

Replacement cartridge filter

RE 51426/11.13
Replaces: 01.10

1/12

Type 7 SL 30 to 260; 7 SLS 90 to 260; 50 SL 30 to 80 DSize 7 SL: 30 to 260
7 SLS: 90 to 260
50 SL: 30 to 80 D

Nominal pressure 7 and/or 50 bar

Port up to G 1 1/4, SAE 1 1/2" (3000 psi), SAE 20

Operating temperature -10 °C to +100 °C (shortly down to -30 °C)



filter_29_d

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Application

- Filtration of mineral oils (hydraulic and lubricating oils).
- Direct installation into pipelines.
- Direct wear protection for downstream components and systems.
- Optimized design for use in mobile hydraulics.

Features

- Filters for inline installation
- Optimized for mobile hydraulics
- Installation in suction, pressure and return lines possible
- 7 SLS version with return flow block, patented and environmentally friendly
- Flow-optimized version due to 3D computer-supported design
- Low pressure drop
- Special highly efficient filter media



Structure

Filter head with inlet and outlet as well as holder for one or two replacement cartridges. The filter element is firmly integrated into the tank of the replacement cartridge.

7 SLS:
Patented version with integrated isolator valve in the filter head for a leakage-free replacement of the replacement cartridge.

Replacement cartridge

Replacement cartridge with filter element in pleated design with optimized pleat density and various filter media.

The filter element is the most important component of the "FILTER" system in view of prolonged life and wear protection of the system.

The required cleanliness of the operating medium, the initial pressure differential and the dirt holding capacity are the most important criteria for selection.

For more information on the filter material please refer to our "Filter Elements" brochure.

Accessories

Maintenance indicators

They serve the monitoring of the degree of contamination of the replacement cartridge and are available as optical and optical / electronic indicator, with one or two switching points.

Bypass valve

To protect the replacement cartridge during startup and exceedance of the pressure differential due to contamination.

Characteristic curves

Our software "BRFilterSelect" 1) makes it possible to optimise filter selection, see download area
<http://www.boschrexroth.com/filter>.

Quality and standardization

The development, manufacture and assembly of Rexroth industrial filters and Rexroth filter elements is carried out within the framework of a certified quality management system in accordance with ISO 9001:2000.

The replacement cartridge filters for hydraulic applications according to RE 51426 are pressure holding equipment according to article 1, section 2.1.4 of the pressure equipment directive 97/23/EC (PED). However, on the basis of the exception in article 1, section 3.6 of the PEG, hydraulic filters are exempt from the PED if they are not classified higher than category I (guideline 1/19). They do not receive a CE mark.

Ordering code

of the filter

		S		0				0			
Pressure											Amending information
7 bar	= 7										0 = Without
50 bar	= 50										R = Check valve in outlet (only with 7 SLS without bypass valve)
Design											Z = Certificates (on request)
Suction and pressure line filter	= SL										Housing material
Suction and pressure line filter with isolator valve	= SLS										0 = Standard material according to dimension sheet
Size											Seal
7 SL...	= 30/20, 30/21, 45/20, 45/21, 60/20, 60/21, 90, 130, 180 ¹⁾ , 260 ²⁾										M = NBR
7 SLS...	= 90, 130, 180 ¹⁾ , 260 ²⁾										V = FKM
50 SL...	= 30, 30 D, 45, 45 D, 60, 60 D, 80, 80 D										Port
Filter rating in µm nominal											R0 = Pipe thread
Paper, non-cleanable: P5, P10, P25	= P...										S0 = SAE flange
absolute (ISO 16889)											U0 = UNF thread
Micro glass, non-cleanable: H1XL, H3XL, H6XL, H10XL, H20XL	= H...XL										Maintenance indicator
Pressure differential											0 = without
max. admissible pressure differential of the filter element											A = Pressure gauge 0...6 bar
Standard 5 bar, with version 7 SL(S), and 8 bar, with version 50 SL	= S										C = Vacuum meter -1...0.6 bar
Element model											F0,2 = Vacuum switch normally open contact
Standard adhesive T = 100 °C	= 0...										G0,2 = Vacuum switch normally closed contact
Special adhesive T = 170 °C	= H...										H1,5 = Pressure switch normally open contact
Standard material	= ...0										J1,5 = Pressure switch normally closed contact
Solenoid											L... = Integr. maintenance indicator opt. (only for 50 SL) Specify switching pressure
Without	= 0										M... = Integr. maintenance indicator electr. (only for 50 SL) Specify switching pressure
											P1,5 = Pressure differential indicator opt./ electr. with connector (only for 7 SL 90 - 260)
											Bypass valve
											0 = without
											1 = 0.3 bar
											2 = 0.8 bar
											3 = 1.5 bar
											4 = 2.0 bar
											5 = 2.5 bar
											6 = 3.0 bar

