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Product Description

STAUFF Offline 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.

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

Material
- Housing: Anodized Aluminium, available with one, two or four filter housings in two different length

Housing Pressure
- Max. 20 bar / 290 PSI

System Volume
- Max. 10800 l / 2853 US GAL

Connections
- G3/8, G1/2 and G3/4, Fitting with 18L connection

Differential Pressure
- Max. 6,2 bar / 90 PSI

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

Media Compatibility
- Mineral and lubrication oils, others on request

Options and Accessories

Clogging Indicators
- Visual Clogging Indicators

Type OLS
- Offline Filter System with intergrated motor/pump unit
- Availab Special designed for industrial applications

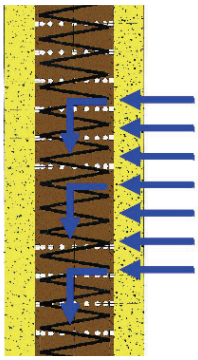
Type OLSW
- Water absorbing filter elements with large water holding capacity

Type OLSH
- Pre-heating unit and extremely efficient filter elements
- Increased flow capacity

Type BPS
- Bypass filter units are especially designed for mobile
- Applications in hydraulic and/or transmission systems
- No special motor-pump unit is required

Type SMWV
- Designated oil purification unit, it dehydrates and cleans most types of oils such as lubricating, hydraulic, transformer and switch oils
- Efficient water, gas and particle removal
- System volume: max. 3.000 l / 795 gal
- Recirculating flow rate: 90 l/h / 23.8 gal/hr
- Backpressure: max. 1 bar / 14.5 PSI
- Extension of fluid life
- Reduces fluid disposal
- Minimizes corrosion
- Reduced failures and downtime
- Reduce operating costs

Filter Element SRM-30/-60



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 downtime.

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

Micro Filtration

At the heart of the STAUFF Offline 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 with 3-20 µm 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 Catalogue No. 10 - Hydraulic Accessories for more details.

Advantages

- Less mailfunction
- 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 $ß_{0,5} \geq 200$, $ß_2 \geq 2330$
- 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
- Harvesting
- Forestry
- Agricultural
- Off-road
- Fishing
- Road construction
- Cranes
- Airport equipment
- Flight simulators
- Pulp and paper
- Food processing
- Presses
- Automotive industry
- Timber plants
- Plastic and rubber
- Metal industry
- Cement and concrete
- Material handling
- Bridges/Hydraulic locks/Water works
- Petrochemical industry
- Power stations
- Marine
- Steel

Offline and Bypass Filters Replacement Elements ▪ Type SRM

Filter Element Technical Data

Element Model	SRM-30-H-B	SRM-60-H-B	SRM-30-E-01-B	SRM-60-E-01-B	SRM-30-E-03-B	SRM-60-E-03-B	SRM-30-EA	SRM-60-EA
Filter Material	Cellulose	Cellulose	Glass fibre	Glass fibre	Glass fibre	Glass fibre	Glass fibre and Polymer	Glass fibre and Polymer
Filtration Efficiency	$\beta_2 \geq 2331$	$\beta_2 \geq 2331$	$\beta_1 \geq 200$	$\beta_1 \geq 200$	$\beta_3 \geq 200$	$\beta_3 \geq 200$	$\beta_5 \geq 200$	$\beta_5 \geq 200$
Water Absorption Capacity	150 ml 5 oz	300 ml 10 oz	N/A	N/A	N/A	N/A	350 ml 11.8 oz	700 ml 23.6 oz
Nominal Flow per Element	2,1 l/min .6 GPM	4,2 l/min 1.2 GPM	2,1 l/min .6 GPM	4,2 l/min 1.2 GPM	2,1 l/min .6 GPM	4,2 l/min 1.2 GPM	2,1 l/min .6 GPM	4,2 l/min 1.2 GPM
Max. Viscosity at Nominal Flow Rate	180 cSt	180 cSt	800 cSt	800 cSt	800 cSt	800 cSt	800 cSt	800 cSt
Max. Oil Temperature	+80 °C +176 °F	+80 °C +176 °F	+80 °C +176 °F	+80 °C +176 °F	+80 °C +176 °F	+80 °C +176 °F	+80 °C +176 °F	+80 °C +176 °F
Lenght of Element	300 mm 11.8 in	600 mm 23.6 in	300 mm 11.8 in	600 mm 23.6 in	300 mm 11.8 in	600 mm 23.6 in	300 mm 11.8 in	600 mm 23.6 in
Sealing Material (Standard)	NBR (Buna-N®) and Silicone Rubber		NBR (Buna-N®)		NBR (Buna-N®)		NBR (Buna-N®)	
Other Sealing Material	Contact STAUFF							
Fluid Compatibility:								
--Mineral Oils								
H, HI, HLP, HVLP	OK		OK		OK		OK	
-- Biodegradable Oils								
HEPG Polethyleneglycol	Contact STAUFF							
HEES Synthetic ester	OK		OK		OK		OK	
HETG Vegetable seed oil	Contact STAUFF							
-- Fire Inhibiting Fluids								
HFA emulsions	NO		OK		OK		NO	
HFC glycol/water solution	NO		OK		OK		NO	
HFD fluids no water content	Contact 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	

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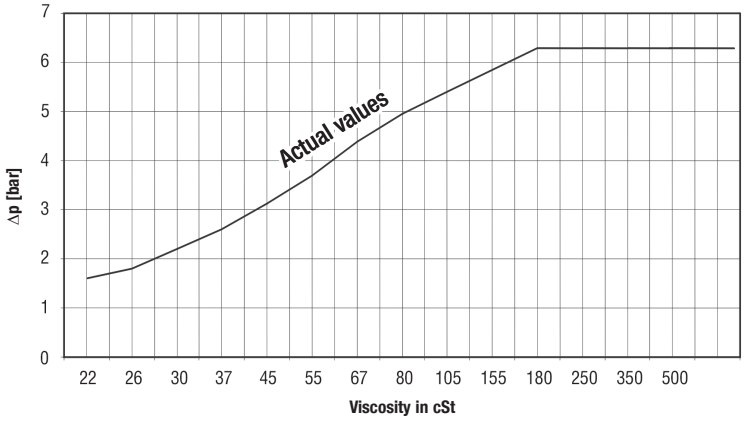
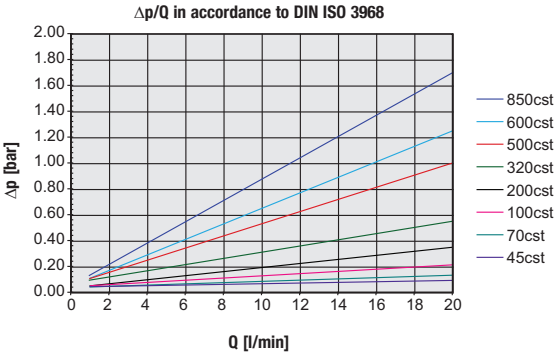
Filter Element SRM-30-H-B Δp / viscosity - graph

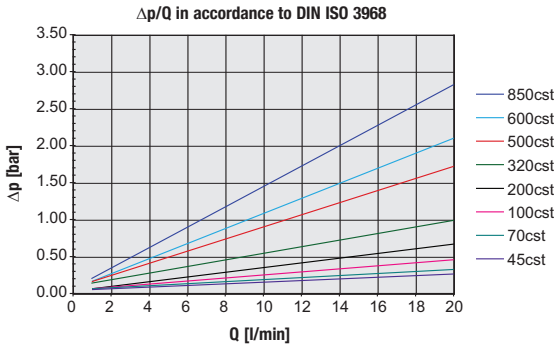
(at a flow of 2,1 l/min / .6 US GPM per element)



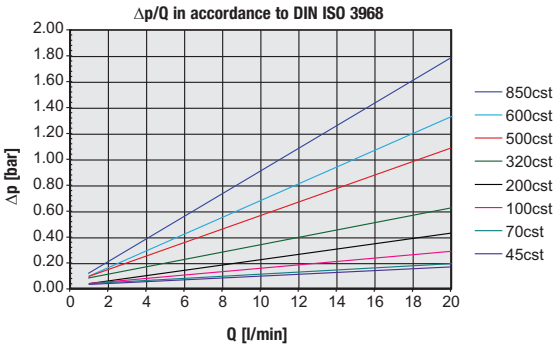
Filter Element SRM-30-E-03-B ΔP / Viscosity-Graph



Filter Element SRM-30-E-01-B ΔP / Viscosity-Graph



Filter Element SRM-30-EA ΔP / Viscosity-Graph



Offline Filters ▪ Type OLS

Product Description

STAUFF Offline 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. Offline Filter Units can continue to work even if 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.

The OLS is available with one, two or four filter housings and in two different lengths. The maximum flow for the Offline 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 188 (Order code).

