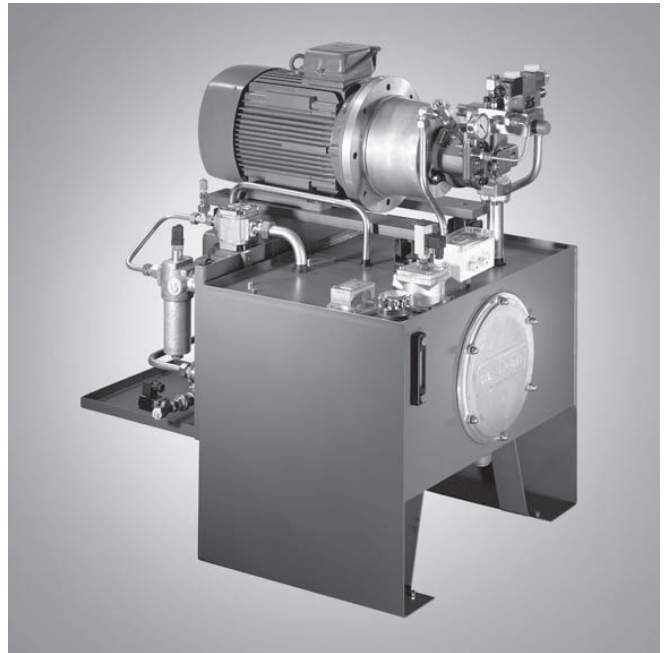


**RE 51 101/ 11.02**

Replaces: 06.99

**Standard power unit  
Type ABSAS**Reservoir capacities of 100; 160; 250; 400  
and 630 litres

Maximum operating pressure 315 bar



HI/AD 20368/97

Standard power unit type ABSAS

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**Features**

- Steel reservoir to DIN 24 339, form AN cover form C, standard sheet AB-E 40-40
- Filter-cooler circulation module
- Float switch
- Thermostat
- Pump motor assembly
- Reservoir accessories (filler/breather, oil level gauge, inspection cover, oil drain)
- Return filter



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## Ordering details

ABSAS		S		-2X/		/		/			
<b>Standard power unit type ABSAS</b>											
<b>Reservoir capacity</b> in litres (NS)											
AB-E40-40/NS 100	= <b>0100</b>										
AB-E40-40/NS 160	= <b>0160</b>										
AB-E40-40/NS 250	= <b>0250</b>										
AB-E40-40/NS 400	= <b>0400</b>										
AB-E40-40/NS 630	= <b>0630</b>										
<b>Reservoir material</b>											
Steel	= <b>S</b>										
<b>Series 20 to 29</b> = <b>2X</b>											
(20 to 29 : unchanged installation and connection dimensions)											
<b>No. of pump motor assemblies</b>											
One pump motor assembly	= <b>1</b>										
Two pump motor assemblies	= <b>2</b>										
<b>Pump type</b>											
A10VSO18	= <b>A10VSO18</b>										
A10VSO28	= <b>A10VSO28</b>										
A10VSO45	= <b>A10VSO45</b>										
A10VSO71	= <b>A10VSO71</b>										
A10VSO100	= <b>A10VSO100</b>										
<b>Other details</b>											
										T =	Thermostat
										N =	Float switch
<b>Return filter</b>											
										SO050 =	NS 110
										SO140 =	NS 240
										SO450 =	NS 660
<b>Cooling capacity</b>											
										04 =	4 kW
										07 =	7.5 kW
										11 =	11 kW
										15 =	15 kW
<b>Electric motor power</b>											
In kW at 1450 min <sup>-1</sup> , see selection table below											
<b>Ordering example:</b>											
<b>ABSAS-0400S-1X/2-A10VSO45/18-11/SO450TN</b>											

