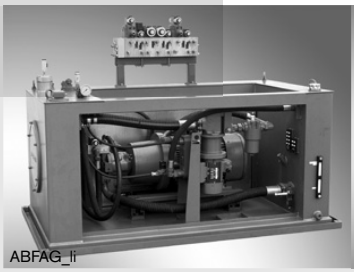
Rexroth
Bosch Group

Hydraulic drive power unit
Low noise compact unit
„Wispering power unit“

RE 51096/04.09 1/10
Replaces: 02.06

Type ABFAG



Type ABFAG …open

Type ABFAG …closed

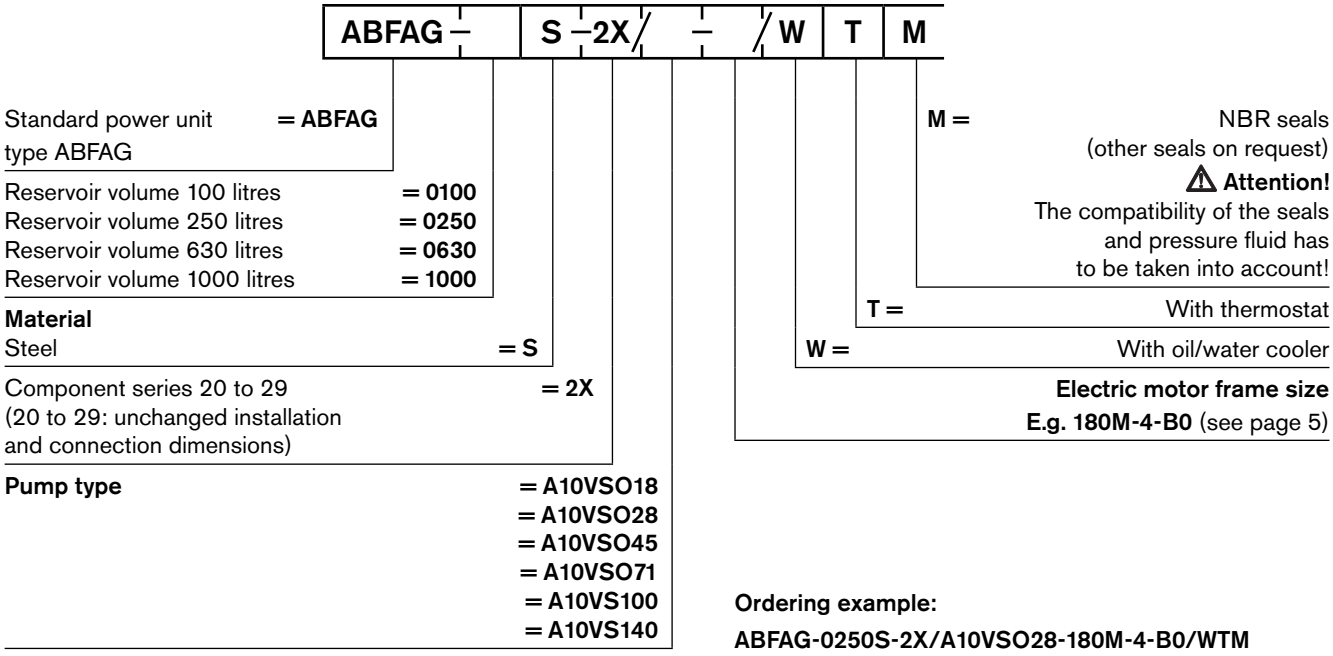
Component series 2X
Reservoir volume 100-1000 litres
horizontal design

Overview of contents

Features

- Very low noise compact unit
- Areas of application:
  - General machinery
  - Plastic processing machines
  - Stroke and lifting systems
  - Presses
  - Laboratory, schools
- The reservoir is in the form of a U with a flexibly mounted motor pump assembly
- The actuator connections terminate at a flexibly mounted bulk-head panel
- Good air separation characteristics
- Separate filter/cooler circuit
- Very accessible

Ordering details



Ordering example:

ABFAG-0250S-2X/A10VSO28-180M-4-B0/WTM

Function

Design

The oil reservoir is designed in the form of a ‚U' within which the motor pump assembly is located. The motor pump assembly is mounted on anti-vibration mounts. Due to the excellent isolation of structure-bourn noise using optimised anti-vibration mounts, the reservoir walls are subjected to very little vibration so that the noise emission from the unit is very low. Noise damping panels are fitted, one on the top and one on the side of the unit, these also contribute to the unusually low noise values. They also make the drive unit very accessible.

General guidelines:

- The actuator connections terminate at a flexibly mounted bulkhead panel.
- The enlarged wall surfaces ensure that any entrapped air easily separates from the pressure fluid.

Mounting controls

Space is foreseen on the rear and the reservoir top for mounting additional controls.

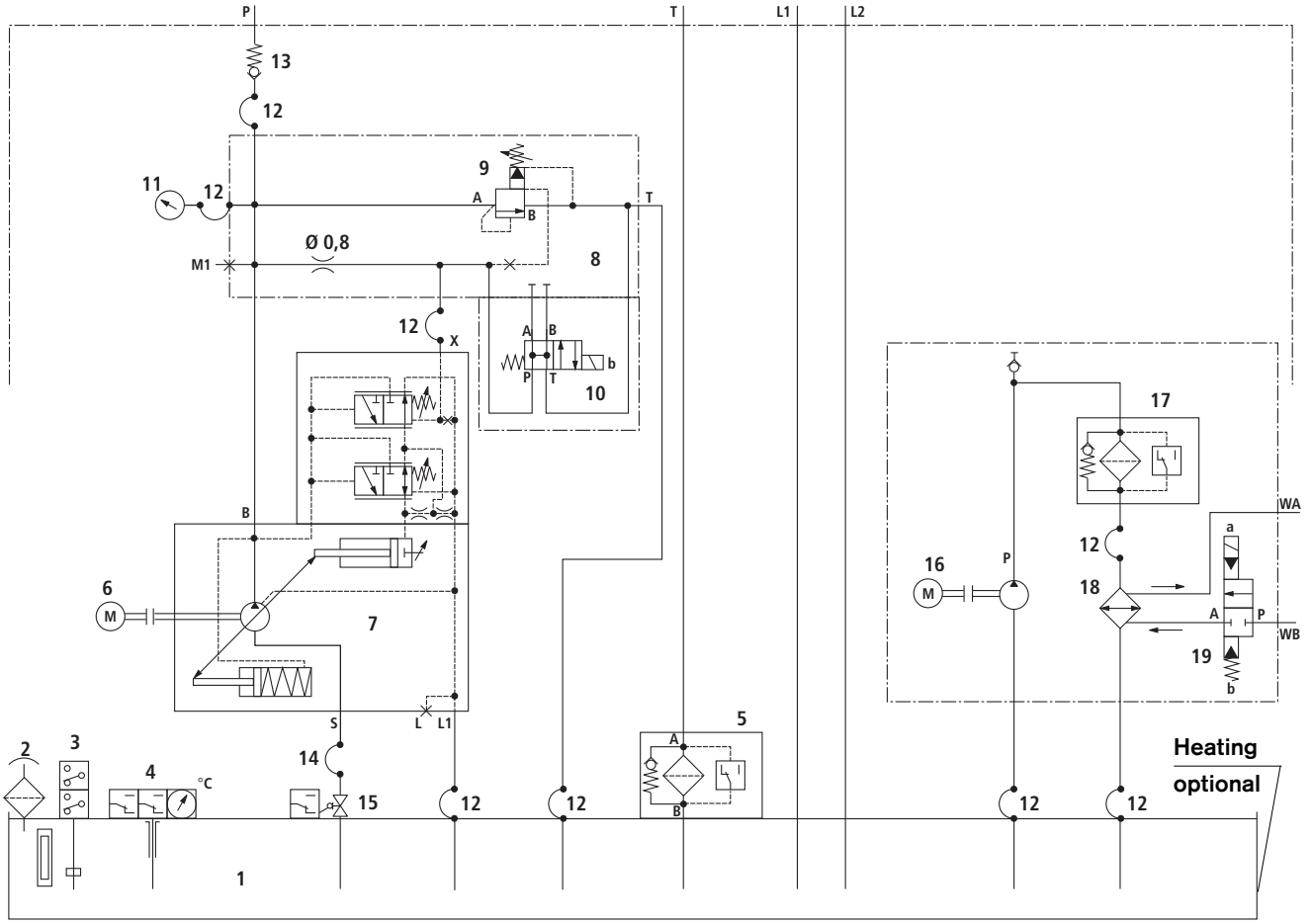
Space for mounting accessories, e.g. hydraulic accumulators, etc, is provided on the rear and sides of the unit.