All Offline 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 184 / 185)

OLS-1-30-H-B

OLS-2-30-H-B

OLS-4-30-H-B

Double Length (see page 186 / 187)

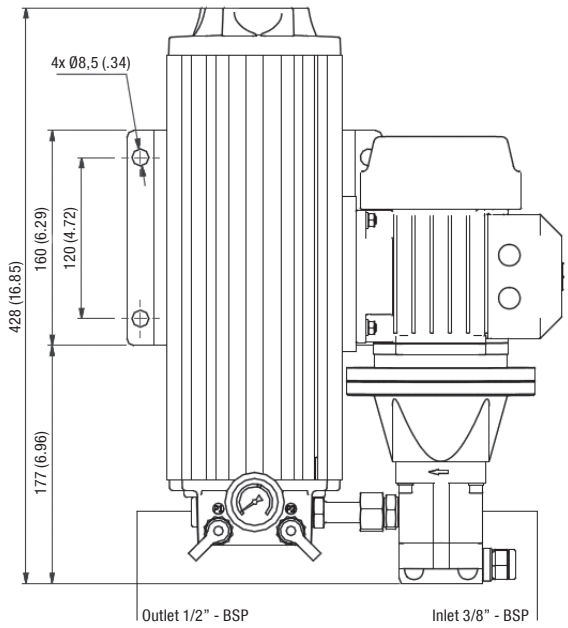
OLS-1-60-H-B

OLS-2-60-H-B

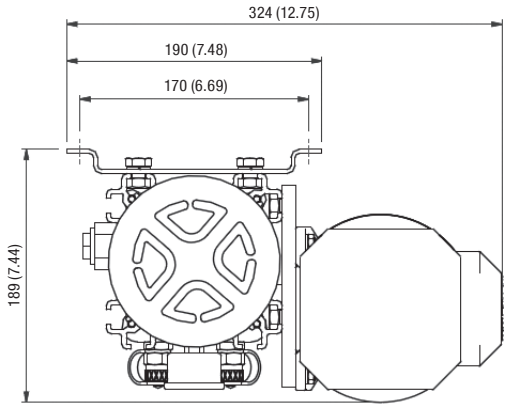
OLS-4-60-H-B

Offline Filters ▪ Type OLS

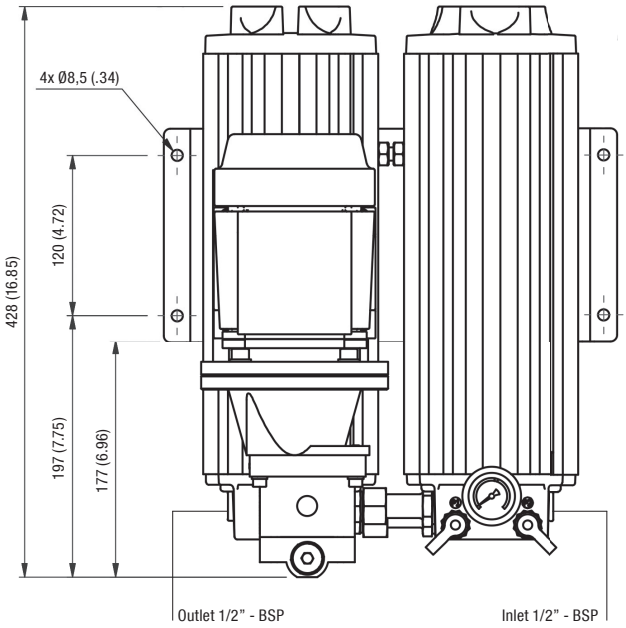
Dimensions OLS-1-30-H-B



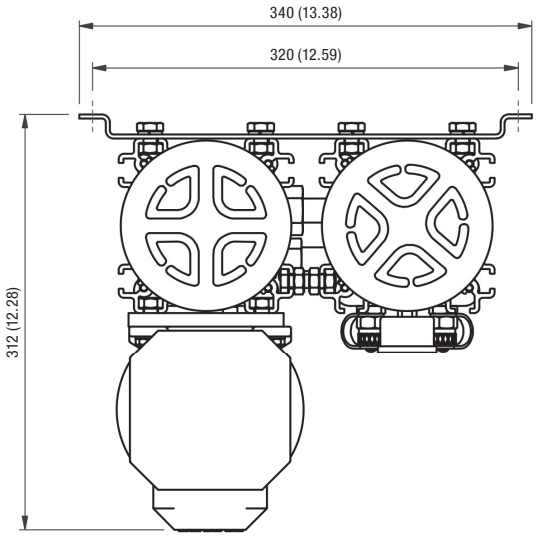
Top View



Dimensions OLS-2-30-H-B

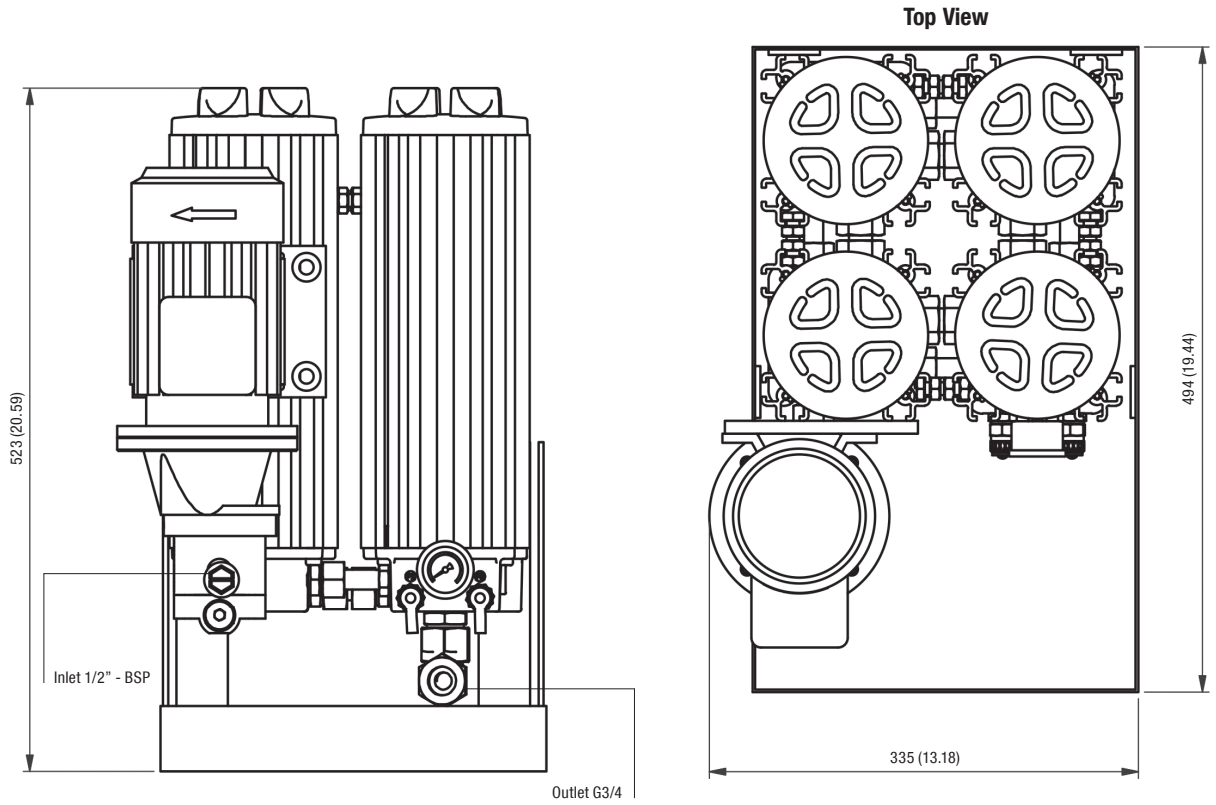


Top View



All dimensions in mm / in

Dimensions OLS-4-30-H-B



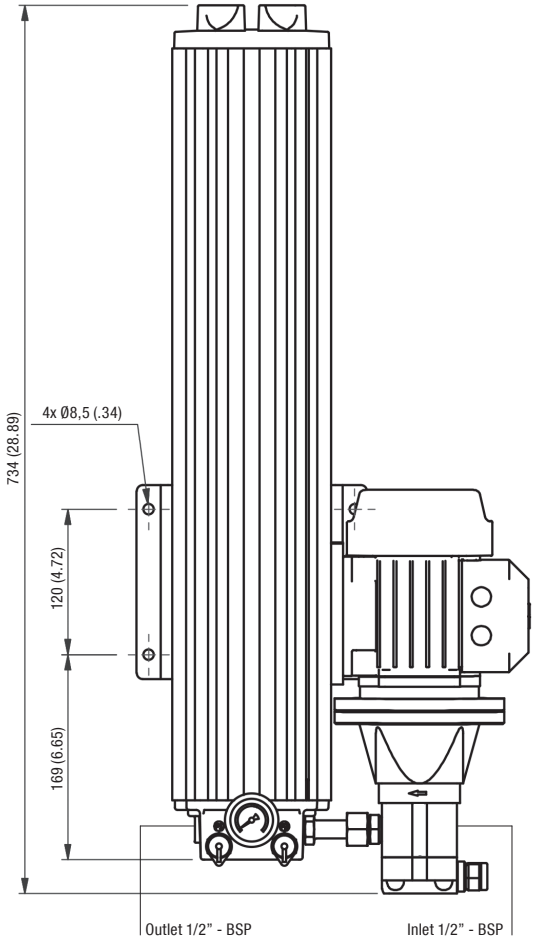
All dimensions in mm / in

Technical Data

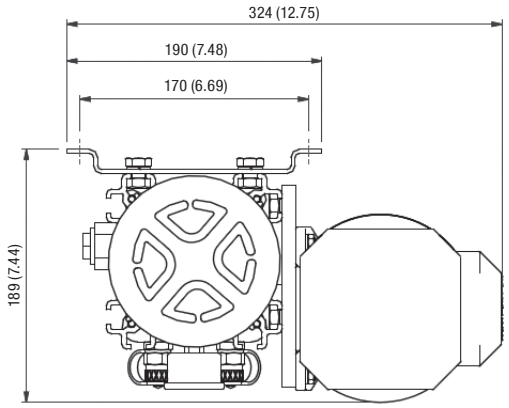
	OLS-1-30-H-B	OLS-2-30-H-B	OLS-4-30-H-B
Number of Filter Housings	1	2	4
Nominal Flow	2,1 l/min	4,2 l/min	8,4 l/min
	.55 US GPM	1.1 US GPM	2.22 US GPM
Max. Differential Pressure	6,2 bar		
	90 PSI		
Max. Fluid Temperature	+80 °C		
	+176 °F		
Max. Housing Pressure	20 bar		
	290 PSI		
Viscosity Range	20 ... 160 cSt 100 ... 750 SUS		
Connection Suction Side	G3/8	G1/2	
Connection Return Side	G1/2		G3/4
Hose Diameter	1/2 in (inner diameter) flexible hose		3/4 in (inner diameter) flexible hose
Weight (Including Element)	14 kg	21 kg	39 kg
	30.9 lbs	46.3 lbs	86 lbs
Max. System Volume	1350 l	2700 l	5400 l
	356 gal	713 gal	1426 gal
Dimensions H x W x D	428 x 324 x 189 mm	428 x 340 x 312 mm	523 x 494 x 335 mm
	16.85 x 12.75 x 7.44 in	16.85 x 13.38 x 12.28 in	20.59 x 19.44 x 13.18 in
Connection for Online Particle Counter	STAUFF Test (M16 x 2)		
Pump	Gear pump		
Motor	See page 188 for electric motor details		
Connection Oil-Analysis: P1 filter inlet side P2 filter outlet side	 Test connector (M16 x 2) Red Test connector (M16 x 2) Yellow		

