / BPS

Off-Line Filter OLS Hydraulic Symbol

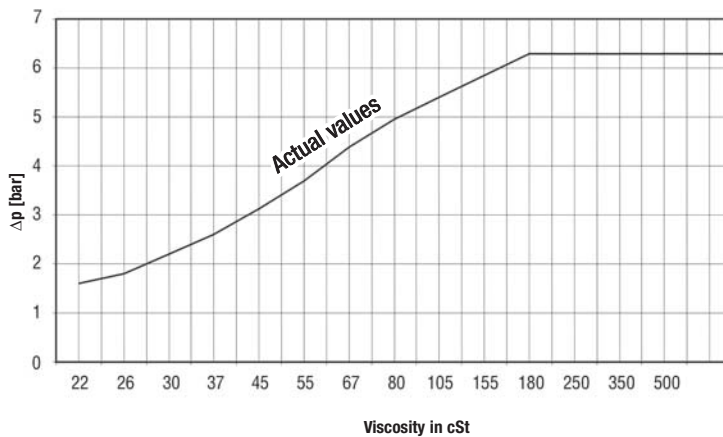


Bypass Filter BPS Hydraulic Symbol

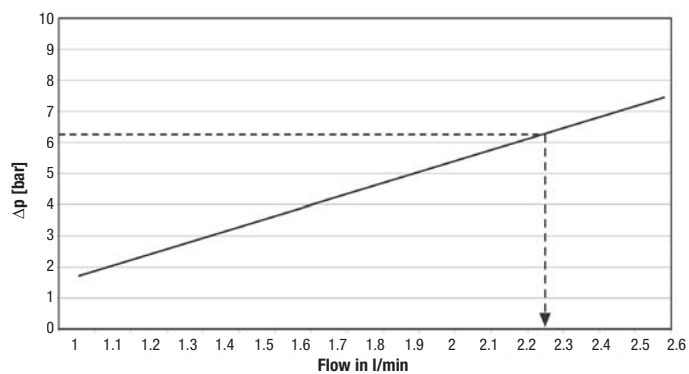


Filter Element SRM-30HB Δp / viscosity - graph

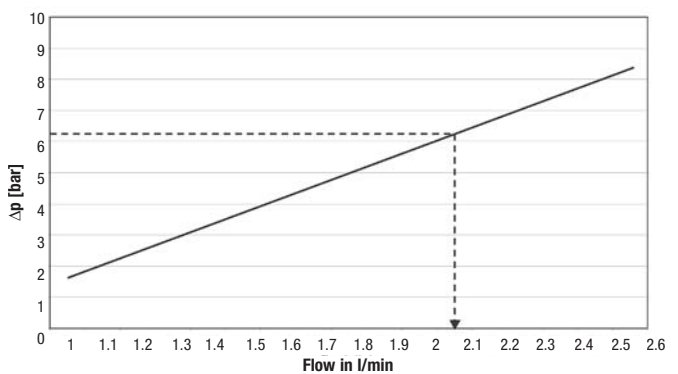
(at a flow of 2,1 l/min / .6 US GPM per element)



Flow Characteristics Off-Line Filter OLS with Filter Element SRM-30HB (at maximum viscosity)



Flow Characteristics Bypass Filter BPS with Filter Element SRM-30HB (at maximum viscosity)