Cooling

Heat generated by the power components of the unit is discipated via an oil/water cooler.

The cooler is integrated into a separate filter cooler circuit which provides continuous off-line filtration and cooling.

Circuit: U form whisper power unit



1 Oil reservoir
2 Filler/breather
3 Float switch
4 Thermostat with display
5 Return filter
6 Electric motor
7 Axial piston pump
8 Pressure safety block
9 Pressure relief valve
10 Directional valve
11 Pressure gauge
12 Pressure hose
13 Check valve
14 Suction hose
15 Check flap with monitoring of the position
16 Motor pump assembly
17 Filter
18 Oil/water cooler
19 Water control valve, electric

Technical data (for applications outside these parameters, please consult us!)

Connections	– Oil		Pipe threads to ISO 1179, pipe connections to DIN 2353/ ISO 8434, flanges to ISO 6162
	– Water		Pipe threads to ISO 228/1
Pump types			A10VSO 18 to catalogue sheet RE 92712
			A10VSO 28 to 140 to catalogue sheet RE 92711
			PVV 18 to 60 to catalogue sheet RE 10335
Motor pump assembly			ABAPG to catalogue sheet RE 51062
Type of pipework			Fittings to DIN 2353; light/heavy series; Type Walform
Pressure fluid			Mineral oil (HL, HLP) to DIN 51524; Fast bio-degradable pressure fluids to VDMA 24 568 (also see RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (syntetic ester); Other pressure fluids on request. Please take our specifications stated within catalogue sheet RE 07075 into account.
Pressure fluid temperature range		°C	0 to + 80 The optimim power unit operating temperature using mineral oil HLP to DIN 51 524 lies between 40 and 50 °C. For continuous operation the operating temperature should **not** exceed 70 °C.
Pressure safety			Pump safety valve to catalogue sheet RE 25890 for the variable displacement pump type A10VSO
Cooling medium			Drinking, industrial, stream and river water
Motor voltage/frequency			400/690 V-D/Y-50 Hz; 460 V-D-60 Hz (other voltages on request); frame type B 35
Direction of rotation			Clockwise
Water control valve			Electrically operated 2/2-way water control valve to AB-E 21-23
Viscosity range	– Optimum	mm^2/s	16 to 36
	– Briefly	mm^2/s	10 to 1000 (also see RE 92711; 92712 and RE 10335)
Cleanliness classes in accordance with ISO code			Max. permissible degree of contamination of the hydraulic fluid to ISO 4406 (c) class 21/18/15 [1)]
Surface protection	– 1st under coat		All steel components with zinc dust paint
	– 2nd under coat		Epoxy under coat RAL 5010 (RN 123.01)

[1)] The cleanliness classes specified for components must be adhered to in hydraulic systems. Effective filtration prevents malfunction and, at the same time, increases the service life of components.

For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086 and RE 50088.

Selection table

The Material No. can be determined after the pump type, nominal size and nominal pressure has been defined.

The Material No. contains all of the components shown in the circuit.

Reservoir volume 100 litres (filling capacity 130 ltrs.)

Pump nom. size	$q_{V\,max}$ in l/min	p_{max} in bar	Power *P* in kW	E-motor frame size	Cooling cap. in kW	Material Number
A10VSO 18	26	145	7.5	132M-4-B1	4	R900244959

Reservoir volume 250 litres

Pump nom. size	$q_{V\,max}$ in l/min	p_{max} in bar	Power *P* in kW	E-motor frame size	Cooling cap. in kW	Material Number
A10VSO 28	39	135	11	160M-4-B0	4	R900772815
	39	190	15	160L-4-B1	4	R900244978
	39	230	18.5	180M-4-B0	7.5	R900244979
	39	280	22	180L-4-B1	7.5	R900244980
A10VSO 45	63	115	15	160L-4-B1	7.5	R900772816
	63	145	18.5	180M-4-B0	7.5	R900244981
	63	170	22	180L-4-B1	7.5	R900244982
	63	235	30	200L-4-B0	15	R900244983

Reservoir volume 630 litres

Pump nom. size	$q_{V\,max}$ in l/min	p_{max} in bar	Power *P* in kW	E-motor frame size	Cooling cap. in kW	Material Number
A10VSO 71	100	90	18.5	180M-4-B0	7.5	R900772817
	100	110	22	180L-4-B1	7.5	R900772818
	100	150	30	200L-4-B0	15	R900244984
	100	185	37	225S-4-B0	15	R900244985
	100	225	45	225M-4-B1	15	R900244986
A10VSO 100	145	100	30	200L-4-B0	15	R900772819
	145	125	37	225S-4-B0	15	R900772820
	145	160	45	225M-4-B1	15	R900244987
	145	195	55	250M-4-B0	30	R900244988
	145	265	75	280S-4-B0	30	R900244989

Reservoir volume 1000 litres

Pump nom. size	$q_{V\,max}$ in l/min	p_{max} in bar	Power *P* in kW	E-motor frame size	Cooling cap. in kW	Material Number
A10VSO 140	203	110	45	225M-4-B1	15	R900772821
	203	140	55	250M-4-B0	30	R900244993
	203	190	75	280S-4-B0	30	R900244994
	203	220	90	280M-4-B1	30	R900244995

Typical noise values (measured at $n = 1450$ min^{-1}, $\vartheta_{oil} = 50$ °C) Details in dB(A)

Pump type	Pressure in bar	Flow ls/min	Pump nominal size					
			18	28	45	71	100	140
A10VSO	100	q_{Vmin}	59	60	62	65	68	69
		q_{Vmax}	62	63	65	68	70	71
	200	q_{Vmin}	61	63	65	68	71	72
		q_{Vmax}	64	65	68	71	73	75
	300	q_{Vmin}	63	66	69	71	72	73
		q_{Vmax}	66	68	71	73	75	75

Noise pressure level to DIN 45635 part 1, 41;

Distance from noise sensor to power unit; -1m

Measured at $n = 1450$ min^{-1}; operating temperature $\vartheta = 50$ °C

Pressure fluid: Mineral oil HLP to DIN 51524 part 2

Noise reflections at the place of final use can lead to a higher noise pressure level. (Lower noise levels on request)

With $n = 1000$ min^{-1} the noise values can be reduced by approx. 3 dB(A).

With $n = 1800$ min^{-1} the noise values are increased by approx. 3 dB(A).

When using a drip tray which complies with the WHG (Water Protection Act), the typical noise valves increase by approx. 3 dB(A). Built-on controls also increase the noise pressure level!

Replacement filter elements – DIN

Reservoir NS	Pump type	E-motor *P* in kW	Filter element type for the hydraulic power unit	Material No.	Filter element type for the filter cooler circuit	Material No.
100	A10VSO 18	7.5	ABZFE-R0063-10-1X/M-DIN	R901025291	ABZFE-N0063-10-1X/M-DIN	R901025361
250	A10VSO 28	11; 15	ABZFE-R0100-10-1X/M-DIN	R901025293		
		18.5; 22			ABZFE-N0100-10-1X/M-DIN	R901025362
	A10VSO 45	15 - 22	ABZFE-R0160-10-1X/M-DIN	R901025295		
		30			ABZFE-N0160-10-1X/M-DIN	R901025363
630	A10VSO 71	18.5 - 22	ABZFE-R0250-10-1X/M-DIN	R901025297	ABZFE-N0100-10-1X/M-DIN	R901025362
		30 - 45			ABZFE-N0160-10-1X/M-DIN	R901025363
	A10VSO 100	30 - 45	ABZFE-R0400-10-1X/M-DIN	R901025298		
		55 - 75				
1000	A10VSO 140	45				
		55 - 90				