Order example:

7 SL 45/21 P10-S00-00H1,5-R0M00

Further versions (filter materials, ports, switching pressures, etc.) are available at request.

¹⁾ The filter 7 SL(S) 180 contains two replacement cartridges of size 90 (see unit dimensions on page 10).

²⁾ The filter 7 SL(S) 260 contains two replacement cartridges of size 130 (see unit dimensions on page 10).

Standard types

Bypass valve, cracking pressure 2.0 bar
 Pressure gauge, version M010, 0...6 bar
 Related type code characteristics

No	Yes	No	Yes
No	No	Yes	Yes
** = 00	** = 40	** = 0A	** = 4A

Replacement cartridge filter, nominal pressure 7 bar, filter material and rating micro glass 10 µm

Type	Flow in l/min	Material no.			
7 SL 45/21 H10XL-S0-0** R0M00	40	R928028291	R928019208	R928028293	R928028294
7 SL 90 H10XL-S0-0** R0M00	140	R928028290	R928019206	R928028295	R928027821
7 SL 130 H10XL-S0-0** R0M00	150	R928028287	R928019211	R928028298	R928025538
7 SL 180 H10XL-S0-0** R0M00	240	R928028288	R928019985	R928028299	R928028301
7 SL 260 H10XL-S0-0** R0M00	260	R928028289	R928028292	R928028300	R928028302

Replacement cartridge filter, nominal pressure 7 bar, filter material and rating paper, 10 µm

Type	Flow in l/min	Material no.			
7 SL 45/21 P10-S0-0** R0M00	45	R928019765	R928028305	R928028306	R928028307
7 SL 90 P10-S0-0** R0M00	185	R928019769	R928028308	R928028309	R928028310
7 SL 130 P10-S0-0** R0M00	190	R928028303	R928028311	R928028312	R928028313
7 SL 180 P10-S0-0** R0M00	300	R928019774	R928028314	R928028315	R928028316
7 SL 260 P10-S0-0** R0M00	300	R928028304	R928028317	R928028318	R928028319

Replacement cartridge filter with return flow block, nominal pressure 7 bar, filter material and rating micro glass, 10 µm

Type	Flow in l/min	Material no.			
7 SLS 90 H10XL-S0-0** R0M00	135	R928028320	R928028321	R928028322	R928028323
7 SLS 130 H10XL-S0-0** R0M00	150	R928028324	R928028338	R928028339	R928028340

Replacement cartridge filter with return flow block, nominal pressure 7 bar, filter material and rating paper, 10 µm

Type	Flow in l/min	Material no.			
7 SLS 90 P10-S0-0** R0M00	185	R928028341	R928028342	R928028343	R928028344
7 SLS 130 P10-S0-0** R0M00	190	R928028345	R928028346	R928028347	R928028348

Replacement cartridge filter, nominal pressure 50 bar, filter material and rating micro glass, 10 µm

Type	Flow in l/min	Material no.			
50 SL 30D H10XL-S0-0** R0M00	25	R928028349	R928028350	R928028351	R928028352
50 SL 45D H10XL-S0-0** R0M00	40	R928028353	R928028354	R928028355	R928028356
50 SL 60D H10XL-S0-0** R0M00	90	R928028357	R928028358	R928028359	R928028360
50 SL 80D H10XL-S0-0** R0M00	100	R928028361	R928028362	R928028363	R928028364

Replacement cartridge filter, nominal pressure 50 bar, filter material and rating paper, 10 µm