Offline Filters ▪ Type OLS

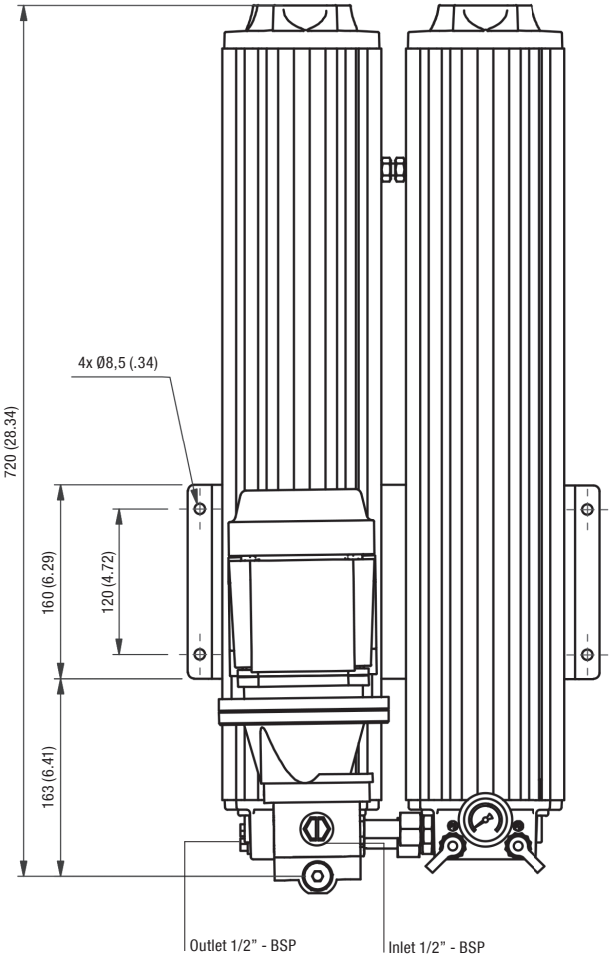
Dimensions OLS-1-60-H-B



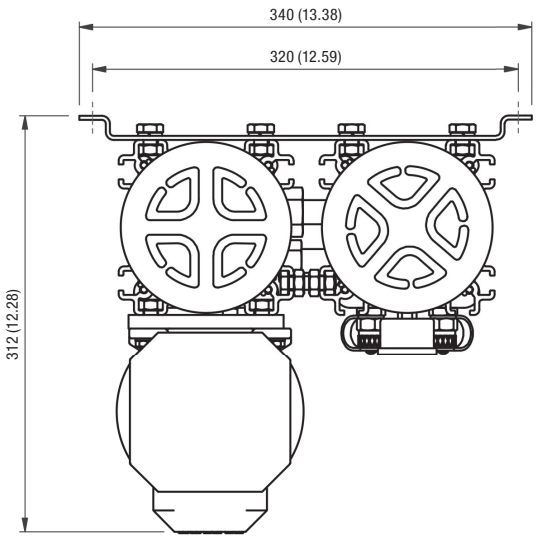
Top View



Dimensions OLS-2-60-H-B

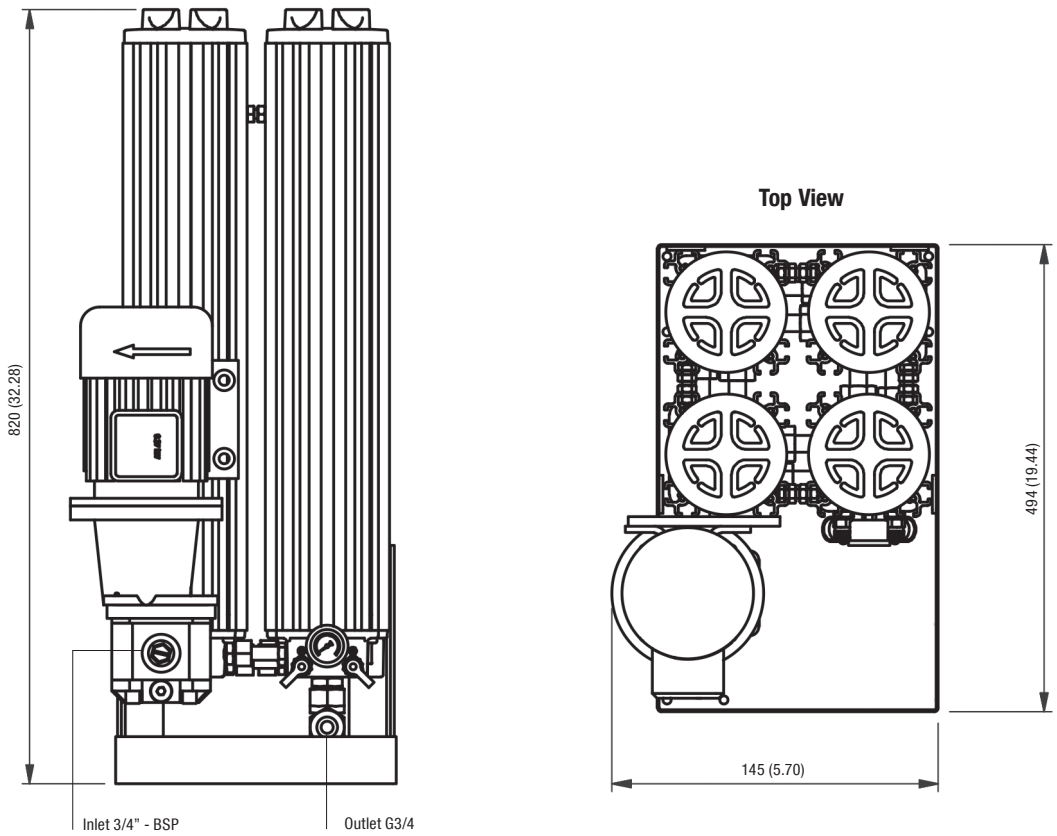


Top View



All dimensions in mm / in

Dimensions OLS-4-60-H-B



All dimensions in mm / in

Technical Data

	OLS-1-60-H-B	OLS-2-60-H-B	OLS-4-60-H-B
Number of Filter Housings	1	2	4
Nominal Flow	4,2 l/min	8,4 l/min	17 l/min
	1.1 US GPM	2.22 US GPM	4.5 US GPM
Max. Differential Pressure	6,2 bar		
	90 PSI		
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 Side	G1/2		G3/4
Hose Diameter	1/2 in (inner diameter) flexible hose		3/4 in (inner diameter) flexible hose
Weight (Including Element)	18 kg	30 kg	61 kg
	39.7 lbs	66.1 lbs	134.5 lbs
Max. System Volume	2700 l	5400 l	10800 l
	713 gal	1426 gal	2853 gal
Dimensions H x W x D	734 x 324 x 189 mm	720 x 340 x 312 mm	820 x 494 x 145 mm
	28.66 x 13.19 x 7.48 in	28.90 x 13.39 x 12.72 in	32.28 x 19.44 x 5.70 in
Connection for Online Particle Counter	STAUFF Test (M16 x 2)		
Pump	Gear pump		
Motor	See page 188 for electric motor details		
Connection Oil-Analysis: P1 filter inlet side P2 filter outlet side	 Test connector (M16 x 2) Red Test connector (M16 x 2) Yellow		

Offline Filter Housings / Complete Filters ▪ Type OLS

OLS	-	1	-	30	-	H	-	B	-	A	-	01	-	V	-	O
①		②		③		④		⑤		⑥		⑦		⑧		⑨

① Type

Offline Filter Unit (for industrial applications)	**OLS**

② Housing Configuration

Single housing	**1**
Twin housing	**2**
Quadruple housing	**4**

③ Filter Element Length

300 mm / 11.81 in	**30**
600 mm / 23.62 in	**60**

④ Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	**H**
Inorg. glass fibre	1	**E-01**
Inorg. glass fibre	3	**E-03**
Inorg. glass fibre	5	**E-05**
Inorg. glass fibre	10	**E-10**
Inorg. glass fibre	20	**E-20**
Inorg. glass fibre and polymer (water absorption)	3*	**EA-03**
Inorg. glass fibre and polymer (water absorption)	5*	**EA-05**

* Other micron ratings on request.

⑤ Sealing Material

NBR (Buna-N®) (standard)	**B**
FKM (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)	**A**
230 V AC, 50 Hz, single phase, 1360 r/min	**G**
110 V AC, 50 Hz, single phase	**I**
110 V AC, 60 Hz, single phase	**J**
230 V AC, 60 Hz, single phase, 1630 r/min	**H**

Note: Special motors on request.