Bypass Lube-Oil Filter ■ Type BPLS



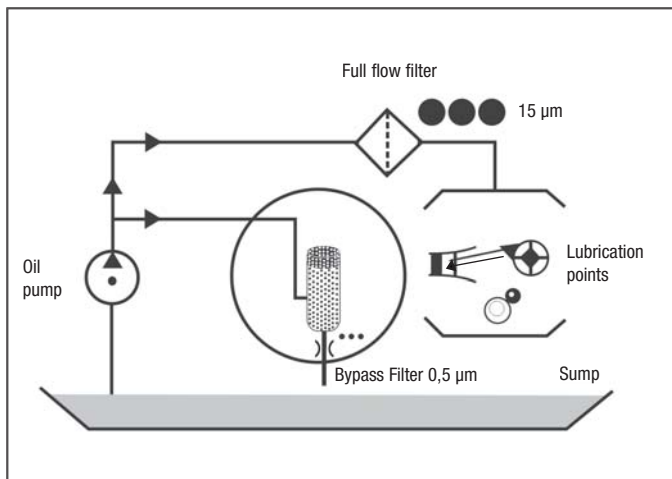
Product Description

Maintenance is essential for the efficient functioning of engine equipment. However, it is always a critical decision between the quality of the maintenance and the costs involved. Optimal maintenance efficiency combines maximum achievement of the maintenance goal (protection and prolonged usage life of the object) with minimal use of means (costs). The STAUFF Bypass Filter is unique in that it not only achieves the goal, but saves on costs.

The STAUFF Bypass Filter keeps the oil clean, resulting in significant technical, environmental and financial benefits thanks to reduced wear and tear on equipment and machines and prolonged oil life time.

STAUFF Systems BPLS Bypass Filters are used as an additional micro filter connected in bypass to the conventional main stream filters on engines (and automatic transmissions.) Most contamination is much smaller than 15 micron in size, but full flow filters generally do not filter below this level. This results in a lot of harmful contamination passing through these filters and remaining in the system. STAUFF Systems Bypass Filters are capable of filtering down as low as 0,5 micron without detriment to the lubrication circuit. (see schematic)

Whatever the application, the benefits of the STAUFF Systems Bypass Filters are all based on maintaining a higher quality and cleanliness level of the oil and thereby avoiding the multiple problems that can be caused by fluid contamination.



The benefits are many, and can be broken into three categories :

Technical benefits

- Less malfunctioning
- Greater reliability of operation
- Prolonged oil usage life
- Reduced down time
- Reduced wear on cylinder linings and pistons
- Less bore polishing
- Less formation of black sludge
- Improved engine compression
- Increased equipment life time

Environmental benefits

- Less oil consumption
- Therefore less waste oil
- Increased life time of additives
- Reduction of harmful emissions

Technical Data

Construction

- BPLS: Bypass Lube-Oil Filter

Materials

- Filter housing: Aluminium
- Sealings: NBR (Buna-N®)
FPM (Viton®)

Port Connection

- Inlet: G1/4
- Outlet: G1/4

Maximum Sump Size

- 35 l / 9.25 gal

Housing Volume

- 2,2 liter / .58 gal

Burst Pressure Housing

- > 20 bar / >290 PSI

Filter Element

- 0,5 micron cellulose element
- Glass fibre elements (pleated)
- Water absorbing elements