Type	Flow in l/min	Material no.			
50 SL 30D P10-S0-0** R0M00	30	R928028365	R928028366	R928028367	R928028368
50 SL 45D P10-S0-0** R0M00	45	R928028369	R928028370	R928028371	R928028372
50 SL 60D P10-S0-0** R0M00	110	R928028373	R928028374	R928028375	R928028376
50 SL 80D P10-S0-0** R0M00	120	R928028377	R928028378	R928028379	R928028380

Maintenance indicator

Maintenance indicators serve the monitoring of the degree of contamination of the replacement cartridge. They are avail-

able as optical, electronic or optical / electronic indicators. Technical data see "Maintenance indicator" brochure

<p>Backpressure gauge M 010</p>	<p>Vacuum gauge M 070</p>	<p>Opt.-mech. indicator P1,5</p>	
<p>Material number: R928019224</p>	<p>Material number: R928025266</p>	<p>Material number: R928019225</p>	
<p>Ordering information in the type code: A</p>	<p>Ordering information in the type code: C</p>	<p>Ordering information in the type code: D</p>	
<p>Pressure switch Normally open contact H1,5 HS 32 00M* Normally closed contact H1,5 HA 32 00M*</p>	<p>Vacuum switch Normally open contact I0,2 HS 32 00M* Normally closed contact I0,2 HA 32 00M*</p>	<p>For 7 SL(S): Pressure differential indicator optical/electric with connector F1,5 GW 02 00M*</p>	<p>For 50 SL: Pressure differential indicator electric with connector W... GW 02 00M*</p>
<p>Material number: R928019219 (normally open contact) R928036128 (normally closed contact)</p>	<p>Material number: R928035839 (normally open contact) R928034711 (normally closed contact)</p>	<p>Material number: R928019336</p>	<p>Material number: Various, depending on the switching pressure</p>
<p>Ordering information in the type code: Normally open contact: H1,5 Normally closed contact: J1,5</p>	<p>Ordering information in the type code: Normally open contact: F0,2 Normally closed contact: G0,2</p>	<p>Ordering information in the type code: P1,5</p>	<p>Ordering information in the type code: M... (Specify switching pressure)</p>
<p>H: Normally open contact</p> <p>J: Normally closed contact</p>	<p>F: Normally open contact</p> <p>G: Normally closed contact</p>		