⑦ Pump Options

50 Hz Motor	Standard in	Code
1,6 cc/rev.	OLS-1-30	**00**
3,15 cc/rev.	OLS-2-30/1-60	**10**
6,1 cc/rev.	OLS-4-30/2-60	**20**
8,2 cc/rev.		**30**
11,3 cc/rev.	OLS-4-60	**40**
0,8 cc/rev.		**50**

60 Hz motor	Standard in	Code
1,25 cc/rev.	OLS-1-30	**01**
2,5 cc/rev.	OLS-2-30/1-60	**11**
5,0 cc/rev.	OLS-4-30/2-60	**21**
6,3 cc/rev.		**31**
10 cc/rev.	OLS-4-60	**41**

⑧ Clogging Indicator

Visual clogging indicator	**V**

⑨ Mounting Options

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

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Filter Elements ▪ Type SRM

SRM	-	30	-	H	-	B	/	X
①		②		③		④		⑤

① Type

Filter Element Series	**SRM**

② Filter Element Length

300 mm / 11.81 in	**30**
600 mm / 23.62 in	**60**

③ Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	**H**
Inorg. glass fibre	1	**E-01**
Inorg. glass fibre	3	**E-03**
Inorg. glass fibre	5	**E-05**
Inorg. glass fibre	10	**E-10**
Inorg. glass fibre	20	**E-20**
Inorg. glass fibre and polymer (water absorption)	3*	**EA-03**
Inorg. glass fibre and polymer (water absorption)	5*	**EA-05**

* Other micron ratings on request.

④ Sealing Material

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

⑤ Design Code

Only for information	**X**

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
I, J	OLS-1-30 OLS-2-30 OLS-1-60	M63 B3/B5 4P 110V MULTIVOLT	0,18	0.24	110 V AC	3,30		110 V AC	2,70	
G, H	OLS-1-30 OLS-2-30 OLS-1-60	M63 B3/B5 4P 230 MULTIVOLT	0,18	0.24	230 V AC	1,57		230 V AC	1,34	
A	OLS-1-30 OLS-2-30 OLS-1-60	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	
A	OLS-2-60 OLS-4-30	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
I, J	OLS-2-60 OLS-4-30 OLS-4-60	M71 B3/B5 4P 110V MULTIVOLT	0,37	0.50	110 V AC	6,10		110 V AC	5,20	
G, H	OLS-2-60 OLS-4-30 OLS-4-60	M71 B3/B5 4P 230V MULTIVOLT	0,37	0.50	230 V AC	3,00		230 V AC	2,65	
A	OLS-4-60	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 Offline Filter ▪ Type OLSW

Product Description

STAUFF Systems Units are characterized by their extremely efficient filter elements which are rated to 5 micron. Specially designed for industrial hydraulic installations the STAUFF Offline Filters are available in single or double length configurations. The Offline Filter Units can easily be mounted to new and existing hydraulic installations. By means of an integrated motor/pump unit and an Offline 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 80 % of mechanical failures are caused by contamination in the system. The STAUFF Water Absorbing Offline 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 Offline 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 $ß_{0,5} \geq 200$, $ß_2 \geq 2330$
- 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

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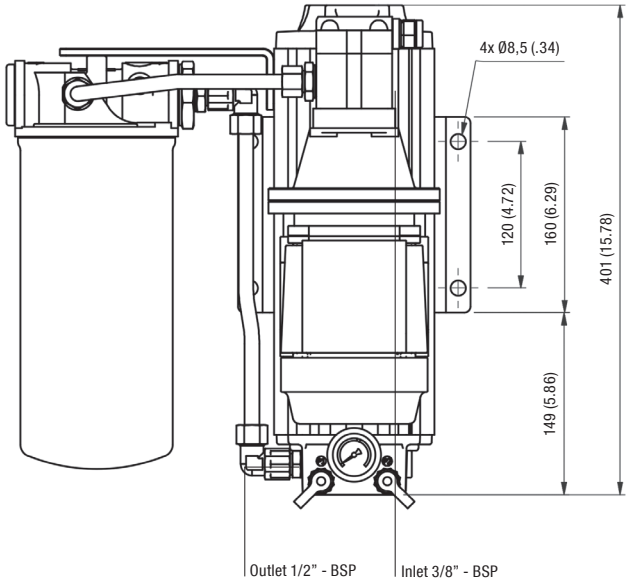
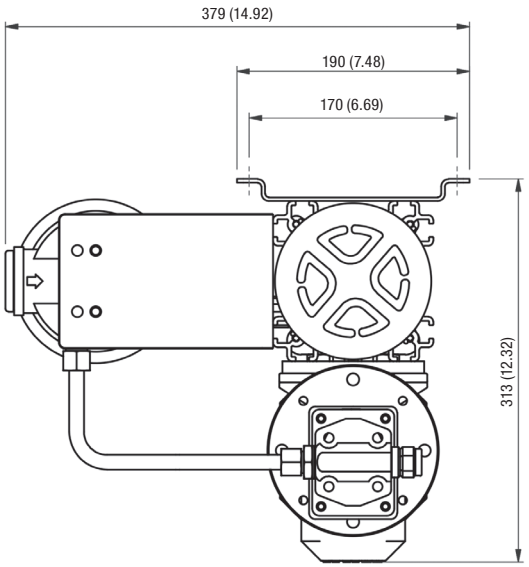
Water Absorbing Offline Filter ▪ Type OLSW