Float switch settings

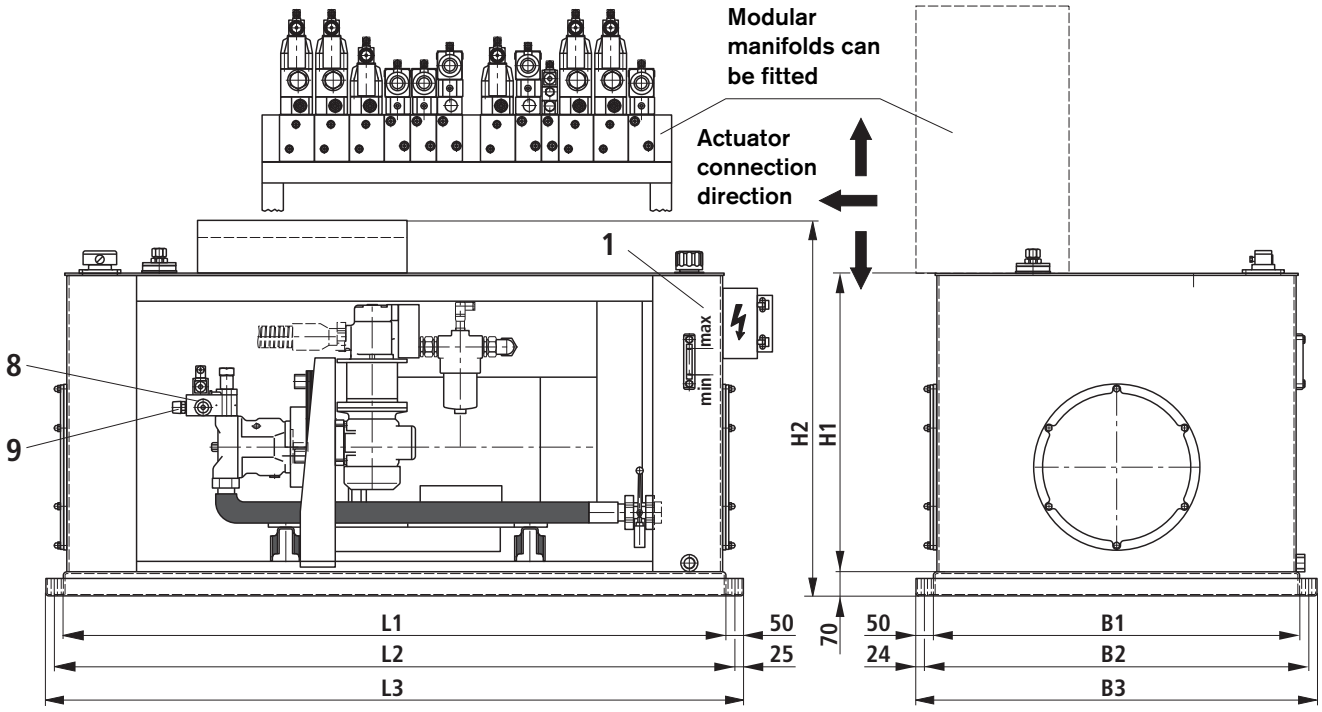
Reservoir nominal size	Residual volume at the upper switching point in litres	Residual volume at the lower switching point in litres
100	93	69
250	160	145
630	515	455
1000	745	685

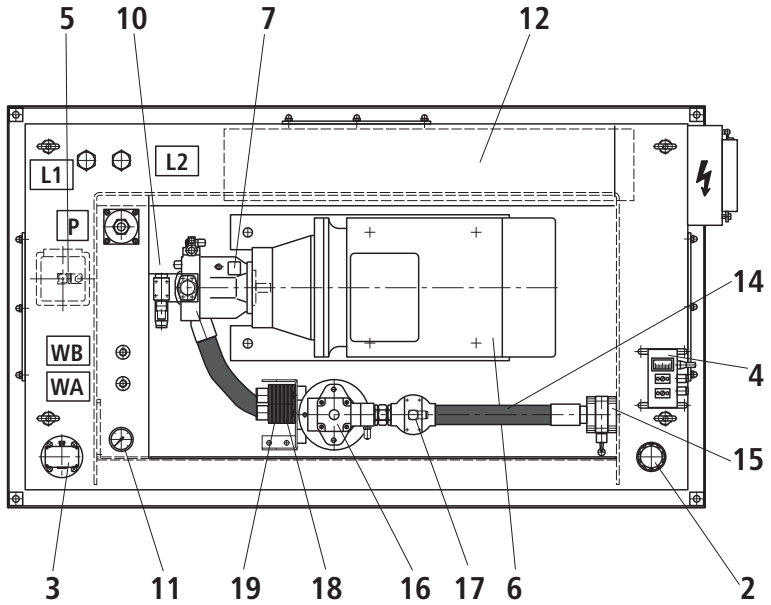
Flange and fitting sizes (SAE connections 3000 PSI) (in mm)

Reservoir NS (in ltrs.)	Pump type								
	A10VSO 18			A10VSO 28			A10VSO 45		
	P	T	L	P	T	L	P	T	L
100	Ø16	G1	Ø18						
250				Ø20	G1	Ø18	Ø25	G11/4	Ø18
630									
1000									

Reservoir NS (in ltrs.)	Pump type								
	A10VSO 71			A10VSO 100			A10VSO 140		
	P	T	L	P	T	L	P	T	L
100									
250									
630	Ø30	G11/2	Ø22	Ø38	SAE2	Ø28			
1000							Ø38	SAE2	Ø28

Unit dimensions (in mm)





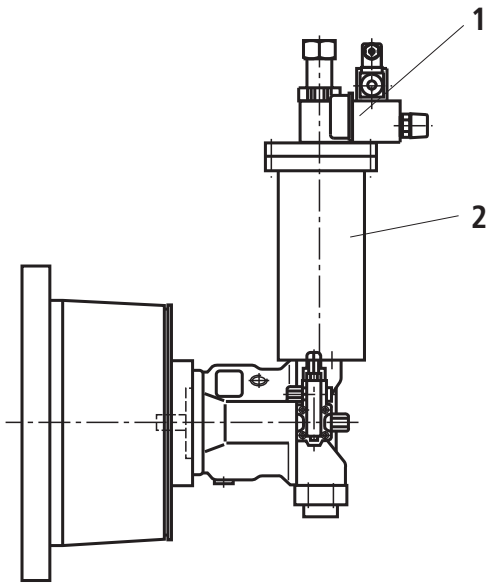
Reservoir - NS	L1	L2	L3	B1	B2	B3	H1	H2
100	1450	1502	1550	800	852	900	755	1070
250	1850	1902	1950	1000	1052	1100	955	1315
630	2300	2352	2400	1200	1252	1300	1080	1590
1000	2300	2352	2400	1250	1302	1350	1280	1790

1 Oil reservoir
2 Filler/breather
3 Float switch
4 Thermostat with display
5 Return filter
6 Electric motor
7 Axial piston pump
8 Pressure safety block
9 Pressure relief valve
10 Directional valve
11 Pressure gauge
12 Area for controls
13 Check valve (in pipe work)
14 Suction hose
15 Check flap with monitoring of the position
16 Motor pump assembly
17 Filter
18 Oil/water cooler
19 Water control valve, electrical

Option: Pulsation damper

Pulsation dampers are fitted into hydraulic systems that use displacement pumps and where noise is transmitted via the pressure fluid. Controls that are built onto the unit and their assoicated pipe work increase the noise valves. The nominal values can be retained by using the pulsation damper (see page 6). It is fitted directly onto the pumps pressure connection. For further information see RE 50142.

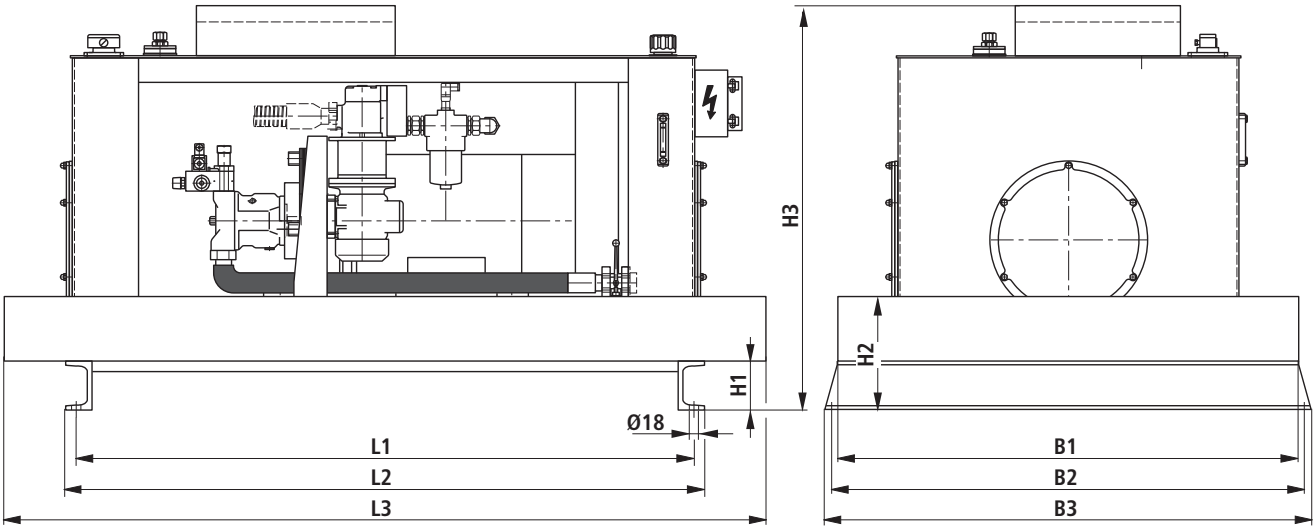
Pump	Nominal size	Material number
A10VSO	18, 28	R900863597
A10VSO	45, 71	R900863407
A10VSO	100, 140	R900863406



1 Pump safety block to RE 25890

2 Pulsation damper (max. pressure 300 bar)

Option: Drip tray in accordance with the Water Protection Act (WHG) (in mm)



Reservoir - NS	Material No.	L1	L2	L3	B1	B2	B3	H1	H2	H3
100	R900780835	1500	1550	1800	1150	1200	1250	140	260	1215
250	R900780836	1900	1950	2200	1350	1400	1450	140	240	1460
630	R900780837	2350	2400	2650	1550	1600	1650	140	285	1735
1000	R900780838	2350	2400	2650	1600	1650	1700	160	355	1955

When using a drip tray which complies with the WHG (Water Protection Act), the typical noise values increase by approx. 3 dB(A).