* M = NBR seal, alternatively V = FKM seal

Characteristic curves

Specific weight: $< 0.9 \text{ kg/dm}^3$

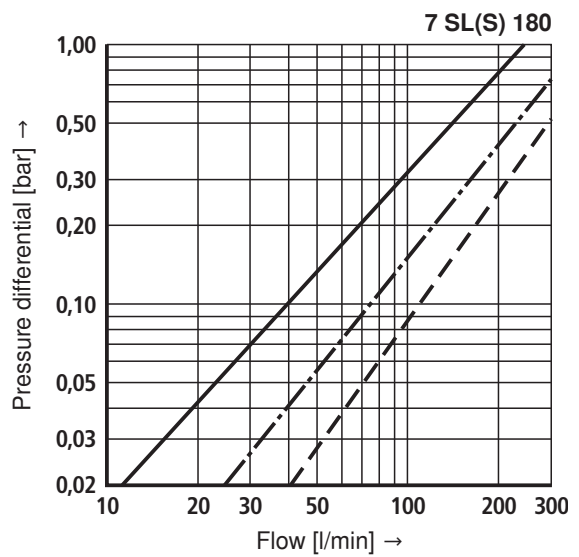
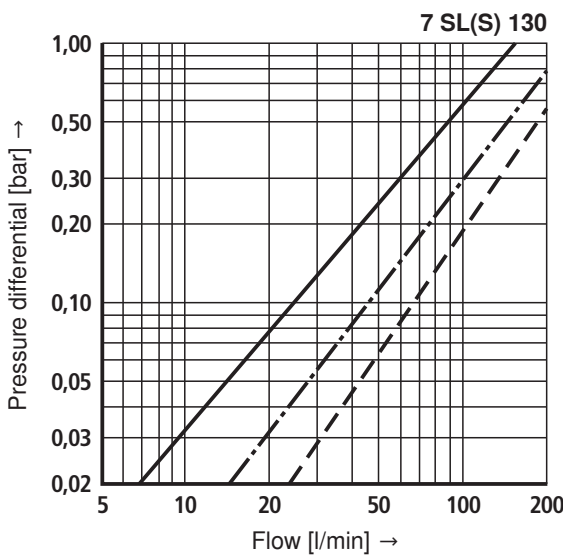
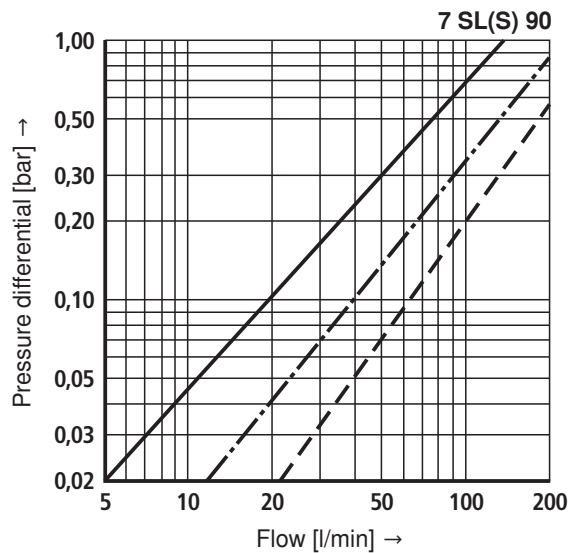
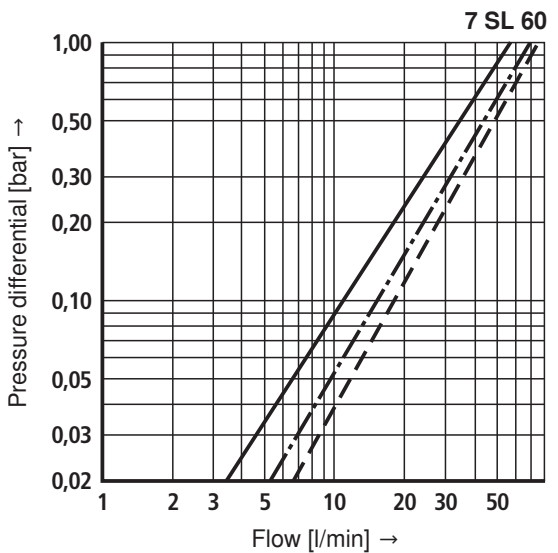
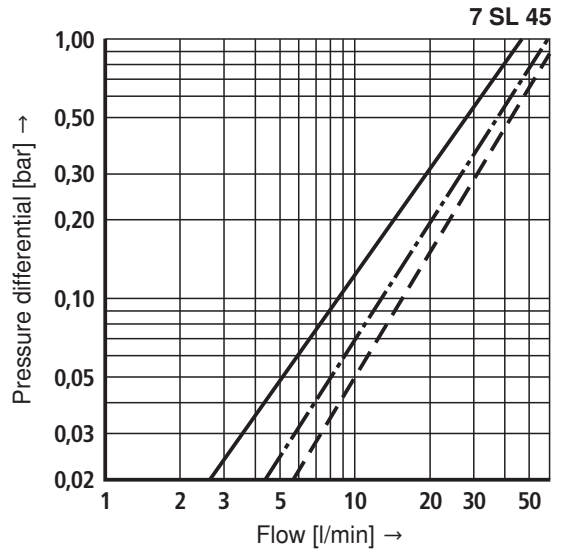
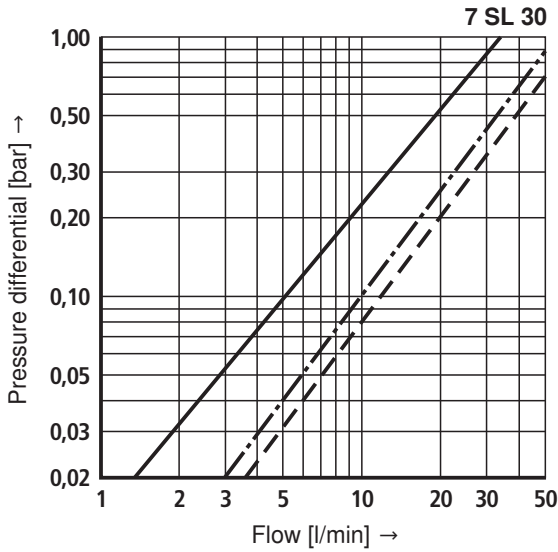
Oil viscosity $30 \text{ mm}^2/\text{s}$