## Selection table

Reservoir NS	Motor frame size	No. of Pump motor assemblies	Pump type	q <sub>v max</sub> in L/min	p <sub>max</sub> in bar	Elec. motor		Cooling capacity in kW	Return filter NS	Material No.
						Power in kW	BS			
100	B5	1	A10VSO18	26	100	5.5	132S	4	SO050	R900960461
					140	7.5	132M			R900960494
160	B5	1	A10VSO28	40	90	7.5	132M	4	SO140	R900960495
	B35				130	11	160M			R900960496
					180	15	160L			R900960497
250	B35	1	AV10SO45	65	110	15	160L	7,5	SO450	R900960498
					135	18.5	180M			R900960499
					160	22	180L			R900960500
400	B35	1	A10VSO71	100	105	22	180L	11	SO450	R900960502
					145	30	200L			R900960503
					180	37	225S			R900960504
	B35	2	A10VSO45	65	110	15	160L			R900960505
					135	18.5	180M			R900960506
					160	22	180L			R900960507
630	B35	1	A10VSO100	145	100	30	200L	15	SO450	R900960508
					120	37	225S			R900960509
					150	45	225M			R900960510
	B35	2	A10VSO71	100	105	22	180L			R900960511
					145	30	200L			R900960512
					180	37	225S	R900960513		

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

Pressure fluid	Mineral oil HLP to DIN 51 524 part 2 e.g. for an operating temperature of 50 °C ISO VG46 DIN 51 519 (other pressure fluids on request) <b>Please take the specifications stated within catalogue sheet RE 07 075 into account!</b>				
Pump types	A10VSO18 to catalogue sheet RE 92 712				
	A10VSO28 to 140 to catalogue sheet RE 92 711				
Pump motor assembly	ABHPG to catalogue sheet RE 51 068				
	ABAPG to catalogue sheet RE 51 062				
Filter-cooler circulation module	ABUKG to catalogue sheet RE 50 120				
Operating pressure, absolute	Inlet	$p_{\min-\max}$	bar	0.8 to 30	
	Outlet	$p_{\text{nom}}$	bar	250	
	Peak pressure	$p_{\max}$	bar	315	
	Drain connection	$p_{\min-\max}$	bar	2	
Pressure fluid temperature range	$\vartheta$	°C	- 25 to 80		
	The optimum operating temperature for the power unit when operating with mineral oil HLP to DIN 51 524 lies between 40 °C and 50 °C. During continuous operation the operating temperature should <b>not</b> exceed 70 °C!				
Cleanliness class to ISO code	Maximum permissible degree of contamination of the pressure fluid is to ISO 4406 (C) depending on the requirements of the entire hydraulic system <sup>1)</sup>				
Pressure safety	Pump safety block type DBA..., series 2X to catalogue sheet RE 25 890 for variable displacement pumps type A10VSO				
Viscosity range	$\nu$	mm <sup>2</sup> /s	Optimum 16 to 36		
	$\nu$	mm <sup>2</sup> /s	Briefly 10 to 1000		
	(also see RE 92 711 or RE 92 712)				
Motor type	AC asynchronous motor				
	No. of pole pairs	4			
	Voltage	$U$	V	230 / 400 at 50 Hz	
		$U$	V	460 at 60 Hz to IEC 38	
	RPM	$n$	min <sup>-1</sup>	1500 at 50 Hz	
		$n$	min <sup>-1</sup>	1800 at 60 Hz	
	Protection	IP55			
	Direction of rotation	Anti-clockwise (viewed on the drive shaft)			
Filter rating	Filler/breather	µm	10		
	Return filter	µm	10		
Surface protection	Epoxy undercoat to RAL 5009 (RN 123.01)				
Type of pipe work	Fittings to DIN 2353 light/heavy series, type Walform				