Ordering example:

OELWANNE ABFAG 250S 2200 x 1450 x 260
(Material No. **R900780836**)

Engineering guidelines

These units are of a molular design.
For further information please contact your Bosch Rexroth sales office.

Comprehensive instructions and proposals can be found in the Hdyraulic Trainer, volume 3, RE 00281, „Planning and design of hydraulic power systems.“

Commissioning guidelines

General

- The power units supplied by ourselves have been tested for function and performance. Changes in any form or manner to the power units are not permitted as this would also invalidate any guarantee claims.
- Repairs may only be carried out by the manufacturer or authorised agent or subsidary. No guarantee with be accepted for commissioning carried out by third parties.

Commissioning

- Only fill the pressure fluid via a filter which has the necessary retention rate.
- Take into account the direction of rotation arrow when connecting the electric motor.
- Start the pump without load and let it displace oil without pressure for a few seconds in order to provide sufficient lubrication.
- Never run the pumpt **without** oil.
- If the pump, after approx. 20 seconds, does not displace oil without any bubbles then the system has to be rechecked.
- After the operating values have been reached, check the pipe connections for leakage and check the operating temperature.

Bleeding

- Before commissioning, the pump housing must be filled with oil.

⚠ Important guidelines

- Assembly, maintenance and servicing of the power unit must only be carried out by authorised, trained and instructed personnel!
- The power unit must only be operated within the permissible limits!
- When carrying out any work on the power unit, switch the system to zero pressure! Unauthorised conversions and modifications which affect the safety and function are not permitted!
- Provide protective measures and **do not** remove any existing protective devices.
- Ensure that the fixing bolts are correctly fitted! (Take into account the prescribed tightening torque!)
- The general valid safety and accident prevention regulations must be adhered too!
- Reservoir nominal size 100 has to be filled with a minimum of 130 litres (sight glass „max“).

Note: with reference to the EC machinery guidelines 89/392 EWG annex II, section B; manufacturer‘s declaration:

The supplied assemblies have been manufactured in accordance with the harmonised standards EN 982, EN 983, EN ISO 12100 and DIN EN 60204-1.

Commissioning may not take place until it has been confirmed that the machine, into which the assembly is to be installed, conforms with the regulations stated within the EG guidelines.

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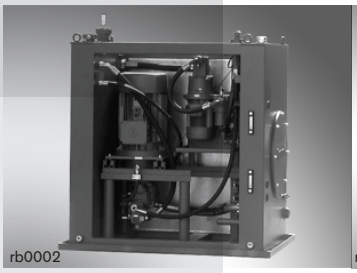
Rexroth
Bosch Group

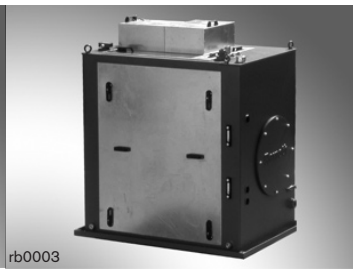
Hydraulic drive power unit
Low-noise compact unit
“Whispering power unit“

RE 51094/05.04 1/12
Replaces: 08.03

Type ABFAG-V



Type ABFAG-V …open



Type ABFAG-V …enclosed

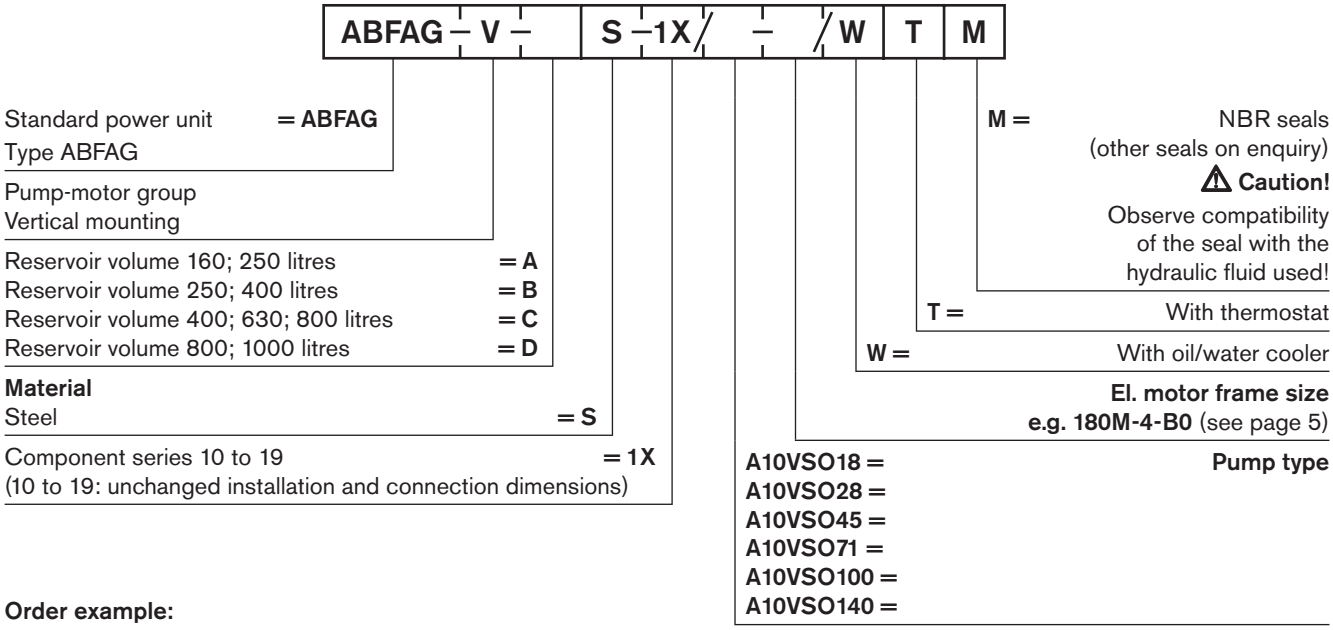
Component series 1X
Reservoir volume 160-1000 litres
Vertical design

Table of contents

Features

- Extremely low-noise compact unit
- Fields of application:
  - General machinery construction sector
  - Plastics processing machinery
  - Lifting and elevator equipment
  - Press construction sector
  - Laboratories, schools
- U-shaped tank with motor-pump group fitted using anti-vibration mounts
- Actuator ports terminate at a flexibly supported outlet strip
- Good outgassing of the hydraulic fluid
- Separate filtering-cooling circuit
- Excellent accessibility

Ordering code



Order example:

ABFAG-V-BS-1X/A10VSO45-180M-4-B0/WTM

Function

Structure

The tank design is of U-shape, in which the motor-pump group is mounted with anti-vibration mounts. Due to the good isolation of structure-borne noise, the tank walls are only slightly excited so that noise emission of the system can be neglected. A sound insulation panel at the front and on top contribute to these extraordinarily low values. They also allow easy access to the drive unit.

General notes:

- The consumer ports terminate at a flexibly supported outlet fitting.
- The enlarged wall surfaces result in good outgassing of the hydraulic fluid.

Fitting of controls

Room for additional controls is provided at the longitudinal side, at the rear and on top of the tank.

Room for attachments such as hydraulic accumulators, etc. is provided at the broad and at the longitudinal side.