Financial benefits

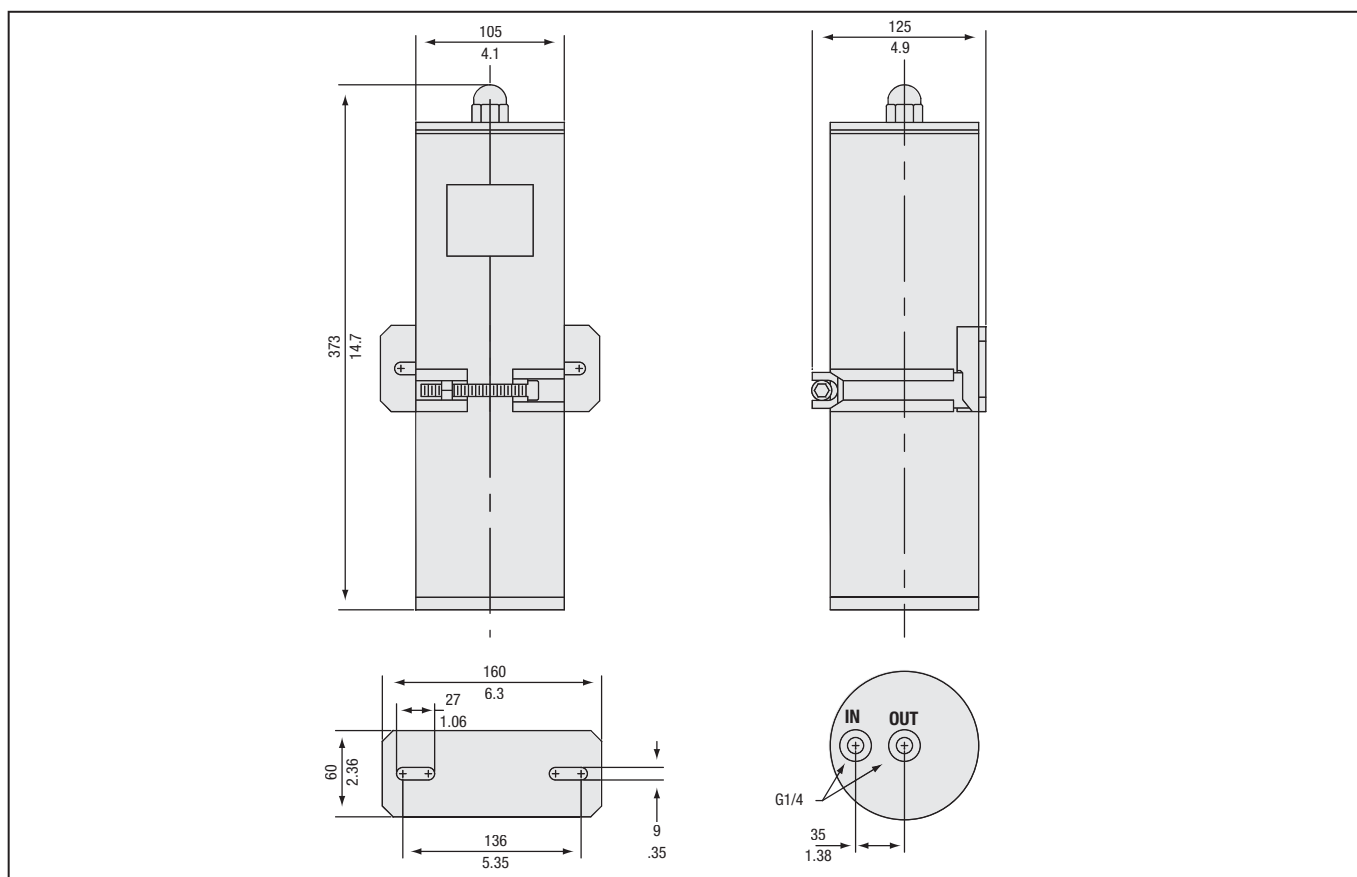
- Savings in labour and materials (oil changes)
- Reduced costs for repairs and downtime
- Reduced waste processing costs

Applications

- Construction equipment
- Agricultural equipment
- Forestry equipment
- Diesel driven welding machines/generators
- Port equipment

Bypass Lube Oil Filter ■ Type BPLS

BPLS-Filter Dimensions



All dimensions in mm / in

Bypass Lube Oil Filter Housings / Complete Filters ■ Type BPLS

BPLS - 1A - 26 - H - B - 0 - 0 - 0

1 2 3 4 5 6 7 8

1 Type

Bypass Lube-Oil Filter (for engines and transmission systems) **BPLS**

2 Housing Configuration

Length	Quantity of elements	Code
Single housing	1 pcs element - (281 mm)	1A

3 Filter Element Length

281 mm / 11.06 in **26**

4 Filter Material and Micron Rating

Material	Micron Rating μm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

5 Sealing Material

NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

6 Housing Material

Aluminium (standard) **0**

7 Options

No options **0**

8 Bracket Options

No mounting bracket **0**
Standard mounting bracket (bulkhead) **1**

Filter Elements ■ Type SRM

SRM - 26 - H - B - 1

1 2 3 4 5

1 Type

Filter Element Series **SRM**

2 Group

Element length 281 mm / 11.06 in **26**

3 Filter Material and Micron Rating

Material	Micron rating μm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

4 Sealing Material

NBR (Buna-N®) (standard) **B**
FPM (Viton®) **V**

5 Quantity

One piece filter element **1**
Box with 12 pieces filter element **12**

Mini Water Vac ▪ Type SMWV



Product Description

The Mini Water Vac is a designated oil purification unit which can be applied directly to various types of machine reservoirs. It dehydrates and cleans most types of oils such as lubricating, hydraulic, transformer, and switch oils. The Mini Water Vac is a self-regulating filtration unit which removes particles, gas, and water. The purified oil satisfies the most stringent quality requirements.