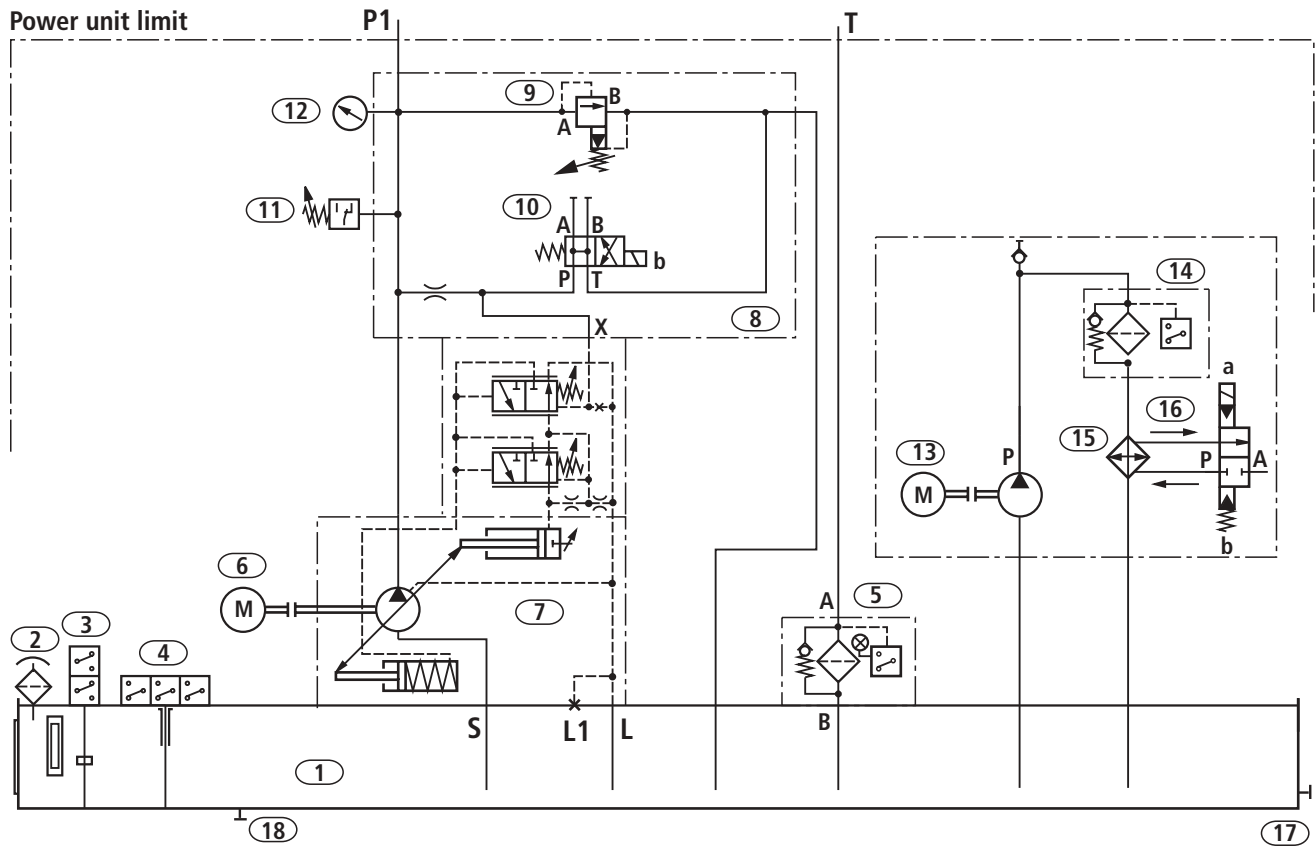
<sup>1)</sup> The cleanliness class stated for the components must be adhered too in hydraulic systems. Effective filtration prevents faults from occurring and at the same time increases the component service life. For the selection of filters see catalogue sheets RE 50 070, RE 50 076 and RE 50 081.

**Note:**

For the assembly, commissioning and maintenance of hydraulic systems, please take the specifications stated within catalogue sheet RE 07 900 into account!