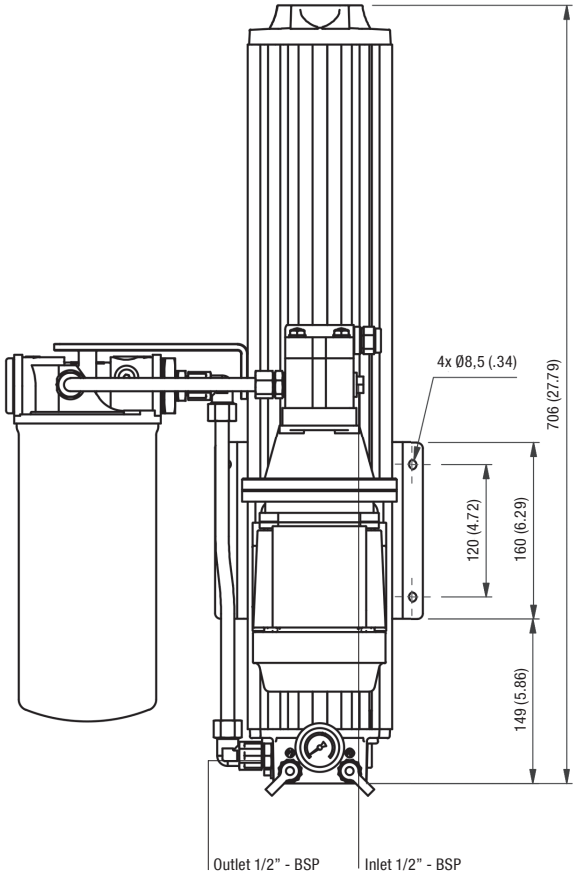
Dimensions OLSW-1-30



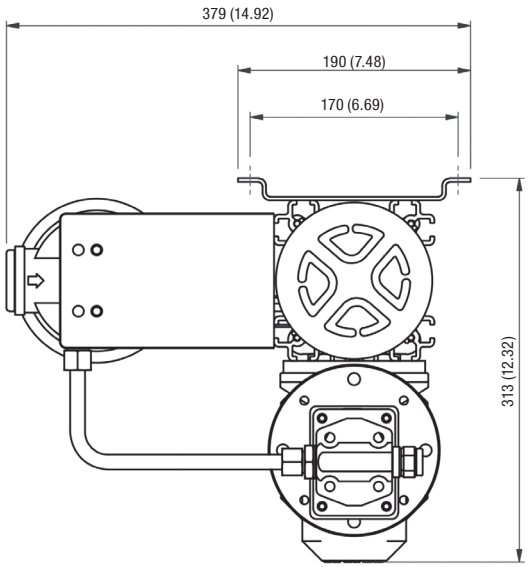
Top View



Dimensions OLSW-1-60



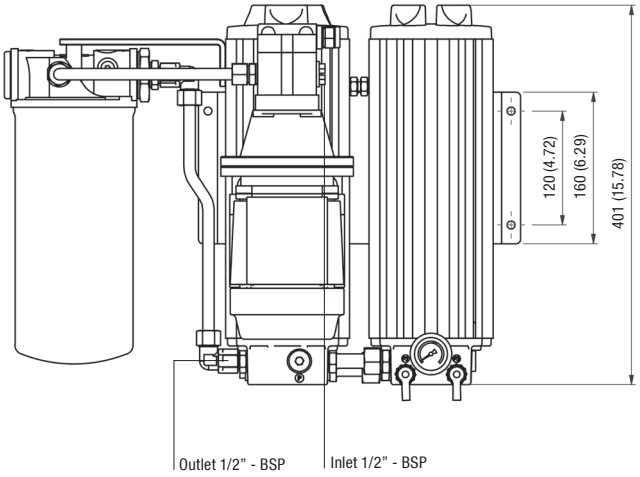
Top View



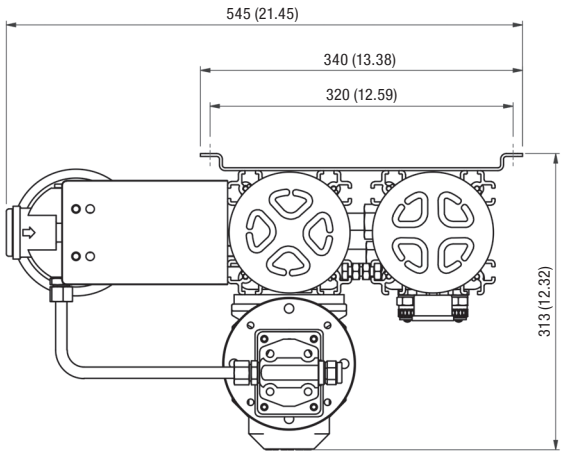
All dimensions in mm / in

Water Absorbing Offline Filter ▪ Type OLSW

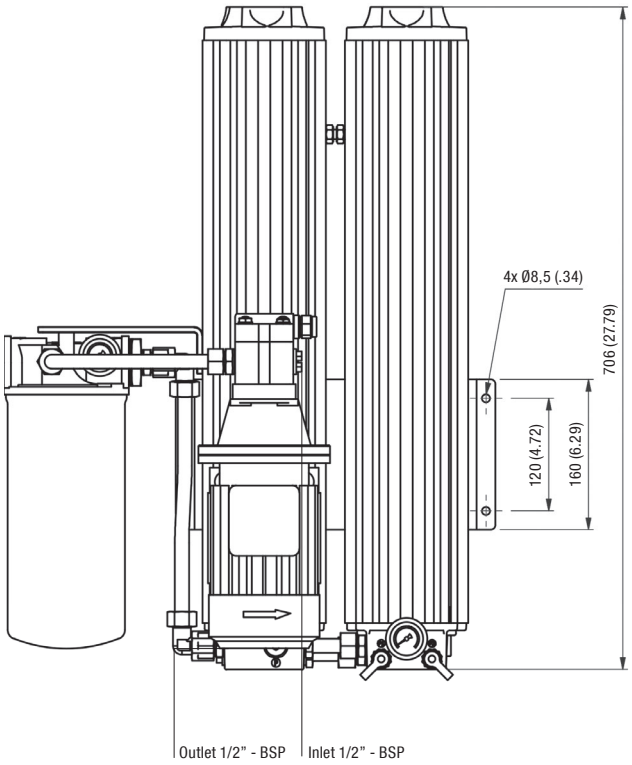
Dimensions OLSW-2-30



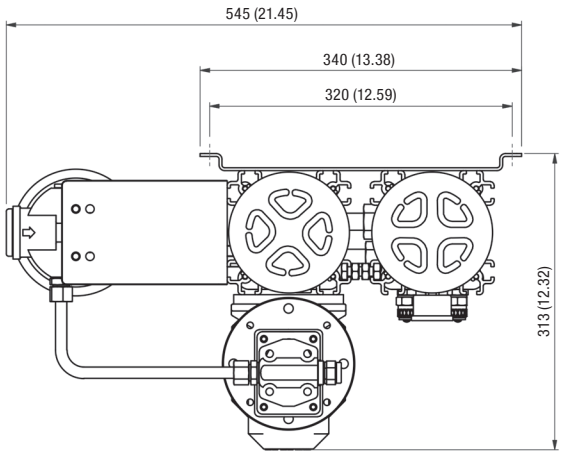
Top View



Dimensions OLSW-2-60



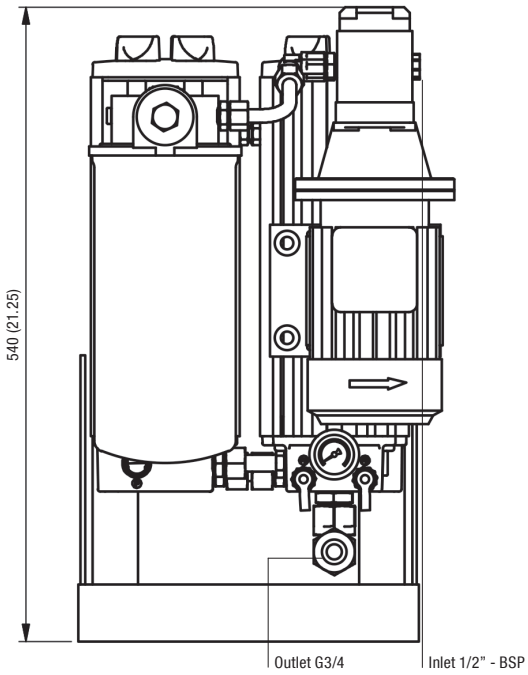
Top View



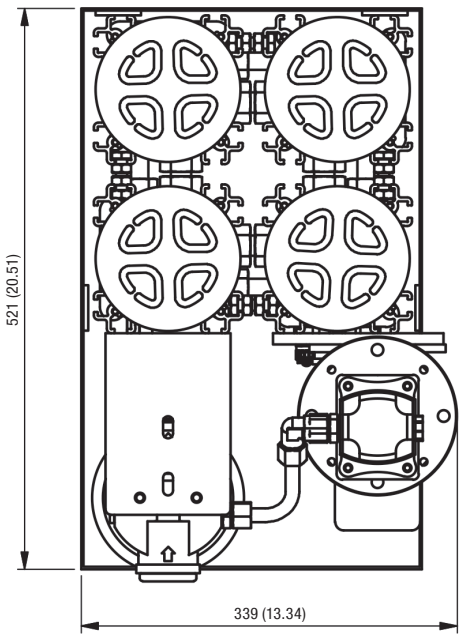
All dimensions in mm / in

Water Absorbing Offline Filter ▪ Type OLSW

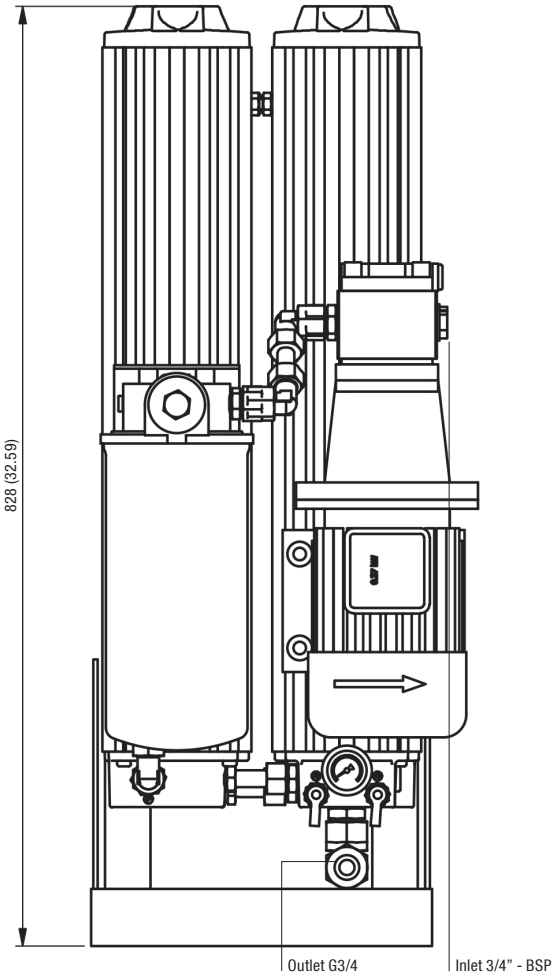
Dimensions OLSW-4-30



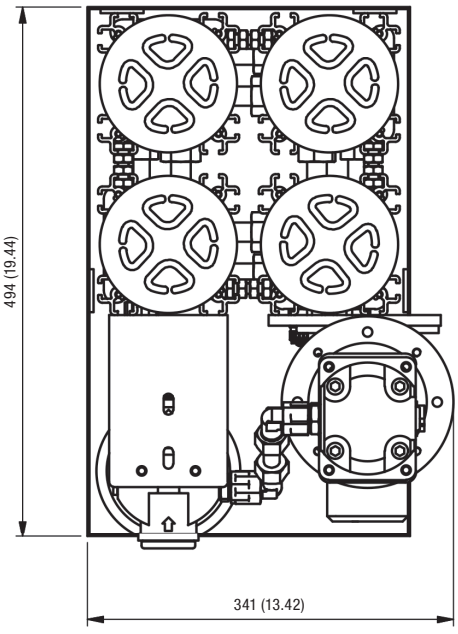
Top View



Dimensions OLSW-4-60



Top View



All dimensions in mm / in

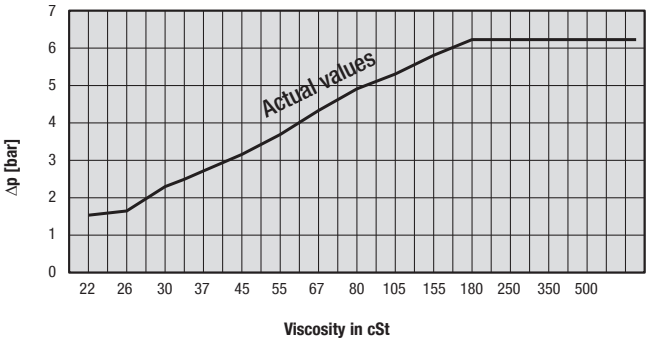
Water Absorbing Offline Filter ▪ Type OLSW