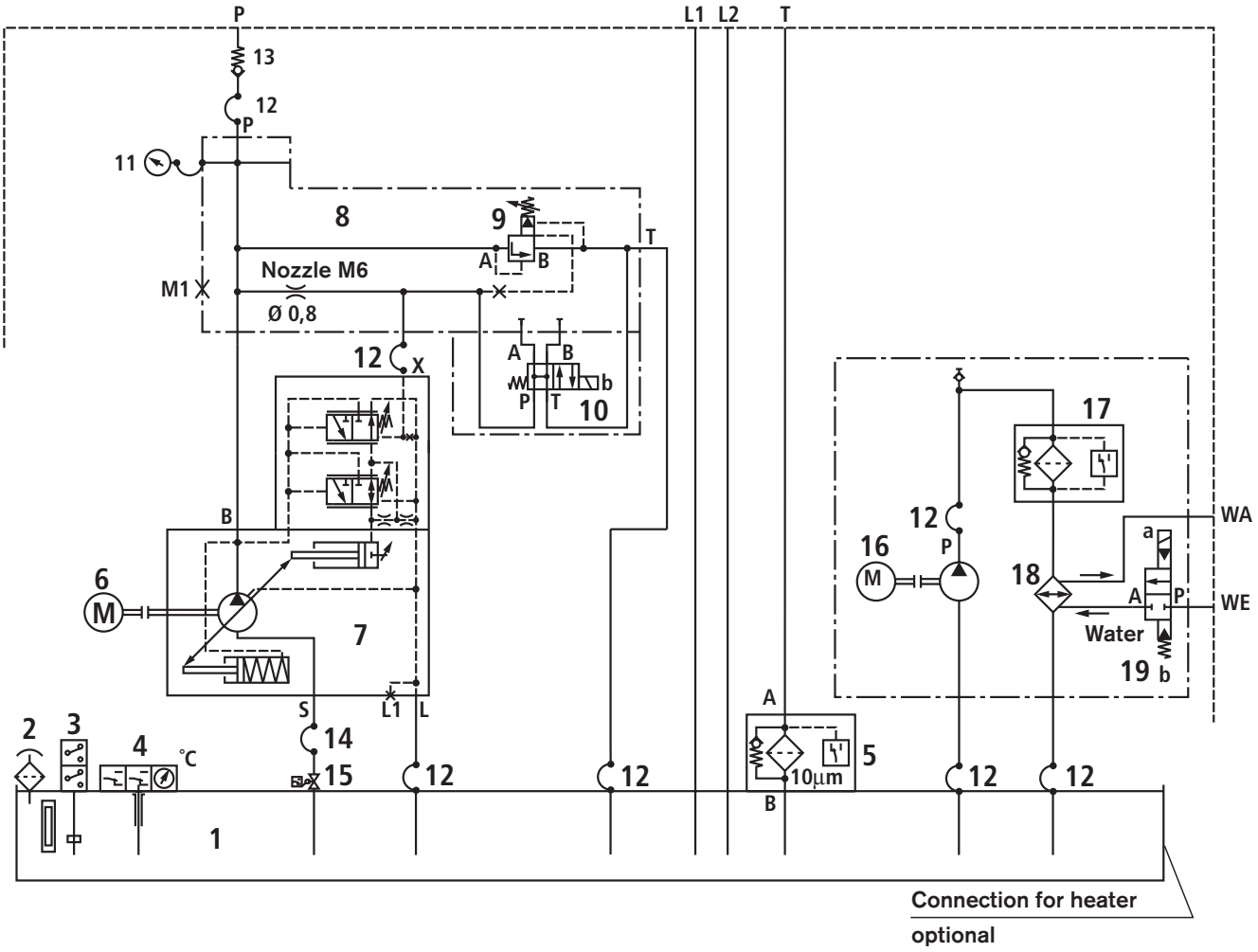
Cooling

The share of the system's power that is converted into heat is dissipated by an oil/water cooler. [1)]

The heat exchanger is arranged in a separate filtering-cooling circuit. The separate circuit ensures continuous filtering and cooling.

[1)] The use of air heat exchangers is possible, but may result in higher noise pressure levels.

Circuit diagram: Whispering power unit, U-shape



1 Fluid tank
2 Tank breather filter
3 Float switch
4 Thermostat with indicator
5 Return line filter
6 Electric motor
7 Axial piston pump
8 Maximum pressure relief block
9 Pressure relief valve
10 Directional valve
11 Pressure gauge
12 Hoses
13 Check valve
14 Suction hose
15 Check flap with monitoring of the position
16 Pump-motor group
17 Line filter
18 oil/water cooler
19 Water valve, electrical

Technical data (for applications outside these parameters, please consult us!)

Line connections	– Oil side		Connection thread to ISO 1179, pipe connections to DIN 2353/ ISO 8434, flanges to ISO 6162
	– Water connections		Pipe thread to ISO 228/1
Pump types			A10VSO 18 to data sheet RE 92712
			A10VSO 28 … 140 to data sheet RE 92711
	– Circulating unit		PVV 18 … 60 to data sheet RE 10335 [1]
Type of pipe fittings			Fittings to DIN 2353; light/heavy series; type Walform
Hydraulic fluid			Mineral oil (HL, HLP) to DIN 51524; fast bio-degradable hydraulic fluids to VDMA 24 568 (see also RE 90221); HETG (rape-seed oil); HEPG (polyglycols); HEES (synthetic esters) and other hydraulic fluids on enquiry. Please observe our regulations given in data sheet RE 07075.
Hydraulic fluid temperature range		°C	0 … + 80 The optimum operating temperature of the power unit in operation with mineral oil HLP to DIN 51524 is between 40 and 50 °C. The operating temperature should **not** exceed 70 °C in continuous operation.
Max. pressure relief function			Pump pressure relief valve to data sheet RE 25890 for variable displacement pumps of type A10VSO
Cooling medium			Potable, processing water, water from streams and rivers
Motor voltage / frequency			400/690 V-D/Y-50 Hz; 460 V-D-60 Hz (other voltages on enquiry); form B 35
Pump's direction of rotation			Clockwise
Water valve			Electrically operated 2/2 directional water valve to AB 21-23
Viscosity range	– optimum	mm^2/s	16 … 36
	– briefly	mm^2/s	10 … 1000 (see also RE 92711; 92712 and RE 10335)
Cleanliness classes in accordance with ISO code			Max. permissible degree of contamination of the hydraulic fluid to ISO 4406 (c) class 21/18/15 [2]
Filter rating		µm	10
Surface protection	– 1st primer coat		All steel components with zinc dust paint
	– 2nd primer coat		Epoxy primer to RAL 5010 (RN 123.01)

[1] Other pumps on enquiry

[2] The cleanliness classes specified for components must be adhered to in hydraulic systems. Effective filtration prevents malfunction and, at the same time, increases the service life of components.

For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086 and RE 50088.

Selection table

The material number can be established after the selection of the pump type and size and the pump pressure.

The material number includes all the components listed in the circuit diagram. The selection of the tank size depends on the size of the pump-motor group.

Tank size “A“: 160; 250 litres [1)]

Pump size	$q_{V\,max}$ in L/min	p_{max} in bar	Power *P* in kW	El. motor frame size	Cooling power in kW	Material number
A10VSO 18	26	200	11	160 M	4	R901005244
A10VSO 28	39	135	11	160 M		R901005245
		190	15	160 L		R901005246

Tank size “B“: 250; 400 litres [1)]

Pump size	$q_{V\,max}$ in L/min	p_{max} in bar	Power *P* in kW	El. motor frame size	Cooling power in kW	Material number
A10VSO 28	39	230	18.5	180 M	7,5	R901005247
		280	22	180 L		R901005248
A10VSO 45	63	115	15	160 L		R901005249
		145	18.5	180 M		R901005250
		170	22	180 L		R901005251
		235	30	200 L	15	R901005252
A10VSO 71	100	90	18.5	180 M	7,5	R901005253
		110	22	180 L		R901005254
		150	30	200 L	15	R901005255

Tank size “C“: 400; 630; 800 litres [1)]