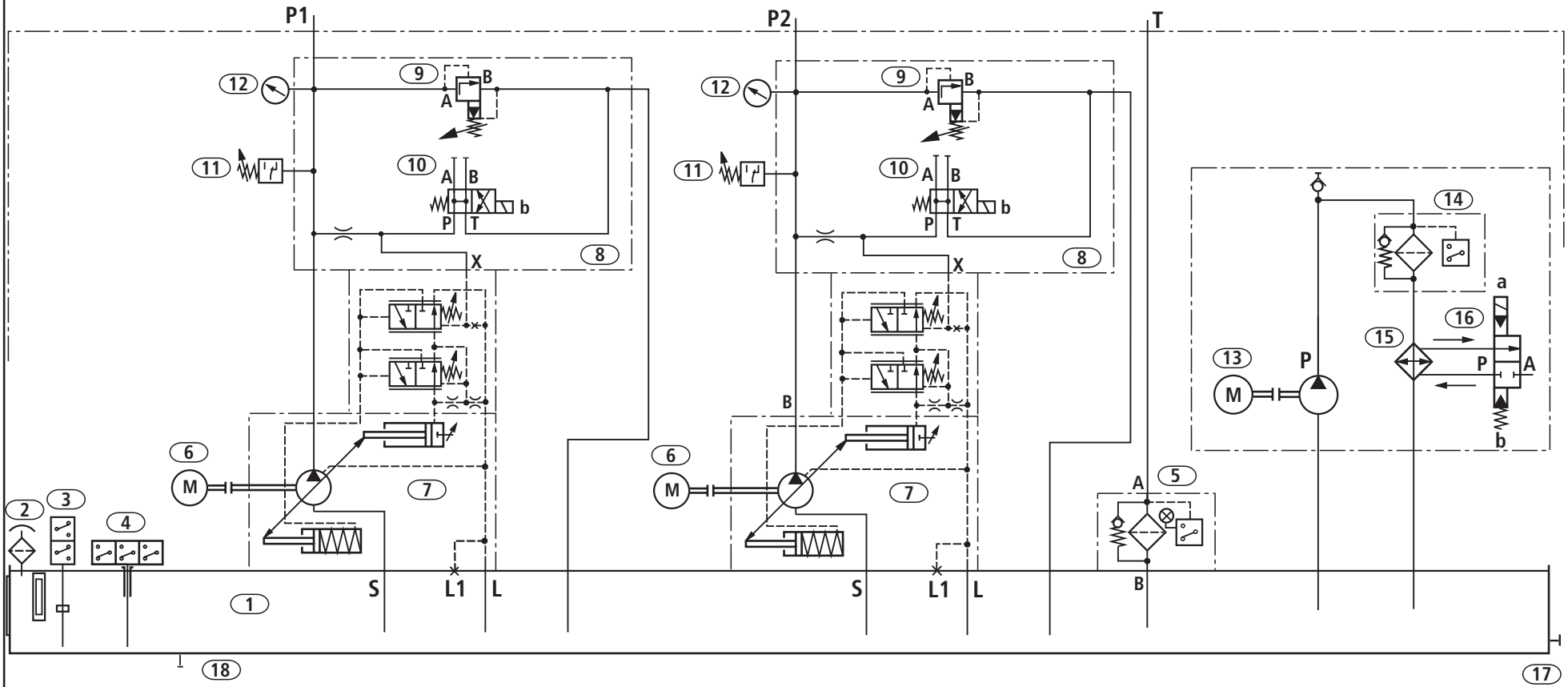
The units have been designed and manufactured in accordance with the harmonised EN stand:

## Circuit: power unit with one pump motor assembly



### Parts list

- |   |                       |    |                                       |
|---|-----------------------|----|---------------------------------------|
| 1 | Fluid reservoir       | 10 | Directional valve                     |
| 2 | Filler/breather       | 11 | Pressure switch                       |
| 3 | Float switch          | 12 | Pressure gauge                        |
| 4 | Thermostat            | 13 | Pump motor assembly                   |
| 5 | Return filter         | 14 | In-line filter                        |
| 6 | Electric motor        | 15 | Oil/water cooler                      |
| 7 | Axial piston pump     | 16 | Solenoid actuated water control valve |
| 8 | Pump safety block     | 17 | Heater connection                     |
| 9 | Pressure relief valve | 18 | Oil drain plug                        |



**Parts list**

- |                   |                         |  |
|-------------------|-------------------------|--|
| 1 Fluid reservoir | 7 Axial piston pump     | 13 Pump motor assembly                   |
| 2 Filler/breather | 8 Pump safety block     | 14 In-line filter                        |
| 3 Float switch    | 9 Pressure relief valve | 15 Oil/water cooler                      |
| 4 Thermostat      | 10 Directional valve    | 16 Solenoid actuated water control valve |
| 5 Retrun filter   | 11 Pressure switch      | 17 Heater connection                     |
| 6 Electric motor  | 12 Pressure gauge       | 18 Oil drain plug                        |