Technical Data OLSW

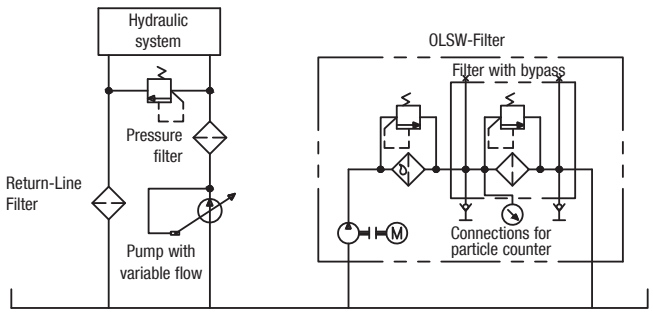
	OLSW-1-30-H-B	OLSW-1-60-H-B	OLSW-2-30-H-B	OLSW-2-60-H-B	OLSW-4-30-H-B	OLSW-4-60-H-B
Number of Filter Housings	1	1	2	2	4	4
Nominal Flow	2,1 l/min	4,2 l/min	4,2 l/min	8,4 l/min	8,4 l/min	16,8 l/min
	.6 US GPM	1.1 US GPM	1.1 US GPM	2.2 US GPM	2.2 US GPM	4.4 US GPM
Max. Differential Pressure	6,2 bar over the filter element without backpressure					
	90 PSI over the filter element without backpressure					
Water Absorbing Capacity	794 ml	1144 ml	1144 ml	1844 ml	1844 ml	3244 ml
	25 oz.	38 oz.	38 oz.	62 oz.	62 oz.	109 oz.
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	G1/2	G1/2	G1/2	G3/4
Connection Return Side	G1/2	G1/2	G1/2	G1/2	G3/4	G3/4
Hose Diameter	1/2 in (inner diameter) flexible hose					3/4 in (inner diameter) flexible hose
Weight (including Element)	18 kg	22 kg	25 kg	34 kg	43 kg	65 kg
	39.7 lbs	48.5 lbs	55. 1 lbs	75.0 lbs	94.8 lbs	143.3 lbs
Max. System Volume	1350 l	2700 l	2700 l	5400 l	5400 l	10800 l
	356 gal	713 gal	713 gal	1427 gal	1427 gal	2853 gal
Dimensions H x B x L	401 x 379 x 313 mm	706 x 379 x 313 mm	401 x 545 x 313 mm	706 x 545 x 313 mm	540 x 339 x 521 mm	928 x 341 x 494 mm
	15.78 x 14.92 x 12.32 in	27.79 x 14.92 x 12.32 in	15.78 x 21.45 x 12.32 in	27.79 x 21.45 x 12.32 in	21.25 x 13.34 x 20.51 in	36.53 x 13.42 x 19.44 in
Pump	Gear pump					
Connection Oil-Analysis: P1 filter inlet side P2 filter outlet side	Test connector (M16 x 2) Red Test connector (M16 x 2) Yellow					

Water absorbing spin-on filter element

Δp / Viscosity for OLSW-Filter



System Example
Schematic Offline Filtration incl. Water Absorption



Water Absorbing Offline Filter Housings / Complete Filters ▪ Type OLSW

OLSW - 1 - 30 - H - B - A - 01 - V - O - A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Type

Offline Filter Unit incl. water absorption (for industrial applications)	OLSW

② Housing Configuration

Single housing	1
Twin housing	2
Quadruple housing	4

③ Filter Element Length

300 mm / 11.81 in	30
600 mm / 23.62 in	60

④ Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre and polymer (water absorption)	5	EA

⑤ Sealing Material

NBR (Buna-N®) (standard)	B
FKM (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)	A
230 V AC, 50 Hz, single phase, 1360 r/min	G
110 V AC, 50 Hz, single phase	I
110 V AC, 60 Hz, single phase	J

Note: Special motors on request.

⑦ Pump Options

50 Hz Motor	Standard in	Code
1,6 cc/rev.	OLSW-1-30	00
3,15 cc/rev.	OLSW-1-60/2-30	10
6,1 cc/rev.	OLSW-2-60/4-30	20
11,3 cc/rev.	OLSW-4-60	40

60 Hz Motor	Standard in	Code
1,25 cc/rev.	OLSW-1-30	01
2,5 cc/rev.	OLSW-1-60/2-30	11
5,0 cc/rev.	OLSW-2-60/4-30	21
10 cc/rev.	OLSW-4-60	41

⑧ Clogging Indicator

Visual clogging indicator	V

⑨ Mounting Options

No options (standard)	O

⑩ Pre-Filter Elements

Water absorption element	
SF-6721-W (10 micron water absorbing, capacity 444 ml water)	A
Pre-filter elements (particles)	
without pre-filter element	O
SF-6702-MG (inorganic glass fiber, 1 micron)	B
SF-6704-MG (inorganic glass fibre, 3 micron)	C
SF-6707-MG (inorganic glass fibre, 6 micron)	D
SF-6731-MG (inorganic glass fibre, 12 micron)	E
SF-6726-MG (inorganic glass fibre, 25 micron)	F
SF-6721 (filter paper, 10 micron)	G
SF-6711 (filter paper, 25 micron)	H
SF-6791 (wire mesh, 125 micron)	J

G

Filter Elements ▪ Type SRM

SRM - 30 - H - B / X

① ② ③ ④ ⑤

① Type

Filter Element Series	SRM

② Filter Element Length

300 mm / 11.81 in	30
600 mm / 23.62 in	60

③ Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	H
Inorg. glass fibre and polymer (water absorption)	5	EA

④ Sealing Material

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

⑤ Design Code

Only for information	X

Pre-Filter Elements ▪ Type SF-67

SF-6721-W

①

① Pre-Filter Elements

Water absorption element	
SF-6721-W (10 micron water absorbing, capacity 444 ml water)	A
Pre-filter elements (particles)	
without pre-filter element	O
SF-6702-MG (inorganic glass fiber, 1 micron)	B
SF-6704-MG (inorganic glass fibre, 3 micron)	C
SF-6707-MG (inorganic glass fibre, 6 micron)	D
SF-6731-MG (inorganic glass fibre, 12 micron)	E
SF-6726-MG (inorganic glass fibre, 25 micron)	F
SF-6721 (filter paper, 10 micron)	G
SF-6711 (filter paper, 25 micron)	H
SF-6791 (wire mesh, 125 micron)	J

Heated Offline 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 Offline Filters are available in single or multiple housing configurations. The Offline Filter Units can easily be mounted to new and existing hydraulic installations.

By means of an integrated motor/pump unit and an Offline 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 Offline 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 of 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 Offline Filters

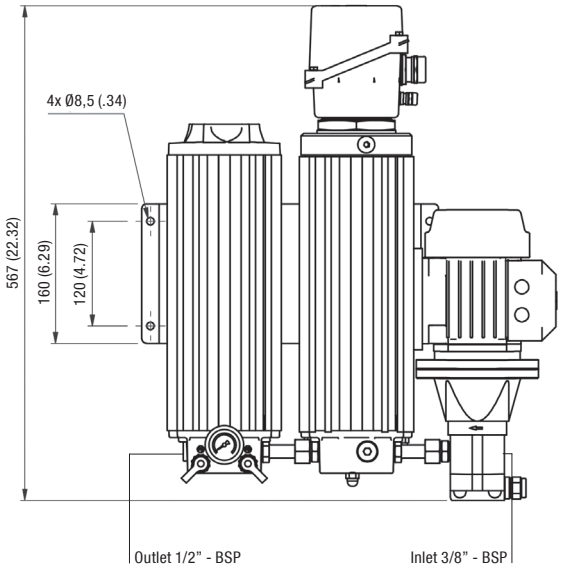
The electric pre-heating ensures that the cold and/or high viscosity fluid is brought to a temperature with a suitable filtration viscosity. Offline Filters with pre-heating can be applied to new or existing installations. The integrated pump-motor combination draws fluid from the reservoir, pumps it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

Advantages

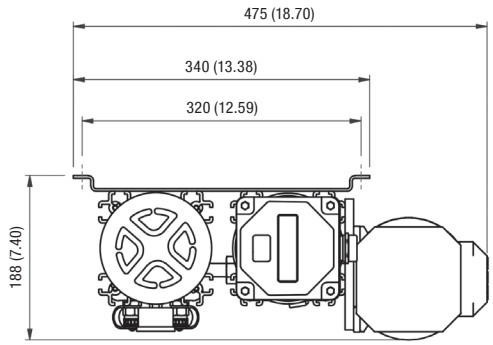
- Extremely clean oil due to the high filtration efficiency $ß_{0,5} \geq 200$, $ß_2 \geq 2330$
- Prevention of channel forming by radial filtration direction
- Increased flow capacity
- Increased dirt holding capacity
- Large water holding capacity
- Compact and easy maintenance design
- Longer usage life for oil and components