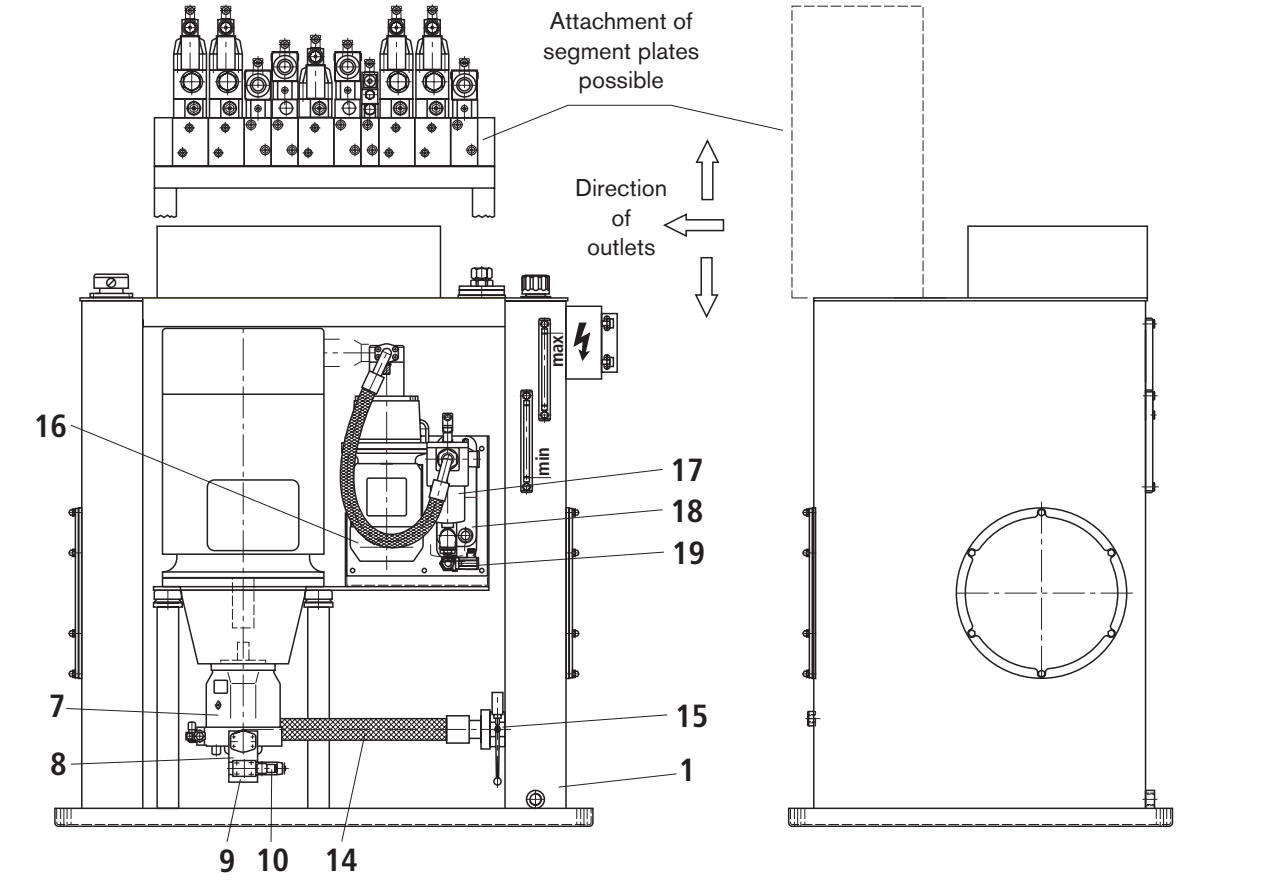
Pump size	$q_{V\,max}$ in L/min	p_{max} in bar	Power *P* in kW	El. motor frame size	Cooling power in kW	Material number
A10VSO 71	100	185	37	225 S	15	R901005256
		225	45	225 M		R901005257
A10VSO 100	145	100	30	200 L		R901005258
		125	37	225 S		R901005259
		160	45	225 M		R901005260

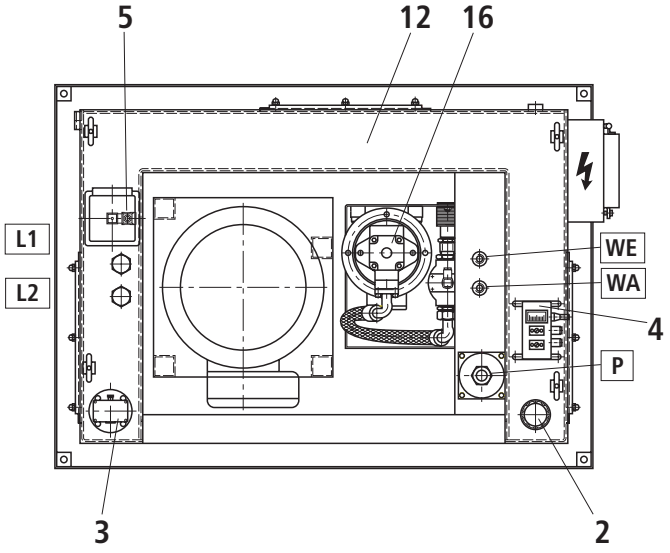
Tank size “D“: 800; 1000 litres [1)]

Pump size	$q_{V\,max}$ in L/min	p_{max} in bar	Power *P* in kW	El. motor frame size	Cooling power in kW	Material number
A10VSO 100	145	195	55	250 M	30	R901005261
		265	75	280 S		R901005262
A10VSO 140	203	110	45	225 M	15	R901005263
		140	55	250 M	30	R901005264
		190	75	280 S		R901005265
		220	90	280 M		R901005266

[1)] The individual fill levels are marked on the oil level indicator

Attachment of components





1 Fluid tank
2 Tank breather filter
3 Float switch
4 Thermostat with indicator
5 Return line filter
6 Electric motor
7 Axial piston pump
8 Max. pressure relief function block
9 Pressure relief valve
10 Directional valve
11 Pressure gauge
12 Room for controls
13 Check valve (in-line)
14 Suction hose
15 Check flap with monitoring of the position
16 Pump motor group
17 Line filter
18 oil/water cooler
19 Water valve, electrical

Connection sizes for flanges and fittings (SAE connections 3000 PSI) (in mm)

Pump type; size																		
A10VSO 18			A10VSO 28			A10VSO 45			A10VSO 71			A10VSO 100			A10VSO 140		
P	T	L	P	T	L	P	T	L	P	T	L	P	T	L	P	T	L
Ø16	G1	Ø18															
			Ø20	G1	Ø18	Ø25	G11/2	Ø18									
									Ø30	G11/2	Ø22	Ø38	SAE2	Ø28			
															Ø38	SAE2	Ø28

Typical noise data (measured at $n = 1450\ min^{-1}$, $\vartheta_{oil} = 50\ °C$) Details in dB(A)

Pump type	Pressure in bar	Flow L/min	Pump size					
			18	28	45	71	100	140
A10VSO	100	q_{Vmin}	60	60	62	65	68	69
		q_{Vmax}	63	63	65	68	70	71
	200	q_{Vmin}	63	63	65	68	71	72
		q_{Vmax}	65	65	68	71	73	75
	300	q_{Vmin}	66	66	69	71	72	73
		q_{Vmax}	68	68	71	73	75	75

Noise pressure level to DIN 45635 part 1, 41;

Distance between microphone and power unit: -1m

Measured at $n = 1450\ min^{-1}$; operating temperature $\vartheta = 50\ °C$

Hydraulic fluid: Mineral oil HLP to DIN 51524 part 2

Sound reflections at the place of installation can lead to a higher noise pressure level (lower noise pressure levels on enquiry).

At $n = 1000\ min^{-1}$ the noise data can be reduced by approx. 3 dB(A).

At $n = 1800\ min^{-1}$ the noise data can be assumed to be + 3 dB(A).

When an oil drip tray is used in accordance with the Water Resources Act, the typical noise values are about + 3 dB(A). Attached controls increase the noise pressure level!