The Mini Water Vac neither removes or alters oil additives. The water removal process is based on pure vacuum evaporation inside a vacuum chamber at a maximum temperature of +65 °C / +149 °F. Solid particle removal is achieved through a well proven STAUFF Systems Micro Filter.

Simple Operation

The Mini Water Vac does not require continuous supervision while operating. Once the unit is connected and commissioned, oil purification is a semi-automatic process. Desired oil temperature can be selected via the integrated heater thermostat. The dehydration and filtering process is fully automatic and is controlled via the PLC. The only manual action required is the emptying the pre-condenser bowl and the waste water container which are equipped with float switches to prevent overflow.

Water, Gas and Particle Removal

The Mini Water Vac removes liquid, gas, and solid particle contamination, which are corrosive and contribute to the reduction of machine life. Contamination greatly increases maintenance costs and contribute to breakdowns and total machine failures. The Mini Water Vac offers protection against malfunctions, breakdowns or total failures. The Mini Water Vac also protects the environment by reducing oil consumption and oil disposal.

Benefits

- Efficient water, gas and particle removal
- Extension of fluid life
- Reduces fluid disposal
- Minimizes corrosion
- Reduced failures and downtime
- Reduce operating costs

Technical Data

Construction

- SMWV-1A-30: Mini Water Vac Vacuum Dehydration Unit
one filter housing

Materials

- Filter housing Anodized Aluminium
- Vacuum chamber Anodized Aluminium
- Heater chamber Anodized Aluminium

Port Connection

- Inlet G1
- Outlet G1/2
- Online particle counter STAUFF Test (M16x2)

Max. System Volume

- 3000 l / 795 gal

Recirculating Flow Rate

- 90 l/h / 23.8 gal/hr

Max. Backpressure

- 1 bar / 14.5 PSI

Max. Heater Temperature

- +65°C / +149°F

Filter Element

- 1 micron inorganic glass fibre element $\beta_1 > 200$

Media Compatibility

- Viscosity between 20 ... 500 cSt
- Max. attainable water content 100 ppm

Removals

- 100% of free water, >80% of dissolved water
- 100% of free gases, >80% of dissolved gases