Heated Offline Filters ▪ Type OLSH

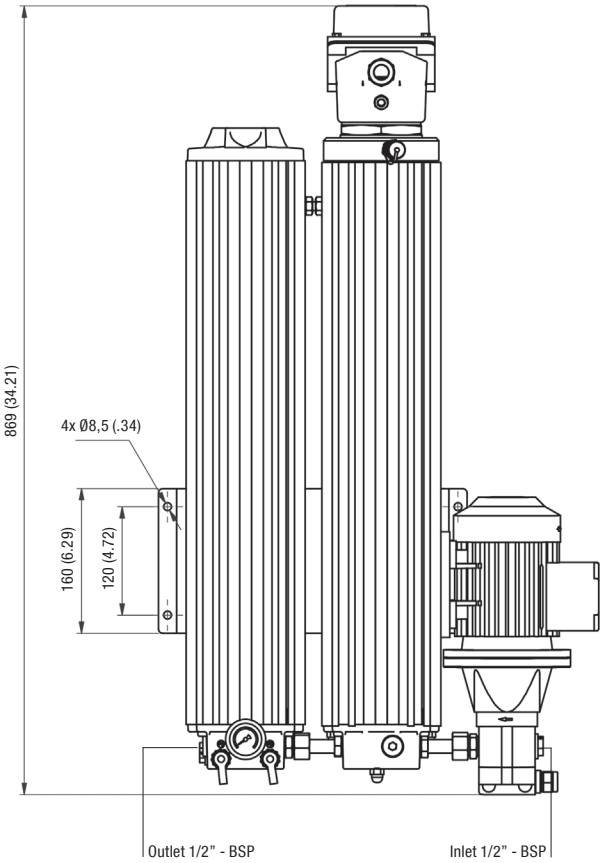
Dimensions OLSH-1-30-H-B



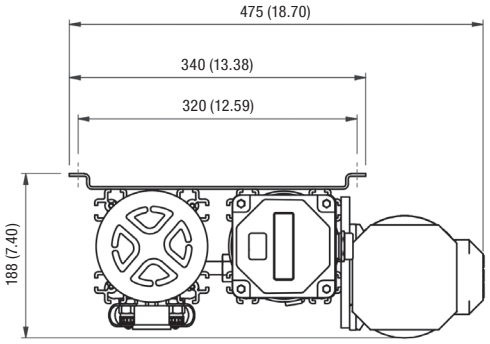
Top View



Dimensions OLSH-1-60-H-B



Top View



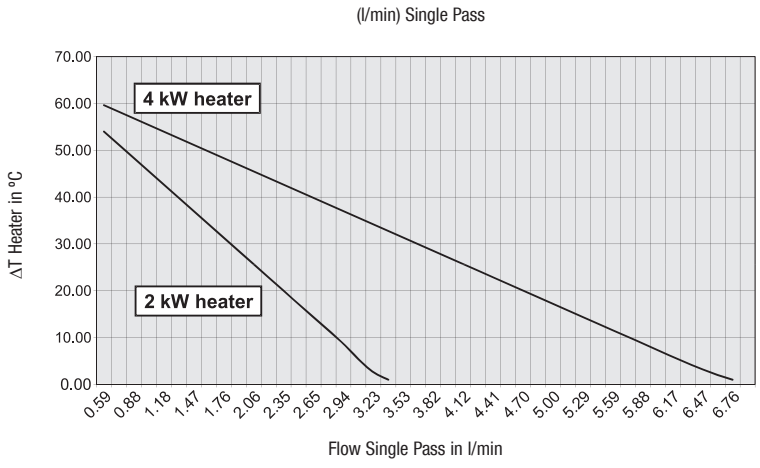
All dimensions in mm / in

Heated Offline Filters ▪ Type OLSH

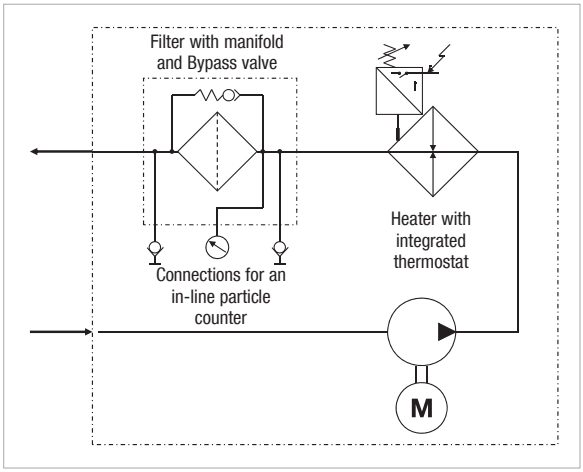
Technical Data Heated Offline Filters

	OLSH-1-30-H-B	OLSH-1-60-H-B
Number of Filter Housings	1	1
Nominal Flow	2,1 l/min	4,2 l/min
	.6 US GPM	1.2 US GPM
Max. Differential Pressure	6,2 bar	
	90 PSI	
Max. Fluid Temperature	+80 °C	
	+176 °F	
Max. Housing Pressure	20 bar	
	290 PSI	
Heater Capacity	2 kW	
Connection Suction Side	G3/8	G1/2
Connection Return Side	G1/2	G1/2
Hose Diameter	1/2 in (inner diameter) flexible hose	3/4 in (inner diameter) flexible hose
Weight (including Element)	24 kg	28 kg
	44 lbs	62 lbs
Max. System Volume	1350 l	2700 l
	356 gal	713 gal
Dimensions H x W x D	567 x 475 x 188 mm	869 x 475 x 188 mm
	22.32 x 18.70 x 7.40 in	34.21 x 18.70 x 7.40 in
Connection for Online Particle Counter	STAUFF Test (M16 x 2)	STAUFF Test (M16 x 2)
Pump	Gear Pump	
Motor	See page 196 for electric motor details	
Connection Oil-Analysis: P1 filter inlet side P2 filter outlet side	 Test connector (M16 x 2) Red Test connector (M16 x 2) Yellow	

STAUFF Heating Efficiency Curve



Heated Unit Hydraulic Schematic



G

Heated Offline Filter Housings / Complete Filters ▪ Type OLSH

OLSH	-	1	-	30	-	H	-	B	-	A	-	00	-	V	-	O
①		②		③		④		⑤		⑥		⑦		⑧		⑨

① Type

Heated Offline Filter Unit (for industrial applications)	**OLSH**

② Housing Configuration

Single housing	**1**

③ Filter Element Length

300 mm / 11.81 in	**30**
600 mm / 23.62 in	**60**

④ Filter Material

Material	Micron Rating µm	Code
Cellulose (standard)	0,5	**H**
Inorg. glass fibre	1	**E-01**
Inorg. glass fibre	3	**E-03**
Inorg. glass fibre	5	**E-05**
Inorg. glass fibre	10	**E-10**
Inorg. glass fibre	20	**E-20**
Inorg. glass fibre and polymer (water absorption)	5	**EA**

⑤ Sealing Material

NBR (Buna-N®) (standard)	**B**
FKM (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)	**A**
230 V AC, 50 Hz, single phase	**G**
230/400 V AC, 50 Hz, three phases, IP65	**A-IP65**
230 V AC, 60 Hz, single phase, 1630 r/min	**H**

Note: Special motors on request.

⑦ Pump Options

Standard for 50 Hz Motor	Standard for	Code
1,6 cc/rev.	OLSH-1-30-H-B	**00**
3,15 cc/rev.	OLSH-1-60-H-B	**10**
1.0 cc / rev.		**60**

60 Hz Motor	Standard in	Code
1,25 cc / rev.	OLSH-1-30-H-B	**01**
2,5 cc / rev.	OLSH-1-60-H-B	**11**

⑧ Clogging Indicator

Visual clogging indicator	**V**

⑨ Mounting Options

No options (standard)	**O**

G

Filter Elements ▪ Type SRM

SRM	-	30	-	H	-	B	/	X
①		②		③		④		⑤

① Type

Filter Element Series	**SRM**

② Filter Element Length

300 mm / 11.81 in	**30**
600 mm / 23.62 in	**60**

③ Filter Material and Micron Rating

Material	Micron rating µm	Code
Cellulose (standard)	0,5	**H**
Inorg. glass fibre	1	**E-01**
Inorg. glass fibre	3	**E-03**
Inorg. glass fibre	5	**E-05**
Inorg. glass fibre	10	**E-10**
Inorg. glass fibre	20	**E-20**
Inorg. glass fibre and polymer (water absorption)	5	**EA**

④ Sealing Material

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

⑤ Design Code

Only for information	**X**

Bypass Filters ▪ Type BPS

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. 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 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.

Material
- Housing: Anodized Aluminium

Differential Pressure
- Max. 6,2 bar / 90 PSI

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

Media Compatibility
- Mineral and lubrication oils, others on request

Options and Accessories (only for BPS)

Clogging Indicators
- Visual clogging indicators

Valves
- Available with flow control valve

Type BPS

- Bypass filter units are especially designed for mobile applications in hydraulic and/or transmission systems
- No special motor-pump unit is required

- Housing pressure: max. 20 bar / 290 PSI
- Nominal flow rate: max. 4,2 l/min / 1.1 US GPM
- System volume: max. 1350 l / 356 gal
- Connections: G1/4, G1/2
- Pressure range: 12 ... 420 bar / 180 ... 6200 PSI

Type BPS

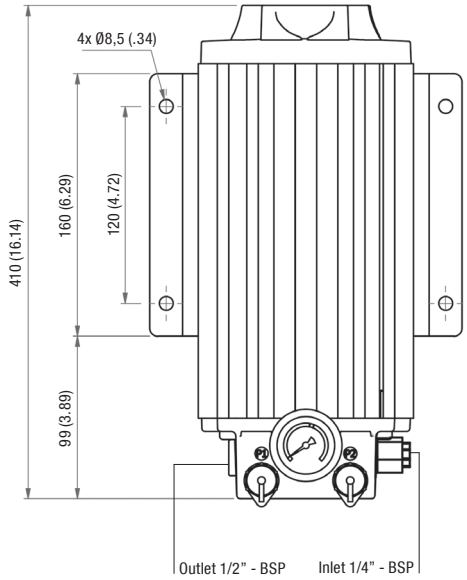
- Bypass filter units are especially designed for mobile applications in hydraulic and/or transmission systems
- No special motor-pump unit is required

- Housing pressure: max. 20 bar / 290 PSI
- Nominal flow rate: max. 4,2 l/min / 1.1 US GPM
- System volume: max. 2700 l / 713 gal
- Connections: G1/4, G1/2
- Pressure range: 12 ... 420 bar / 180 ... 6200 PSI