Spare filter elements – DIN

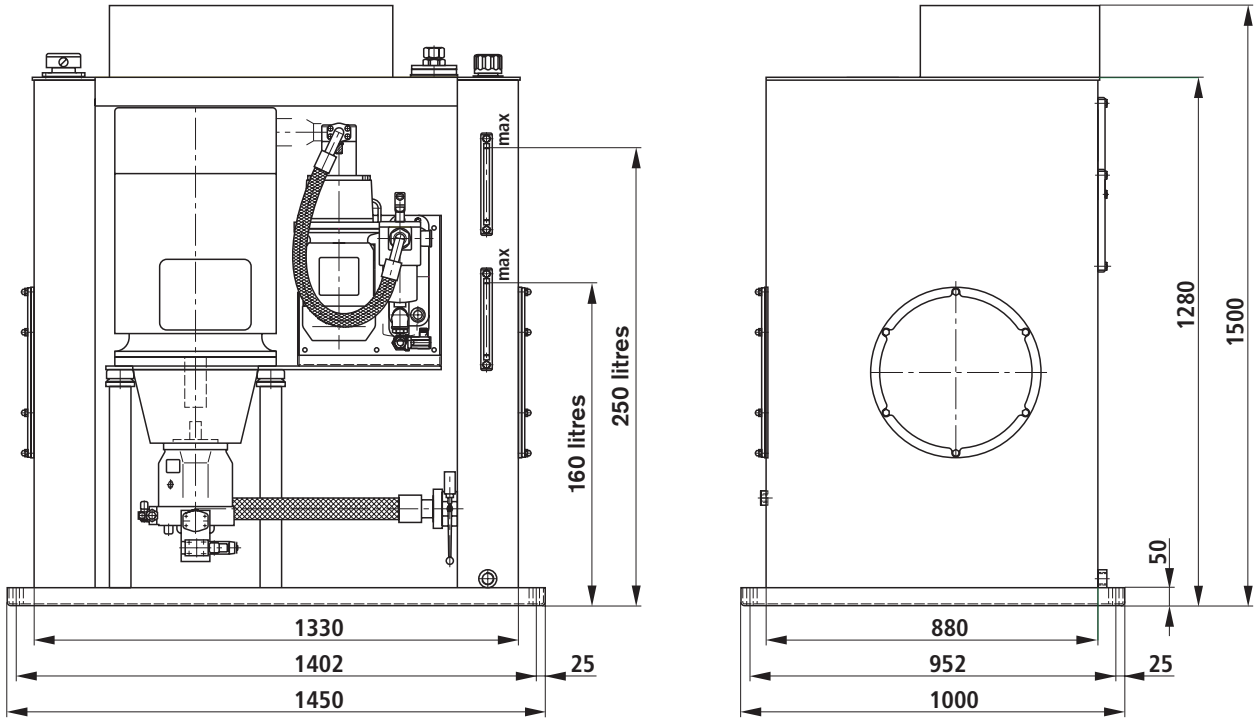
Tank size	Pump type	El. motor P in kW	Filter element type for hydraulic system	Material no.	Filter element type for filter/cooler circuit	Material no.
A	A10VSO 18	7.5	ABZFE-R0063-10-1X/M-DIN	R901025291	ABZFE-N0063-10-1X/M-DIN	R901025361
	A10VSO 28	11; 15	ABZFE-R0100-10-1X/M-DIN	R901025293		
B	A10VSO 28	18.5; 22			ABZFE-N0100-10-1X/M-DIN	R901025362
	A10VSO 45	15 - 22	ABZFE-R0160-10-1X/M-DIN	R901025295		
		30			ABZFE-N0160-10-1X/M-DIN	R901025363
	A10VSO 71	18.5 - 22	ABZFE-R0250-10-1X/M-DIN	R901025297	ABZFE-N0100-10-1X/M-DIN	R901025362
		30			ABZFE-N0160-10-1X/M-DIN	R901025363
C	A10VSO 71	37 - 45				
	A10VSO 100	30 - 45	ABZFE-R0400-10-1X/M-DIN	R901025298		
D	A10VSO 100	55 - 75				
	A10VSO 140	45				
		55 - 90				

Float switch settings

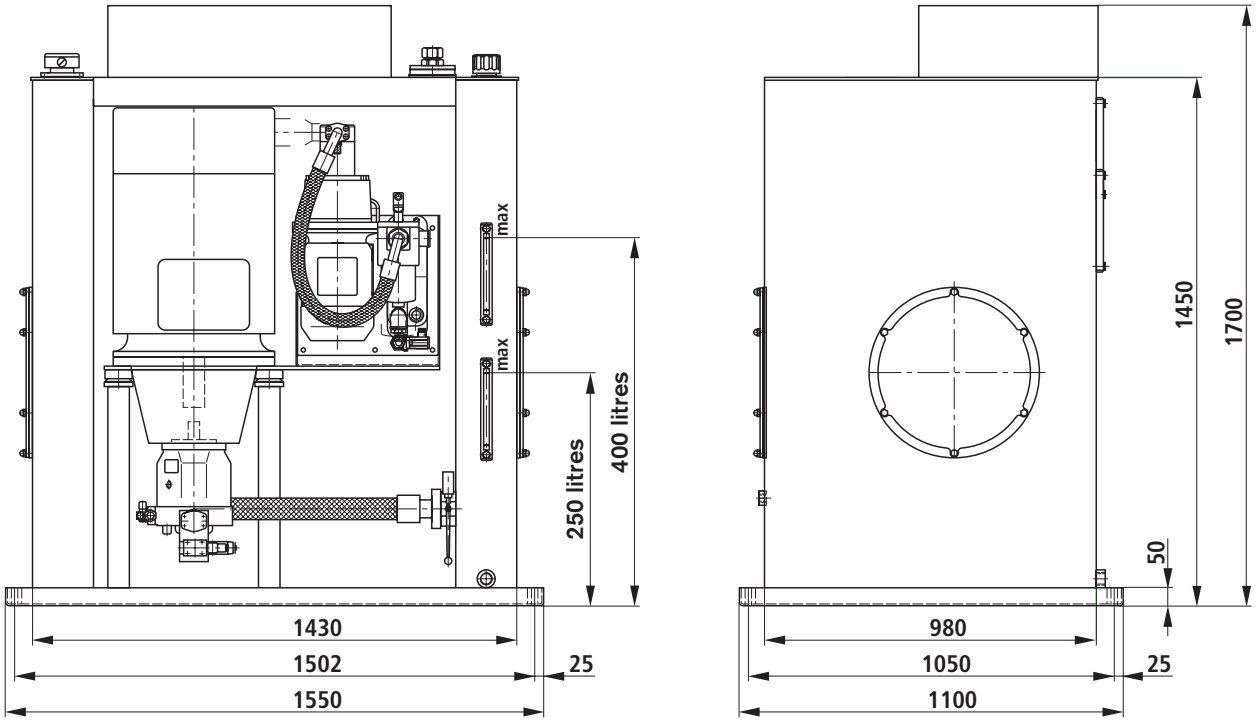
Tank size		Residual capacity at upper switching point in litres	Capacity fluctuation in litres
Size	Tank capacity in litres		
A	160	132	43
	250	218	43
B	250	195	49
	400	350	49
C	400	356	58
	630	560	70
	800	730	70
D	800	749	79
	1000	950	79

Unit dimensions (in mm)