$D_p Q$ characteristic curves for complete filters

recommended initial D_p for design = 0.5 bar

recommended max. flow velocity = 3 m/s

— H3XL - · - · H10XL - - - P10



Characteristic curves

Specific weight: $< 0.9 \text{ kg/dm}^3$

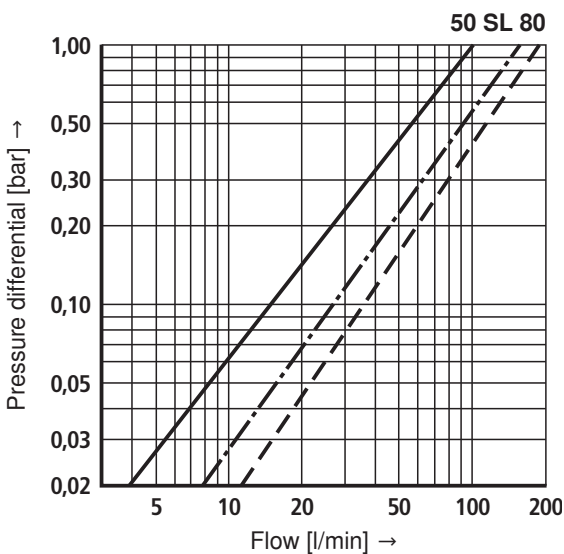
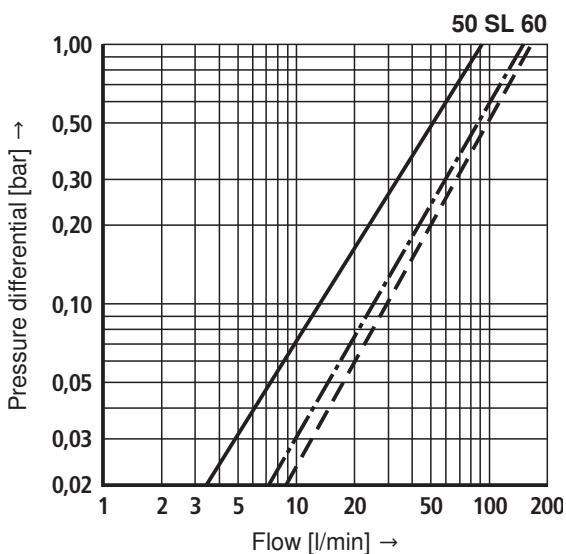
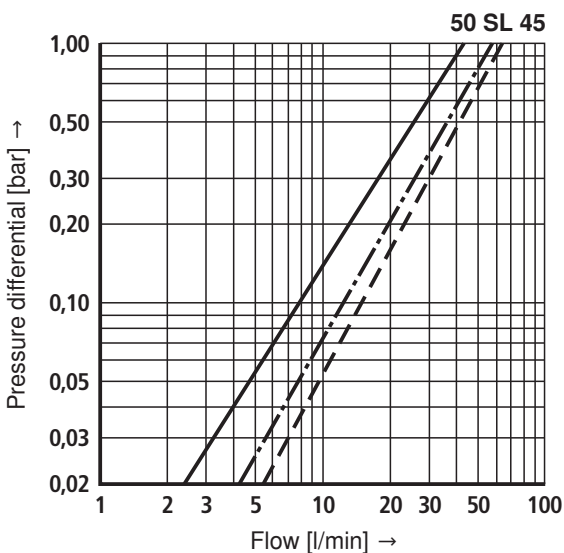
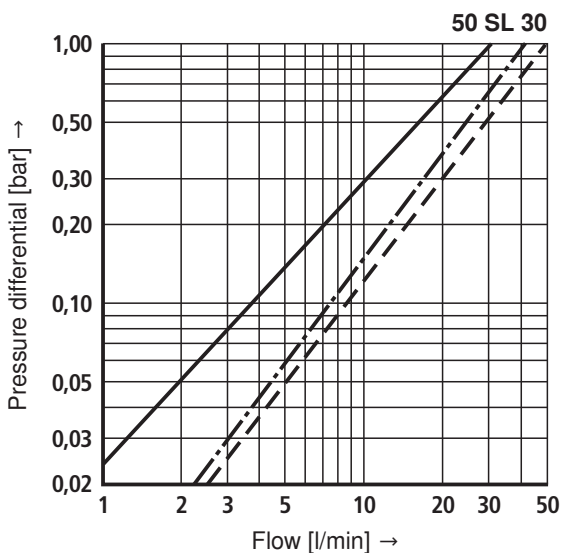
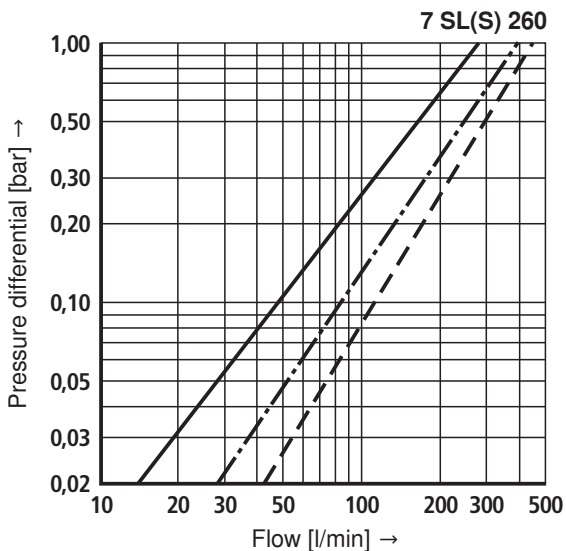
Oil viscosity $30 \text{ mm}^2/\text{s}$