Dimensions

- 1200 x 740 x 450 mm / 47.3 x 29.1 x 17.7 in

Weight

- 130 kg / 287 lbs

Electrical Data

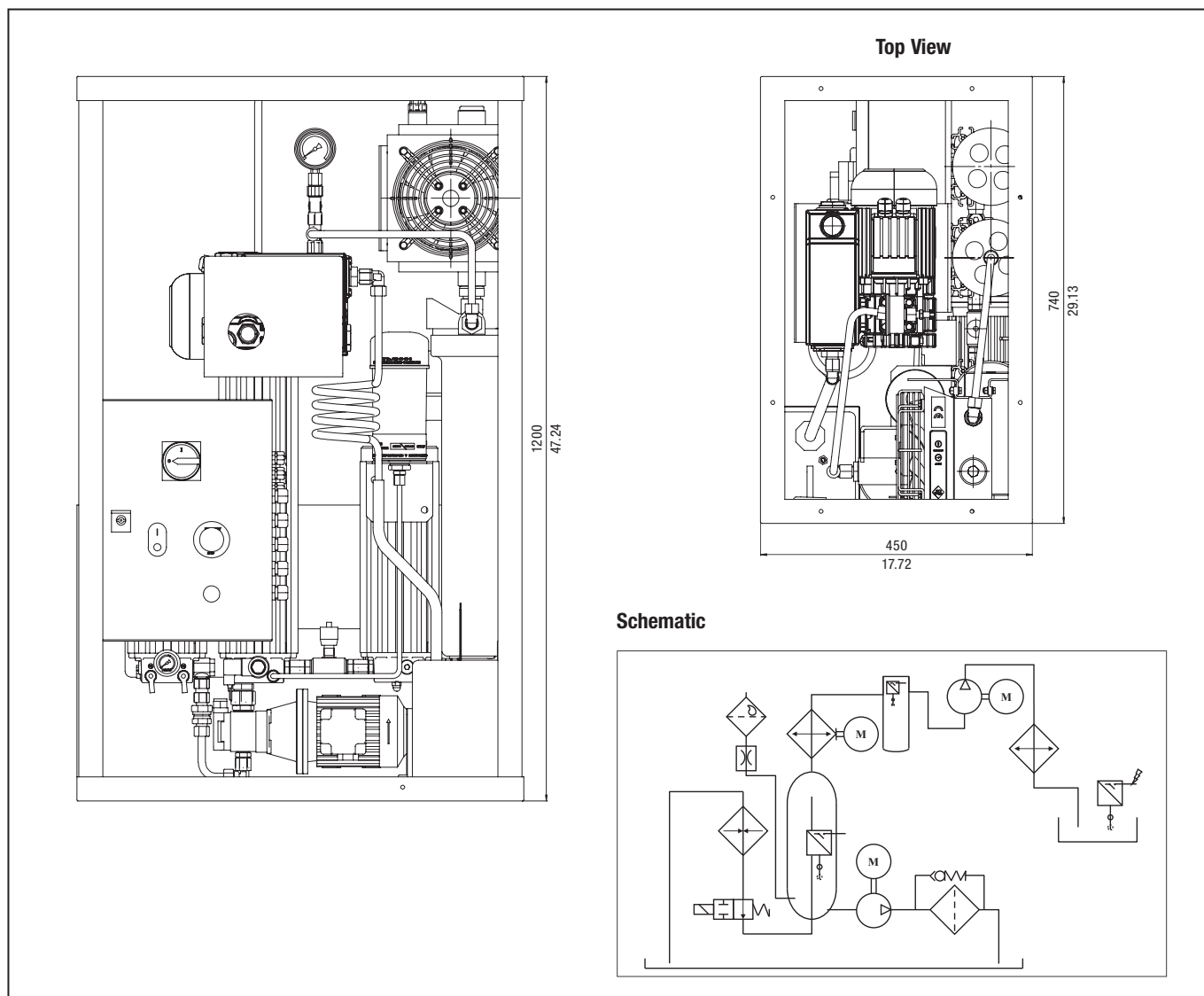
- Voltage 230/400 V AC, 50 Hz
255/460 V AC, 50 Hz
- Power supply 3 phases
- Heater section 2 kW
- Vacuum section 0,037 kW vacuum pump
- Max. current 3 Amps

Process Control

- PLC unit

Mini Water Vac ■ Type SMWV

Dimensions SMWV-1A



Mini Water Vac ■ Type SMWV

All dimensions in mm / in

SMWV - 1A - 30 - H - B - B - 60 - 0 - 0 - 0

1 2 3 4 5 6 7 8 9 10

1 Type

Mini Water Vac Oil Purifier (for industrial applications) **SMWV**

2 Housing Configuration

Length	Suitable for Reservoir Size	Quantity of Elements	Code
Single housing Single length	1350 l / 356 gal	1 pcs	1A

3 Filter Element Length

300 mm / 11.81 in **30**

4 Filter Material and Micron Rating

Material	Micron Rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre	1	E01
Inorg. glass fibre	3	E03
Inorg. glass fibre	5	E05
Inorg. glass fibre	10	E10
Inorg. glass fibre	20	E20
Inorg. glass fibre and polymer (water absorption)	5	WA

5 Sealing Material

NBR (Buna-N®)(standard)	B
FPM (Viton®)	V

6 E-motor Options

Type	Code
230/400 V AC, 50 Hz, three phases, 1360 r/min	0
255/460 V AC, 60 Hz, three phases, 1630 r/min	

Note: Other motors on request, technical data see page C 156.

7 Pump Options

1 cc / rev **60**

8 Heating Element

2000 Watt (standard) **0**

9 Extra Functions

Without **0**
With water sensor **1**

10 Options

None **0**

Filter Elements ■ Type SRM



Product Description

STAUFF Systems distinguish themselves by their high efficiency filter elements which are capable of filtering silt particles down to 0,5 microns.

Two types of STAUFF Systems are available. The OLS Series uses an integral motor/pump combination to draw the hydraulic or lubrication fluid from the reservoir, filters it, and returns it to the reservoir. The other type of STAUFF System is the BPS Series which uses system pressure to draw a small oil flow from the system which is then filtered and returned to the reservoir.