Tank size “A“

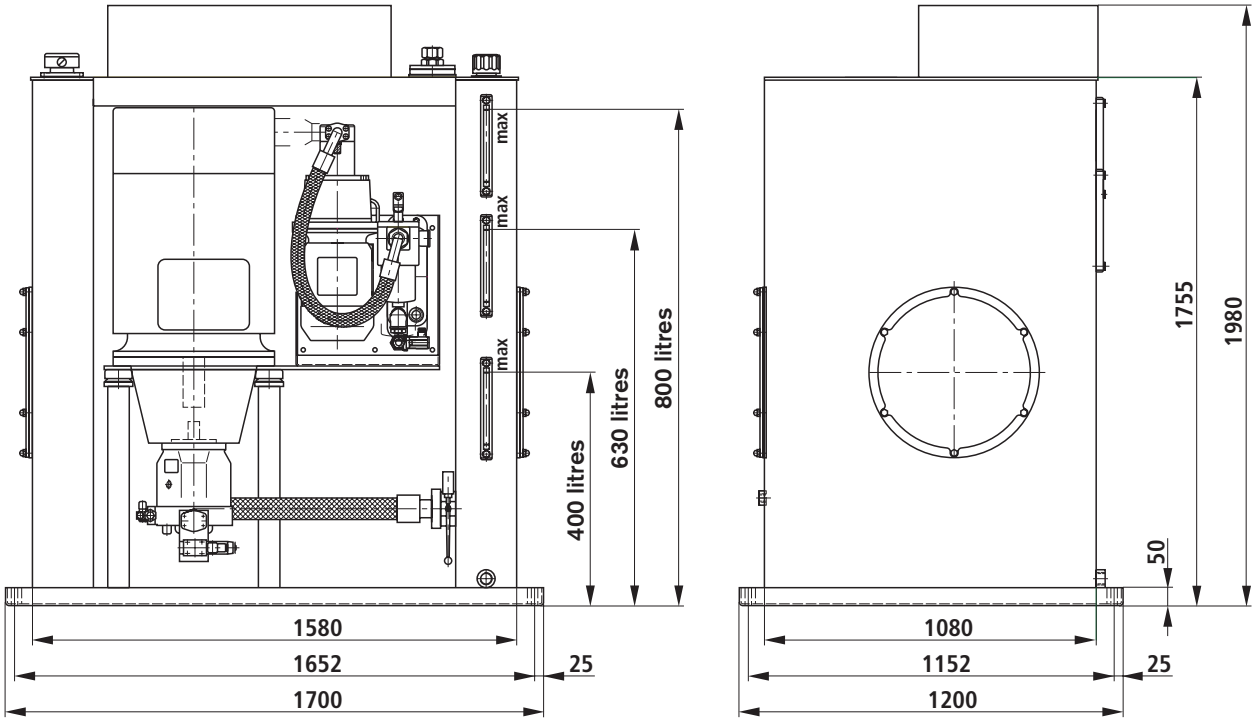


Tank size “B“

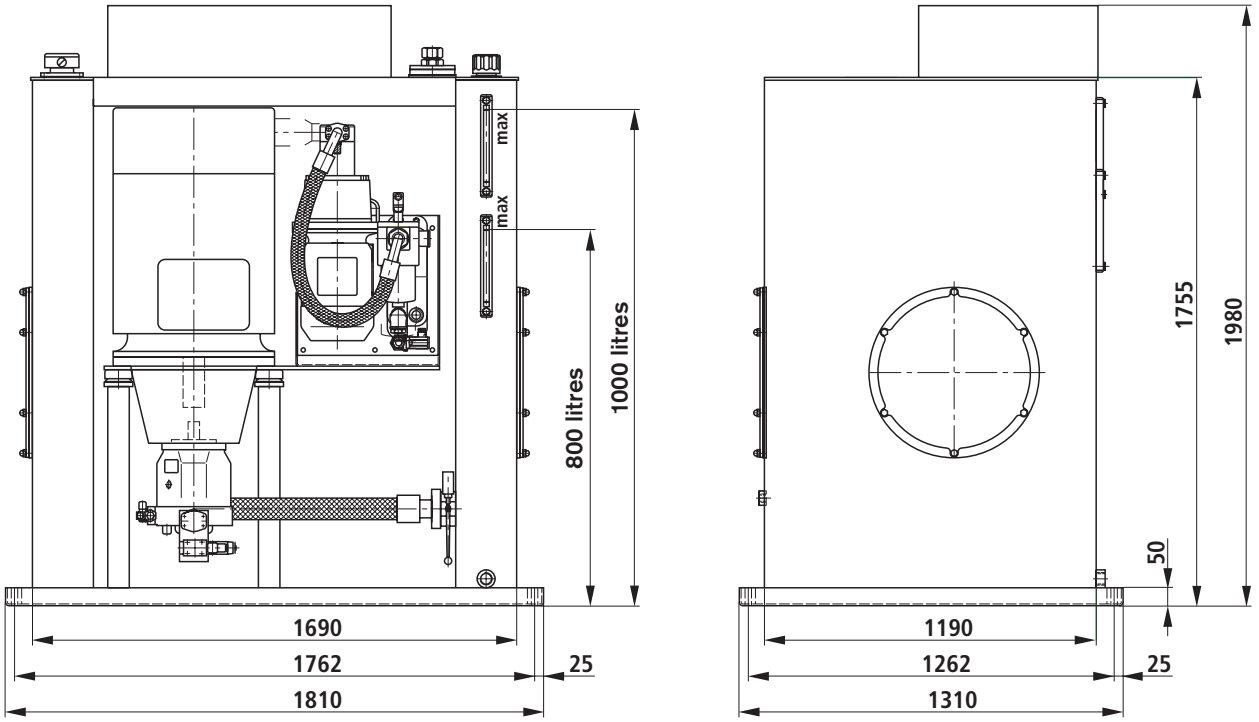


Unit dimensions (in mm)

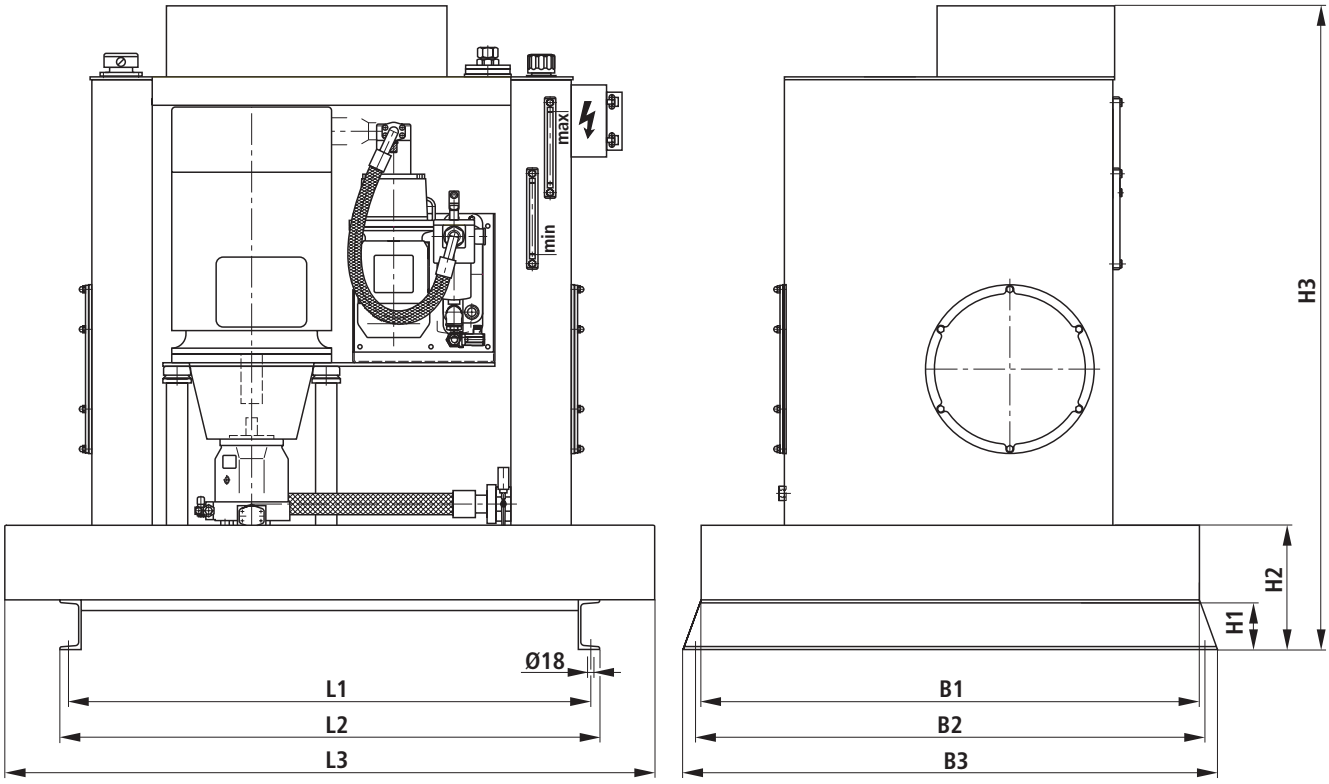
Tank size “C“



Tank size “D“



Option: Oil drip tray in accordance with the Water Resources Act (in mm)



Tank size	Oil drip tray Material no.	L1	L2	L3	B1	B2	B3	H1	H2	H3
A	R901005589	1365	1420	2030	1580	1630	1680	160	295	1795
B	R901005592	1465	1520	2130	1680	1730	1780	160	335	2035
C	R901005593	1630	1685	2280	1780	1830	1880	160	415	2305
D	R901005595	1750	1805	2390	1890	1900	1950	180	475	2455

When an oil drip tray according to the Water Resources Act is used, the assumed typical noise pressure level amounts to + 3 dB(A).

Order example:

OELWANNE ABFAG-V-A-2030X1680X295
(Material no. R901005589)

Engineering notes

The assembly is designed according to the modular principle.

For further information, please contact your Bosch Rexroth Sales Partner.

Comprehensive notes and suggestions can be found in The Hydraulic Trainer Volume 3, RE 00281, “Design of hydraulic systems.“

Commissioning notes

General

- Power units supplied by us have been tested for function and performance. Changes and modifications of any kind are not permitted, otherwise the warranty will become void.
- Repairs may only be carried out by the manufacturer or his authorised dealers and subsidiaries. We will not assume any warranty for repairs carried out by customers.

Commissioning

- Always fill the hydraulic fluid in through a filter with the required minimum retention rate.
- Observe the arrow for direction of rotation when connecting the electric motor.
- Start up the pump under no-load conditions and let it displace at zero pressure for some seconds in order to provide sufficient lubrication.
- In no case may the pump be operated **without** oil.
- Should the pump not displace oil without bubbles after approx. 20 seconds, re-check the system.
- After the system has reached operating values, check the pipe connections for freedom from leakage. Check the operating temperature.

Bleeding

- Prior to initial commissioning the pump case must be filled with oil.

⚠ Important notes

- Installation, maintenance and repairs of the power units may only be carried out by authorised, trained and instructed personnel!
- The power units may only be operated within the permissible limits!
- When carrying out any work on the power unit, depressurise the system!
  Unauthorised changes and modifications that affect the safety and function are not permitted!
- Provide protective equipment and do **not** remove any existing protective equipment and guards.
- Take care that all fixing screws are always tightened! (Observe prescribed tightening torque!)
- The generally valid safety regulations and regulations for the prevention of accidents must be adhered to!
- With tank size 100, fill in at least 130 litres (level indicator “max“).

Note in the sense of the 98/37 EEC Machinery Directive, Annex II, Section B; manufacturer‘s declaration:

The assemblies delivered have been manufactured in accordance with the harmonised standards EN 982, EN 983, EN ISO 12100 and DIN EN 60204-1.

Commissioning is prohibited until it has been established that the machine into which the assemblies are to be installed comply with the stipulations of EC Directives.

Notes

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