$D_p Q$ characteristic curves for complete filters

recommended initial D_p for design = 0.5 bar

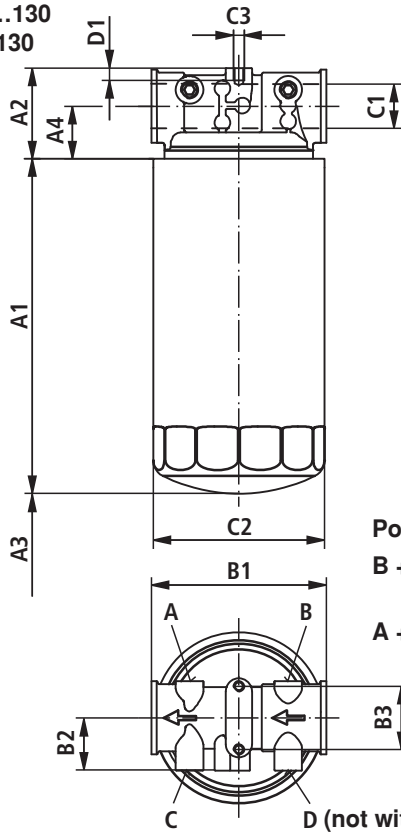
recommended max. flow velocity = 3 m/s

— H3XL - · - · H10XL - - - P10

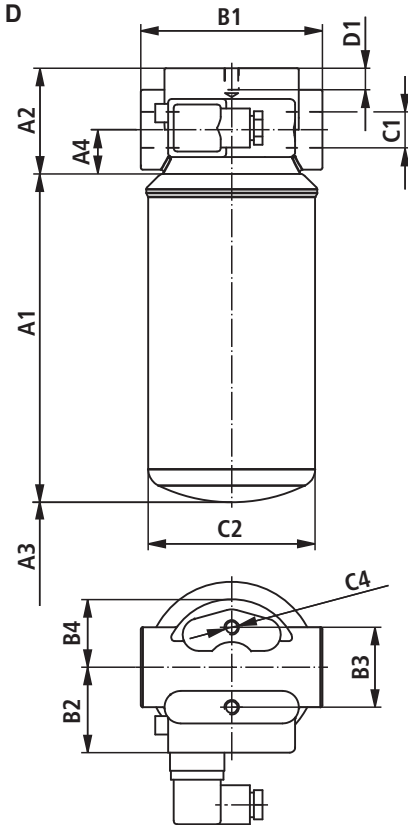


Unit dimensions: 7 SL 30/20...130, 7 SLS 90...130, 50 SL 30...80 D (dimensions in mm)

