HYDAC INTERNATIONAL

ACCUSET-SB

1. DESCRIPTION

1.1. FUNCTION

In addition to completely piped accumulator stations, HYDAC supplies accumulator units with mounting elements, various additional devices on the gas side (e.g. adapters, safety devices, pressure gauges) and additional devices on the fluid side (e.g. adapters, monitoring devices).

This space-saving combination simplifies the connection of the hydraulic accumulator to the hydraulic system, reduces maintenance time and considerably reduces the time and effort required for installation. Depending on the application, HYDAC accumulator units can be designed with bladder accumulators, piston accumulators or diaphragm accumulators.

The ACCUSET-SB is a standardised HYDAC bladder accumulator unit and is described in more detail in the following sections. The most important characteristics and functions are as follows:

- Simple and secure hydraulic accumulator mounting at the installation site
- Connection of the hydraulic accumulator to a hydraulic system via a safety and shut-off block
- Protects the hydraulic accumulator from excessive pressure
- Hydraulic accumulator discharge to the tank via a pressure release valve
- Separation of the hydraulic accumulator from the system
- Two additional hydraulic connections on the shut-off block for accessories (e.g. pressure gauge).

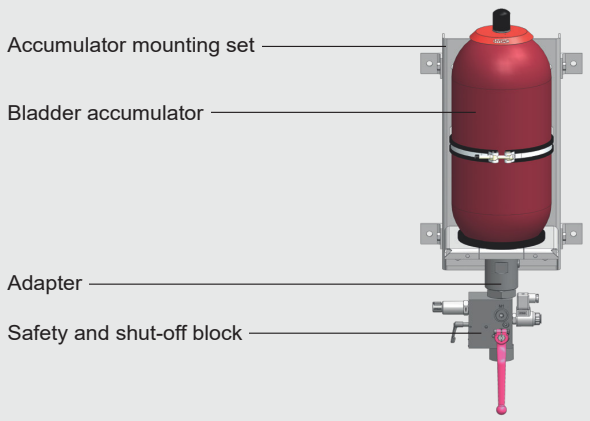
More information on HYDAC hydraulic accumulators and accessories is available in the following brochure sections:

- Bladder accumulators Standard design No. 3.201

- Accumulator stations No. 3.653

- Mounting element for hydraulic accumulators No. 3.502

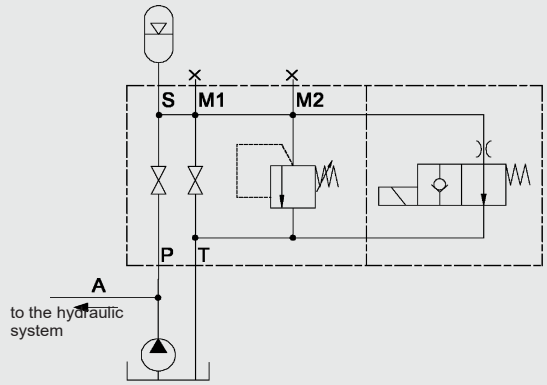
1.2. DESIGN



The ACCUSET is made up of a forged bladder accumulator, a safety and shut-off block, the connecting adapter and a corresponding accumulator mounting set. The parts are designed for optimum compatibility and form a compact, ready-to-install device. For more technical details, see brochure section:

- Bladder accumulators Standard design No. 3.201
- SAF/DSV safety and shut-off block No. 3.551
- Mounting elements for hydraulic accumulators No. 3.502

Circuit diagram



2. FURTHER INFORMATION

- Operating instructions for bladder accumulators No. 3.201.BA
- Operating instructions SAF safety and shut-off block No. 3.551.BA

The operating instructions must be observed!
All work with HYDAC bladder accumulators or safety and shut-off blocks must only be carried out by suitably trained staff. Incorrect installation or handling can lead to serious accidents.

- Installation and repair instructions bladder accumulators No. 3.201.M

For repairs to be performed on hydraulic accumulators, we provide corresponding assembly and repair instructions.