Circuit: power unit with two pump motor assemblies

## Connection sizes: pumps P1/P2 and return T

Reservoir NS	No. of pump assemblies	Pump type	Pump connections		Connection return line
			SAE 3000 PSI pipe connection	SAE 6000 PSI pipe connection	
100	1	A10VSO18	Ø16		G 1
160	1	A10VSO28	Ø20		G 1 1/2
250	1	A10VSO45	Ø25		G 1 1/2
400	1	A10VSO71	Ø30		SAE 2 3000 PSI
	2	A10VSO45	Ø25		
630	1	A10VSO100		Ø38	SAE 3 3000 PSI
	2	A10VSO71	Ø30		

## Noise values for standard power units

Pressure in bar	Flow in L/min	Noise pressure level in dB(A)						
		Pump type A10VSO / NS					2x pump type A10VSO / NS	
		18	28	45	71	100	45	71
100	$q_{v \min}$	71	73	72	74	75	75	77
	$q_{v \max}$	73	75	76	78	79	79	81
200	$q_{v \min}$	73	75	76	78	80	79	81
	$q_{v \max}$	75	77	78	81	84	81	84
300	$q_{v \min}$	76	77	77	79	82	80	82
	$q_{v \max}$	77	78	80	82	84	83	85

### Noise pressure level

To DIN 45 635 parts 1 and 41  
 Measured at  $n = 1450 \text{ min}^{-1}$ ,  $v = 41 \text{ mm}^2/\text{s}$  and  $\vartheta = 50 \text{ }^\circ\text{C}$   
 Distance of noise sensor to power unit: 1 m  
 Pressure fluid: mineral oil HLP to DIN 51 524 part 2

### Please take into account!

The use of noise damping walls reduces the noise pressure level by approx. 10 to 15 dB(A).  
 Noise reflections at the final place of installation can lead to an increased noise pressure level.

## Float switch settings

A float switch with two contacts is provided for the warnings „low oil level“ and „EMERGENCY OFF“. The settings are factory pre-set, they can however be adjusted on the float switch, without effecting the overall length

Reservoir NS	Residual volume at the upper switching point in litres	Residual volume at the lower switching point in litres
100	67	45
160	110	74
250	174	120
400	277	190
630	475	365

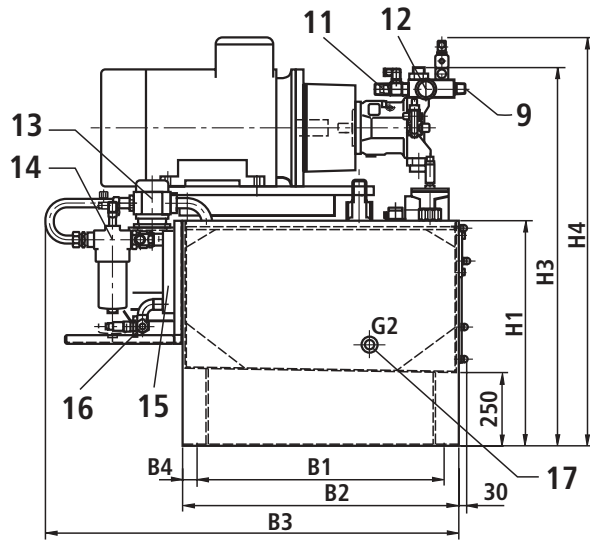
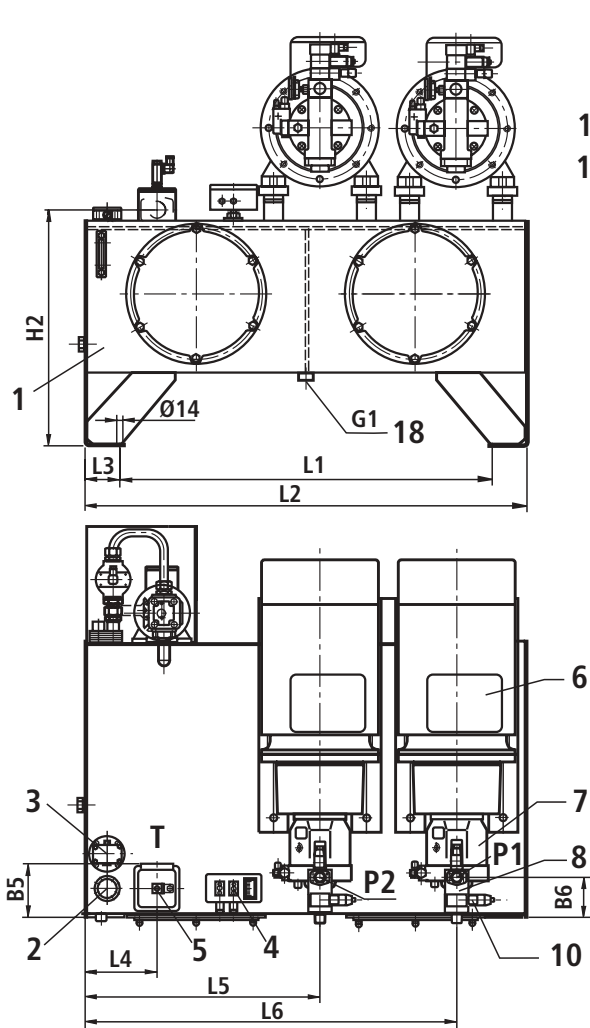
## Replacement filter elements