The success of the STAUFF Off-Line Filtration System is due to the design of the element and housing. The element is constructed of 0,5 micron cellulose media applied with a special wrapping method, providing several hundred layers of filter media. The cellulose fibres also absorb and retain water, which slows down the oxidation process of the fluid. The construction of the housing allows only radial flow through the filter element. This design feature prevents channel forming and subsequent shortcircuiting of the media. The Off-Line design maintains a constant flow and pressure through the filter, which does not allow any particle unloading. These design characteristics enable the STAUFF Filtration System to maintain a rated filtration efficiency of $\beta_2 > 2330$. This allows the user to maintain fluid cleanliness levels which cannot be reached with conventional full flow filtration methods.

The unique STAUFF Filter

The principle of the STAUFF System is based on the unique original filter elements. With a filter fineness of 0,5 micron they have the capacity to remove even the smallest of dirt particles from the oil.

The micro filter works as a fine filter through which oil passes radially, from the outside to the inside. The filter elements are made entirely of cellulose and are specially designed for hydraulic and lubrication systems.

The use of cellulose as the filtration material has the added benefit that water can be absorbed. Water in oil creates a chemical reaction, which seriously deteriorates the oil.

Original Elements

The use of original STAUFF Systems filter elements will result in extreme fluid cleanliness and low water contamination levels in the fluid.

Through a carefully monitored quality control process excellent pressure drop curves, filter efficiency and dirt-hold capacity are ensured.

Cellulose Elements

The STAUFF Systems cellulose filter elements are unique in their design. They consist of several hundred layers of long fiber cellulose which are wound on a perforated center tube. The micro filter element works as a fine filter through which oil passes radially, from the outside to the inside, trapping solid particles throughout all the layers of cellulose. The long fiber cellulose is also capable of absorbing water, adding the benefit of moisture removal from the oil. STAUFF Systems cellulose elements are extremely efficient and have a large dirt-hold capacity.

The cellulose elements are produced in various sizes to suit all STAUFF Systems filter housings. The STAUFF Systems cellulose elements compatible with most commonly used hydraulic and lubricating fluids, including biodegradable fluids.

Glass fibre Elements

STAUFF Systems offers a range of glass fibre filter elements in a fineness of 1, 3, 5, 10 or 20 micron. The micro filter element works as a fine filter through which oil passes radially, from the outside to the inside. STAUFF Systems glass fibre filter elements (conventional pleated construction) are extremely efficient and have a large dirt-hold capacity.

The glass fiber elements are suited for all STAUFF Systems filter housing (except the size 20 housing) and are compatible with most commonly used hydraulic and lubricating fluids, including biodegradable fluids. The glass fibre elements are particularly suited for gearbox applications where high viscosity fluids limit the use of the cellulose elements.

Water Sorb Filter Inserts

STAUFF Systems offers a specifically designed water sorb combination filter element: water absorbing and particle retention. This pleated filter element with a fineness of 5 micron has layers of polymers in between layers of glass fibre, creating a unique media to remove both water and solid particles from the fluid.

Characteristics

- Continuous quality with stable flow/ Δp performance
- Extremely fine filters (0.5 micron)
- Large filtration surface
- High water absorption capacity
- Additives are not removed
- Large dirt collection capacity
- Extends oil usage life
- Extends life cycle main stream filters

Applications

The original filter elements are used in combination with STAUFF Systems filter housings in an endless range of industries.

Some Examples are:

- Plastic industry
- Steel industry
- Concrete and cement industry
- Petrochemical industry
- Maritime industry
- Paper industry
- Forestry industry