Further information such as accumulator sizing, safety information and extracts from the acceptance specifications can be found in our overview brochure section:

- HYDAC Accumulator Technology No. 3.000

This document and others are available from our Download Center at www.hydac.com.

3. MODEL CODE

Not all combinations are possible. Order example.

ACCUSET-SB330 – 10 A 1 / 1 1 2 U – 10 Y 1 – 330

Series

Nominal volume [l]

Fluid port
A = standard connection

Gas valve
1 = standard version

Material of fluid port/block
1 = carbon steel

Shell material
1 = carbon steel

Accumulator bladder/seal material
2 = NBR / NBR

Certification code
U = European Pressure Equipment Directive (PED)

Series SAF block
10 = SAF10

Type – poppet valve
M = manual discharge Y = solenoid-operated and manual discharge (normally open)

Voltage type – poppet valve
1 = 24 V DC (for Y version)

Permitted operating pressure/response pressure of the pressure release valve [bar]

4. STANDARD ITEMS

The ACCUSET-SB330 is the standard HYDAC ACCUSET. The corresponding part numbers are listed in the tables in section 4.2. (MC = 112) and refer to ACCUSETs with bladder accumulators from the series SB330 in acc. with PED (CC = U). Designs that differ from the standard types described below can be requested from HYDAC.

4.1. TECHNICAL DATA

4.1.1 Permitted operating temperature
The standard ACCUSET-SB330 can be operated in the following temperature range:
-10 °C to +80 °C

4.1.2 Permitted operating pressure
The permitted operating pressure of the standard ACCUSETSB330 is 330 bar.

4.1.3 Nominal volume
The nominal volume of the standard ACCUSET-SB330 is given in section 4.2.

4.1.4 Effective gas volume
The effective gas volume is based on nominal dimensions. It differs slightly from the nominal volume and must be used when calculating the effective fluid volume. This is provided in the tables in section 4.2.

4.1.5 Effective volume
Volume of fluid which is available between the operating pressures p_2 and p_1.

4.1.6 Maximum flow rate of the operating fluid
In order to achieve the max. flow rate given in the tables, the accumulator must be installed vertically. It must be ensured that a residual fluid volume of approx. 10 % of the effective gas volume remains in the accumulator. The maximum fluid flow rate was determined under specific conditions and is not applicable in all operating conditions.

4.1.7 Limits for gas pre-charge pressure
$p_0 \leq 0.9 \cdot p_1$ with a permitted pressure ratio of:
$p_2 : p_0 \leq 4 : 1$

p_2 = max. operating pressure
p_0 = pre-charge pressure

The specified values are maximum values and must not be considered as referring to a permanent load. The sustainable pressure ratio is affected by geometry, temperature, medium, flow rate and gas losses resulting from physical characteristics.

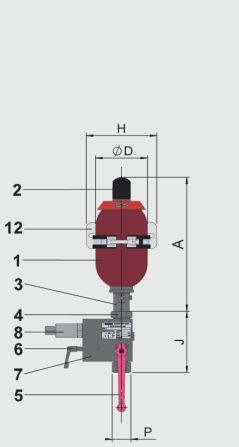
For more information, see brochure section:
- HYDAC Accumulator Technology No. 3.000

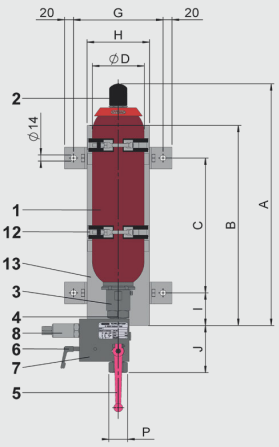
4.1.8 Pressure limit
The DB12 is set to 330 bar, pressure setting with TÜV.