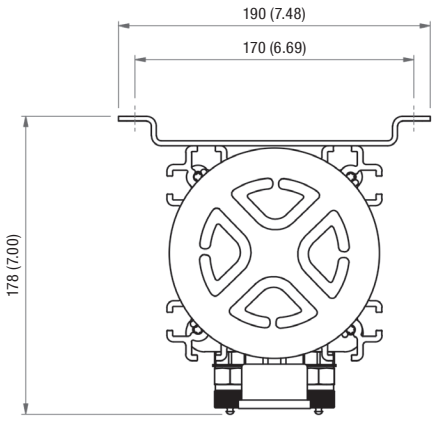
G

Bypass Filters ▪ Type BPS

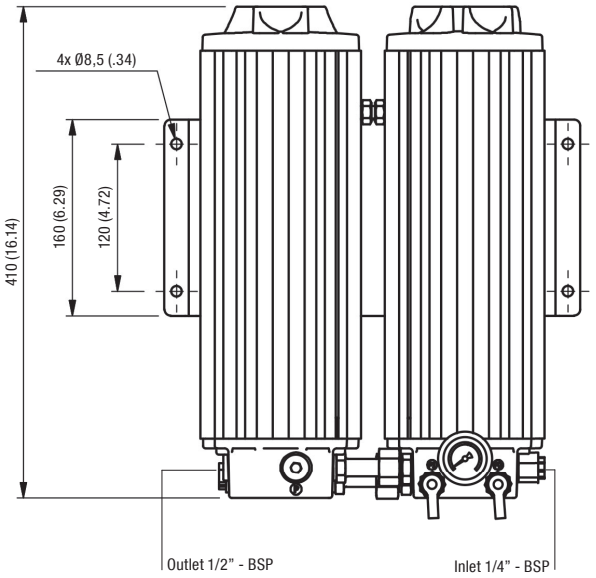
Dimensions BPS-1-30-H-B



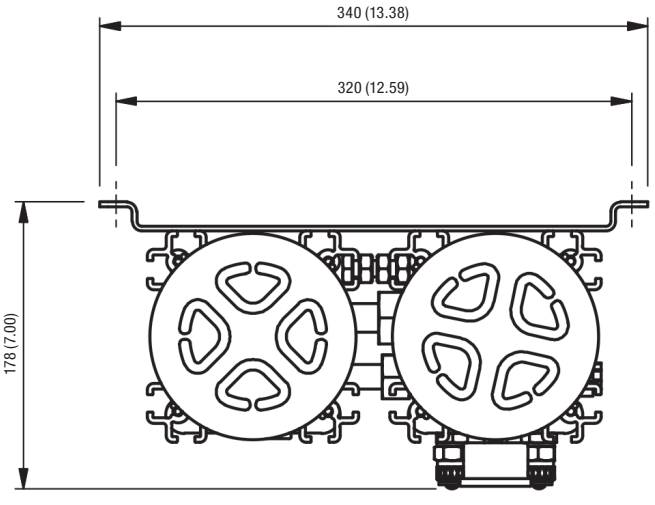
Top View



Dimensions BPS-2-30-H-B



Top View



All dimensions in mm / in

Technical Data BPS

	BPS-1-30-H-B	BPS-2-30-H-B
Number of Filter Housings	1	2
Nominal Flow Rate	2,1 l/min	4,2 l/min
	.6 US GPM	1.1 US GPM
Max. Differential Pressure	6,2 bar over the filter element without back pressure	
	90 PSI over the filter element without back pressure	
Max. Fluid Temperature	+80 °C	
	+176 °F	
Max. Housing Pressure	20 bar	
	290 PSI	
Viscosity Range	20 ... 160 cSt	
	100 ... 750 SUS	
Connection Pressure Side	G1/4	
Connection Return Side	G1/2	
Hose Diameter	3/8 ... 1/2 in (inner diameter) flexible hose	
Weight (including Element)	6 kg	13 kg
	13.2 lbs	28.7 lbs
Max. System Volume	750 l	1500 l
	200 gal	400 gal
Dimensions H x W x D	410 x 190 x 178 mm	410 x 340 x 178 mm
	16.14 x 7.48 x 7.00 in	16.14 x 13.38 x 7.00 in
Connection for On-Line Particle Counter	STAUFF Test (M16 x 2)	
Pressure Range	12 ... 420 bar	
	180 ... 6200 PSI	
Connection Oil-Analysis: P1 filter inlet side P2 filter outlet side	 Test connector (M16 x 2) Red Test connector (M16 x 2) Yellow	

Bypass Filter Housings / Complete Filters ▪ Type BPS

BPS - 1 - 30 - H - B - V - O - O

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Type

Bypass Filter Unit (for mobile applications)	BPS

② Housing Configuration

Single housing	1
Twin housing	2

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	E-01
Inorg. glass fibre	3	E-03
Inorg. glass fibre	5	E-05
Inorg. glass fibre	10	E-10
Inorg. glass fibre	20	E-20
Inorg. glass fibre and polymer (water absorption)	5	EA

⑤ Sealing Material

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

⑥ Clogging Indicator

Visual clogging indicator	V

⑦ Valve Options

With flow control valve (standard)	O
Without flow control valve	1

⑧ Mounting Options

No bracket (standard)	O
With standard foot / bulk head mounting bracket	1
With “bulk head mounting only” bracket	2
With standard ‘OLS’ wall mounting bracket	3

Filter Elements ▪ Type SRM

SRM - 30 - H - B / X

① ② ③ ④ ⑤

① Type

Filter Element Series	SRM

② Filter 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	E-01
Inorg. glass fibre	3	E-03
Inorg. glass fibre	5	E-05
Inorg. glass fibre	10	E-10
Inorg. glass fibre	20	E-20
Inorg. glass fibre and polymer (water absorption)	5	EA

④ Sealing Material

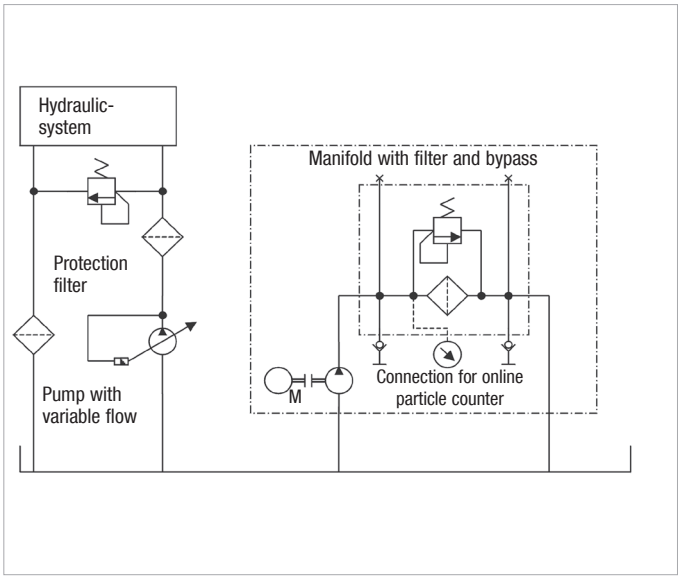
NBR (Buna-N®) (standard)	B
FKM (Viton®)	V

⑤ Design Code

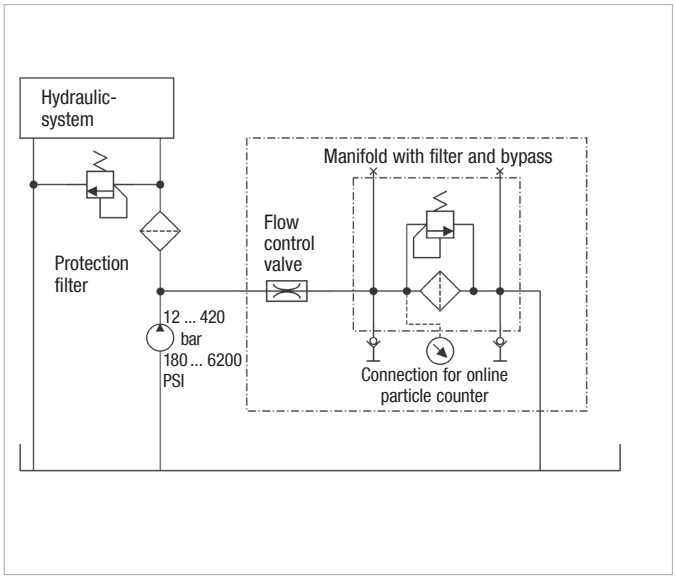
Only for information	X

Bypass and Offline Filters ▪ Type OLS / BPS

Offline Filter OLS Hydraulic Symbol



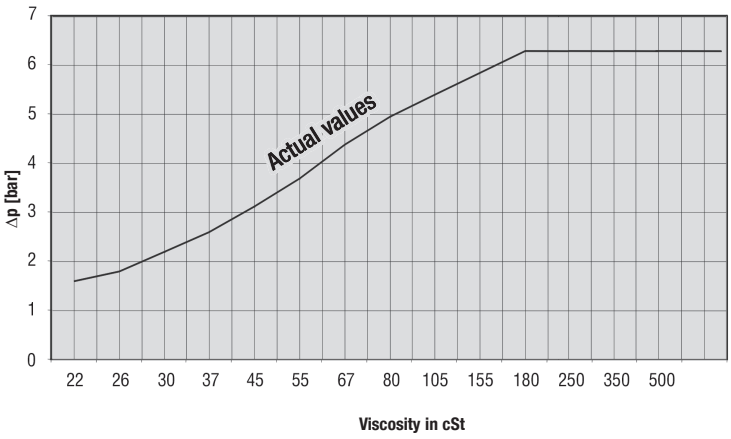
Bypass Filter BPS Hydraulic Symbol



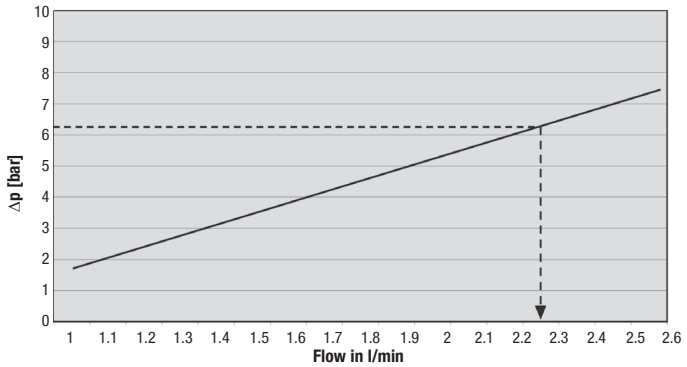
G

Filter Element SRM-30-HB Δp / viscosity - graph

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



Flow Characteristics Offline Filter OLS with Filter Element SRM-30-H-B (at maximum viscosity)



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