7 SL 30/20...130
7 SLS 90...130



50 SL 30...80 D



Port for:
B + D = Pressure gauge or pressure switch
A + C = Vacuum meter or vacuum switch

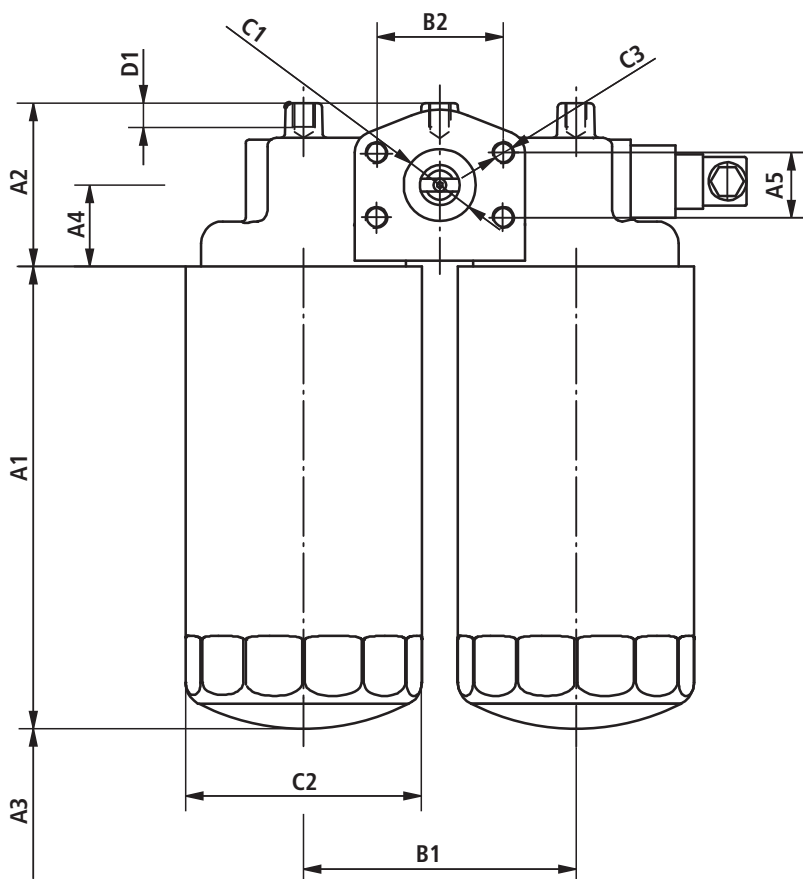
D (not with sizes 90 and 130)

Frame size	Replacement cartridge port	Volume in l	Weight in kg ¹⁾	A1	A2	A3 ²⁾	A4	B1	B2	B3	B4	C1			C2	C3	D1	
												R0	S0	U0				
7 SL 30/20	SAE 8 (UNF 3/4"-16)	0.5	0.8	95														
7 SL 30/21	G3/4																	
7 SL 45/20	SAE 8 (UNF 3/4"-16)	0.5	0.9	146	41		20	95	22	38	22	G3/4	-	-	Ø 92		15	
7 SL 45/21	G3/4																	
7 SL 60/20	UNF 1"-12	1.2	1.1	205														
7 SL 60/21	G3/4																	
7 SL 90	G1 1/4	2.0	1.6	183	69				40	133	48	28	G1 1/4	-	SAE 20 (15/8-12 UN)	Ø 128		16
7 SL 130		2.7	1.9	231														
7 SLS 90	M 42 x 2	2.0	1.8	183	20				39	48	27							
7 SLS 130		2.7	2.1	231														
50 SL 30	UNF 1"-12	0.6	1.1	113														
50 SL 30 D	UNF 1 3/8"-12																	
50 SL 45 D		0.9	1.3	149								G3/4						
50 SL 45	UNF 1"-12																	
50 SL 60		1.3	1.4	215	60		25	100	47	44	38		-	SAE 10 (7/8-14 UNF)	Ø 92		10	
50 SL 60 D	UNF 1 3/8"-12																	
50 SL 80 D		1.5	1.5	240								G1						
50 SL 80	UNF 1"-12																	