4.1.9 Release valve
Operating voltage 24 V DC.

4.1.10 Fluid port P
See table in section 4.2.

4.2. DIMENSIONS AND SPARE PARTS





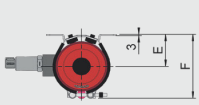


Fig. 1

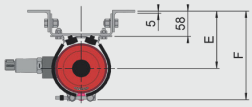
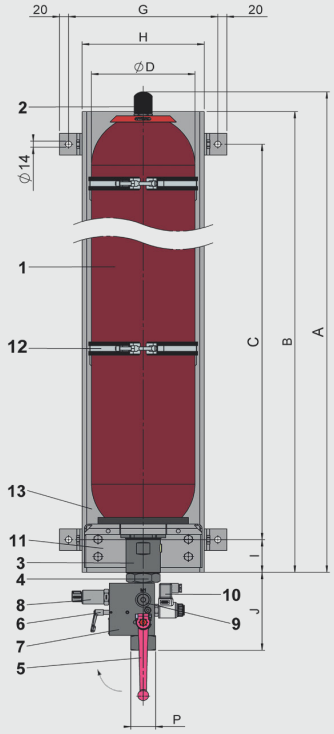


Fig. 2



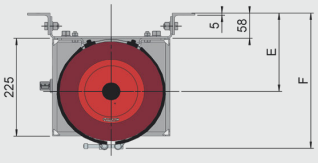


Fig. 3

Nominal volume [l]	SAF type	Part no.	Eff. gas volume [l]	A max. [mm]	B [mm]	C [mm]	ØD max. [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	Fig.
1	SAF10, M	3033471 1)	1	302	–	–	118	74	147	–	156	–	1
	SAF10, Y	3033472 1)											
2.5	SAF10, M	3033473 2)	2.4	571	460	310	118	133	214	198	138	75	2
	SAF10, Y	3033474 2)											
4	SAF10, M	3033475	3.7	440	415	320	173	152	253	330	270	50	
	SAF10, Y	3033476											
6	SAF10, M	3033477	5.7	560	570	420	173	152	253	330	270	75	3
	SAF10, Y	3033478											
10	SAF10, M	3033479	9.3	568	570	420	229	180	317	330	270	75	
	SAF10, Y	3033480											
13	SAF10, M	3033481	12	686	570	420	229	180	317	330	270	75	
	SAF10, Y	3033482											
	SAF20, M	3033483											
	SAF20, Y	3033484											
20	SAF20, M	3033485	18.4	896	570	420	229	180	317	330	270	75	
	SAF20, Y	3033486											
24	SAF20, M		23.6	1062	570	420	229	180	317	330	270	75	
	SAF20, Y	3033487											
32	SAF20, M	3033489	33.9	1411	1340	1190	229	180	317	330	270	75	
	SAF20, Y	3033490											
	SAF32, M	3033491											
	SAF32, Y	3033492											
50	SAF20, M	3033493	47.5	1931	1340	1190	229	180	317	330	270	75	
	SAF20, Y	3033494											
	SAF32, M	3033495											
	SAF32, Y	3033496											

1) Without back plate and console, with one HyRac clamp 110-118/124 H10 ST

2) Without console, with back plate and two HyRac clamps 110-118/124 H10 ST

SAF series	Nominal volume SB330 [l]	P ISO 228	Pressure gauge connection	J [mm]
SAF10	1	G 1/2	2 x G 1/4	142
	2.5			104
	4			113
	6			102
	≥ 10			147
SAF20	2.5	G 1	G 1/4, G 1/2	135
	4			142
	6			132
	≥ 10			178
SAF32	≥ 10	G 1 1/2		203

Designation	Item
Accumulator shell	1
Gas valve	2
Oil valve	3
Adapter S	4
Switching handle	5
Pressure release spindle	6
SAF safety block	7
Release valve	8
Pressure gauge connection	9
Release valve	10
Console	11
HyRac clamp	12
Back plate	13

5. NOTE

The information in this brochure relates to the operating conditions and fields of application described. For applications and/or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.