Reservoir NS	Filter element type for hydraulic system	Material No.	Filter element type for filter-cooling circuit	Material No.
100	ABZFE-R0050-10-1X/M-A	R900229746	ABZFE-N0160-10-1X/M-A	R900229752
160	ABZFE-R0140-10-1X/M-A	R900229747		
250				
400	ABZFE-R0450-10-1X/M-A	R900229749		
630				



# Unit dimensions

(Dimensions in mm)



### Parts list

- |                         |  |
|-------------------------|--|
| 1 Fluid reservoir       | 10 Directional valve                     |
| 2 Filler/breather       | 11 Pressure switch                       |
| 3 Float switch          | 12 Pressure gauge                        |
| 4 Thermostat            | 13 Pump motor assembly                   |
| 5 Return filter         | 14 In-line filter                        |
| 6 Electric motor        | 15 Oil/water cooler                      |
| 7 Axial piston pump     | 16 Solenoid actuated water control valve |
| 8 Pump safety block     | 17 Heater connection                     |
| 9 Pressure relief valve | 18 Oil drain plug                        |

Reservoir NS	No. of pump motor assemblies	Pump NS	Electric motor BS	L1	L2	L3	L4	L5	L6	B1	B2	B3	B4	B5	H1	H2	H3	H4	
100	1	18	132S	393	633	120	160		475	360	460	800	50	126	660	674	980	1070	
			132M																
160	1	28	132M	570	808	119	195		635	490	590	920	50	155	660	680	980	1100	
			615						1075								1190		
			160L						1105								1200		
250	1	45	160L	770	1008	119	200		805	590	690	1020	50	160	680	700	1135	1270	
			180M														1185	1250	
400	1	71	180L	1274	1512	119	210		1255	635	735	1140	50	182	680	723	1210	1300	
			200L														1240	1360	
			225S														1155	1230	
	2	45	160L					875	1305									1175	1250
			180M					865	1295									1175	1250
630	1	100	180L	1274	1512	119	210		1255	845	945	1350	50	208	770	833	1300	1400	
			200L														1325	1430	
			225S														1275	1360	
	2	71	180L					875	1300									1275	1360
			200L					775	1265									1300	1400
			225S						735	1255									

## Engineering guidelines

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These units are of a modular design.

For further information please contact your Bosch Rexroth Sales Office.

Comprehensive instructions and proposals can be found in the Hydraulic Trainer, volume 3 RE 00 281, "Planning and design of hydraulic power systems."

## Commissioning guidelines

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### 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 invalidate any guarantee claims.
- Repairs may only be carried out by the manufacturer or authorised agent or subsidiary. No guarantee will 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.
- On no account run the pump **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.

### Note with regard 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 prEN 982, prEN 983 DIN EN 292 and DIN EN 60 204-1.

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.

### 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 permitted 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 the prescribed tightening torque into account!)
- The general valid safety and accident prevention regulations must be adhered to!

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The data specified above only serves to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. It must be remembered that our products are subject to a natural process of wear and ageing.