¹⁾ Weight including standard replacement cartridge and maintenance indicator

²⁾ Servicing height for replacement cartridge

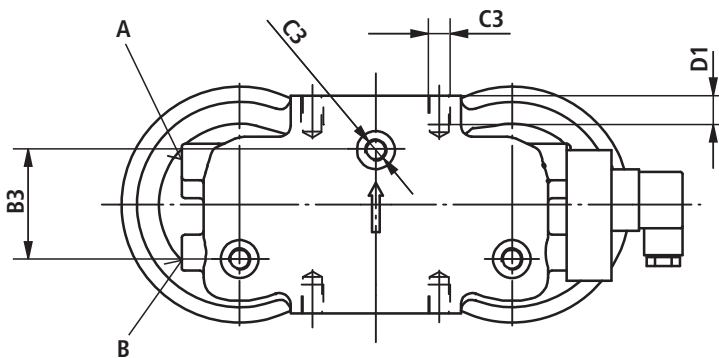
Unit dimensions: 7 SL 180...260, 7 SLS 180...260 (dimensions in mm)



Port for:

A = Vacuum meter or vacuum switch

B = Pressure gauge or pressure switch



Frame size	Replacement cartridge port	Volume in l	Weight in kg ¹⁾	A1	A2	A3 ²⁾	A4	A5	B1	B2	B3	C1			C2	C3	D1
												R0	S0	U0			
7 SL 180	G1 1/4	2.0	3.0	183	90	20	45	35.7	150	69.9	60	G1 1/2	SAE 1 1/2" 3000 psi	-	Ø 128	M 12	12
7 SL 260		2.7	3.2	231													
7 SLS 180	M 42 x 2	2.0	3.3	183	85	20	40	35.7	150	69.9	60	G1 1/2	SAE 1 1/2" 3000 psi	-	Ø 128	M 12	12
7 SLS 260		2.7	3.5	231													

¹⁾ Weight including standard replacement cartridge and maintenance indicator

²⁾ Servicing height for replacement cartridge

Installation, commissioning and maintenance

Filter installation

Verify operating pressure with nameplate information.

Screw the filter head (item 1) to the fastening devices, considering flow direction (direction arrows) and servicing height of the replacement cartridge.

Remove dust protection plugs from filter inlet and outlet, screw filter in pipeline without tension stress.

Connection of the electronic maintenance indicator

Establish the connection using a three-wire cable, observe the switching power on the nameplate of the maintenance indicator.

Connection versions:

1. Normally open contact: 1 (sw) + 3 (bl)
2. Normally closed contact: 1 (sw) + 2 (br)
3. Changeover contact: 1 (sw) + 2 (br) + 3 (bl)

Warning!

Assemble and disassemble filter only when system is depressurized!

Tank is under pressure!

Do not replace the maintenance indicator while the filter is under pressure!

Functional and safety warranty only applicable when using genuine Rexroth spare parts!

Service filter only by trained personal!

Commissioning

Switch on system pump.

Maintenance

If the red indicator pin reaches out of the maintenance indicator and/or if the switching process in the electronic display is triggered, the maintenance indicator has reached the pressure value and the replacement cartridge has to be renewed.

Exchange of the replacement cartridge

Switch of the operating pump.

Screw off the replacement cartridge and replace it with a new cartridge.

When doing so, use the seal / seal ring of the new cartridge.

Manually tighten the cartridges of pressure rating 7 bar (7 SL..., / 7 SLS...).

For assembling the cartridge of pressure rating 50 bar (50 SL...), an assembly line can be used. In this connection, do not overtighten the cartridge as there is the risk of damaging the sheet tank.

Perform the commissioning as described above.

Technical modifications reserved!

Notes

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