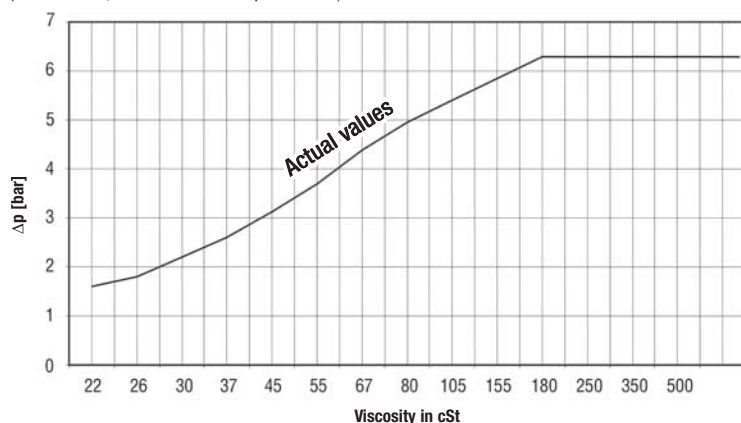
Off-Line and Bypass Filters Replacement Elements ■ Type SRM

Filter Element Technical Data

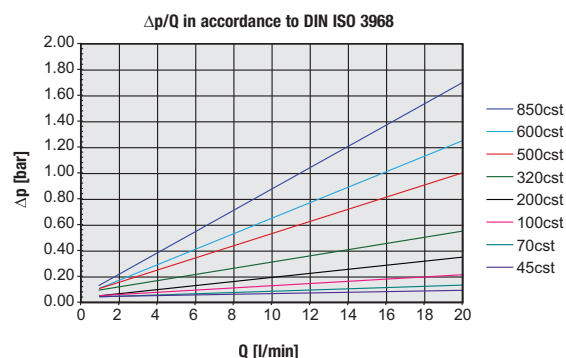
Element Model	SRM-30HB	SRM-30E01B	SRM-30E03B	SRM-30WAB
Filter Material	Cellulose	Glass fibre	Glass fibre	Glass fibre and Polymer
Filtration Efficiency	$\beta_{0.5} \geq 200$ / $\beta_{2} \geq 2331$	$\beta_1 \geq 200$	$\beta_3 \geq 200$	$\beta_5 \geq 200$
Water Absorption Capacity	150 ml 5 oz	N/A	N/A	350 ml 11.8 oz
Nominal Flow per Element	2,1 l/min .6 GPM	2,1 l/min .6 GPM	2,1 l/min .6 GPM	2,1 l/min .6 GPM
Max. Viscosity at Nominal Flow Rate	180 cSt	800 cSt		
Max. Oil Temperature	+80 °C +176 °F			
Length of Element	300 mm 11.8 in			
Sealing Material (Standard)	NBR (Buna-N®) and Silicone Rubber	NBR (Buna-N®)	NBR (Buna-N®)	NBR (Buna-N®)
Other Sealing Material	Consult STAUFF			
Fluid Compatibility:				
--Mineral Oils				
H, HI, HLP, HVLP	OK	OK	OK	OK
-- Biodegradable Oils				
HEPG Polyethyleneglycol	Consult STAUFF			
HEES Synthetic ester	OK	OK	OK	OK
HETG Vegetable seed oil	Consult STAUFF			
-- Fire Inhibiting Fluids				
HFA emulsions	NO	OK	OK	NO
HFC glycol/water solution	NO	OK	OK	NO
HFD fluids no water content	Consult STAUFF			
Approximate Weight	0,8 kg 1.8 lb	1,25 kg 2.8 lb	1,25 kg 2.8 lb	1,25 kg 2.8 lb

Filter Element SRM-30HB Δp / viscosity - graph

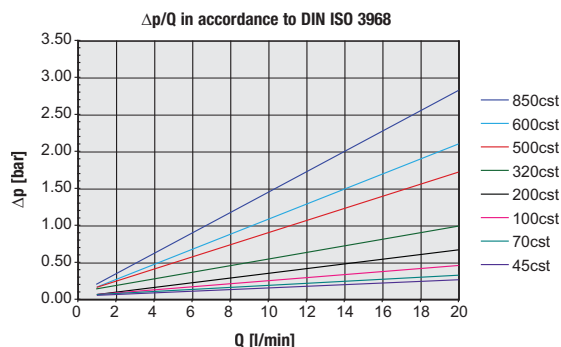
(at a flow of 2,1 l/min / .6 US GPM per element)



Filter Element SRM-30E03B Δp / Viscosity-Graph



Filter Element SRM-30E01B Δp / Viscosity-Graph



Filter Element SRM-30WAB Δp / Viscosity-Graph

