

Accumulator stations

Type ABSBG

RE 50136

Edition: 2019-01

Replaces: 2016-08



- Component series 2X
- With bladder-type accumulator according to data sheet 50171

Features

- Accumulator station with shut-off block
- Bladder-type accumulator
- Shut-off block with integrated shut-off valve, safety valve (type-examination tested) and drain valve
- Drain valve can be operated manually or electrically
- Glycerin-filled pressure gauge with red indication of the maximum admissible operating pressure on the dial
- Console for weld or screw connection
- Assembly prepared for external equipotential bonding

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Ordering code

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15					
ABSBG	-	2X	/	B		N	-		/				G24	V	/		6		

01	Accumulator station	ABSBG
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02	Component series 20 ... 29 (20 ... 29: unchanged installation and connection dimensions)	2X
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Hydraulic accumulator, design

03	Bladder-type accumulator according to data sheet 50171	B
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Accumulator volume in liters

04	1.0 liter	1.0
	2.5 liters	2.5
	4.0 liters	4.0
	6.0 liters	6.0
	10.0 liters	10.0
	20.0 liters	20.0
	24.0 liters	24.0
	32.0 liters	32.0
	50.0 liters	50.0

Bladder material

05	e.g. acrylonitrile butadiene rubber (NBR)	N
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Country acceptance for hydraulic accumulator

06	Short symbol for country acceptance in Europe, Russia and China from the manufacturer's type key	
	Acceptance according to 2014/68/EU	CE
	Acceptance according to SELO (China)	534
	Acceptance according to EAC (Russia)	EAC
	Operating instructions	BA

Accumulator shut-off block according to data sheet 50131

07	ABZSS 10 pressure relief valve 6E	10
	ABZSS 20 pressure relief valve 10E	20
	ABZSS 30 pressure relief valve 20E	30
	ABZSS 30 SO30 pressure relief valve 30E	31

Accumulator shut-off block - Unloading

08	Manual and electro-magnetic	E
	Manual	M

Accumulator shut-off block - Set pressure at the pressure relief valve

09	100 bar	100
	140 bar	140
	210 bar	210
	315 bar	315
	330 bar	330

Accumulator shut-off block - Voltage type

10	Direct voltage 24 V	G24
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Accumulator shut-off block - Seal material

11	FKM	V
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Mounting construction kit

12	Mounting with assembly kit A according to DCCS 10060 (console C)	A
	Mounting with clamp according to DCCS 10060	B

Ordering code

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15					
ABSBG	-	2X	/	B		N	-		/				G24	V	/		6		

ABZMM pressure gauge according to data sheet 50205

13	DN 63	6
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Pressure gauge scale

14	bar/MPa	M
	bar/psi	P

Accumulator manufacturer

15	Bosch Rexroth	DC
	Roth Hydraulics	RH

Order example:**ABSBG-2X/B32,0N-CE/30E315G24V/A6MDC**

Technical data

(for applications outside these values, please consult us!)

Accumulators		
Design		Bladder-type accumulator
Installation position		Any, preferably with the fluid connection socket at the bottom
Ambient temperature range	°C	–15 ... +65
Line connection		Screw-in thread
Hydraulic fluid		Hydraulic oil according to DIN 51524; other liquids on request
Hydraulic fluid temperature range (others upon request)	°C	–15 ... +80 (NBR bladder) –32 ... +80 (ECO bladder)
Acceptance specification for the accumulator	CE/BA	Acceptance according to 2014/68/EU or the operating instructions
	China	SELO
	Russia	EAC

Hydraulic, bladder-type accumulator											
Nominal volume	V_{rated}	l	1	2.5	4.0	6.0	10	20	24	32	50
Effective gas volume	V_{eff}	l	1.0	2.4	3.7	5.9	9.2	18.1	24.5	33.4	48.7
Maximum flow	q_{max}	l/min	240	450	450	450	900	900	900	900	900
Maximum operating pressure	p_{max}	bar	350	350	350	350	330	330	330	330	330
Max. adm. pressure fluctuation range	Δp_{dyn}	bar	200	200	200	200	125	125	125	125	125

Pneumatic			
Charging gas			Nitrogen, cleanliness class 4.0, N ₂ = 99.99 vol. %
Gas filling pressure	p_0	bar	CE, BA, EAC: 0
	p_0	bar	China: >30 l: 2-5

Shut-off block		
Seal material		FKM seals (NBR seals on request)
Operating temperature range	°C	–15 ... +80
Maximum operating pressure	bar	350
Block material		Steel
Direct-operated pressure relief valve		DBDS...K1X/...VB or DBDS...K1X/...E according to data sheet 25402
Cartridge seat valve		KSDER1PB/HN9V according to data sheet 18136-20
Protection class according to VDE 0470-1 – type "K4" (DIN EN 60529), DIN 40050-9		IP 65 with mating connector mounted and locked
Voltage type	V	24 (in case of electro-magnetic unloading "E")
Maximum admissible degree of contamination of the hydraulic fluid Cleanliness class according to ISO 4406 (C)		Class 20/18/15

Hydraulic fluid		Classification	Suitable sealing materials	Standards
Mineral oils		HL, HLP	NBR, FKM	DIN 51524
Bio-degradable	► Insoluble in water	HETG	NBR, FKM	VDMA 24568
		HEES	FKM	
	► Soluble in water	HEPG	FKM	VDMA 24568

**Important notices on hydraulic fluids:**

- For further information and data on the use of other hydraulic fluids, please refer to data sheet 90220 or contact us!
- There may be limitations regarding the technical valve data (temperature, pressure range, life cycle, maintenance intervals, etc.)!
- The flash point of the hydraulic fluid used must be 40 K higher than the maximum solenoid surface temperature.

- **Flame-resistant – containing water:** The maximum pressure differential per control edge is 50 bar. Pressure pre-loading at the tank port > 20% of the pressure differential; otherwise, increased cavitation. The pressure peaks should not exceed the maximum operating pressures!
- **Bio-degradable:** When using bio-degradable hydraulic fluids that are zinc-solvent, zinc may accumulate in the fluid (700 mg zinc per pole tube).

Technical data

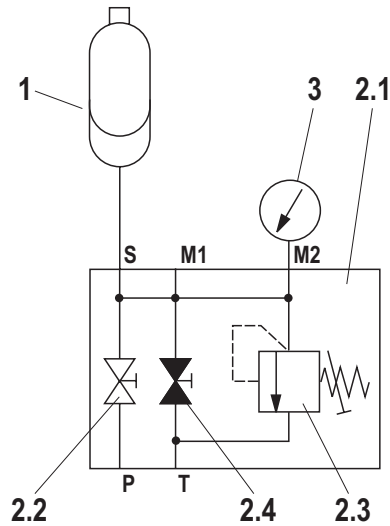
(for applications outside these values, please consult us!)

Pressure gauge		
Size	bar	63
Pressure gauge		Glycerin
Double scale		bar/MPa

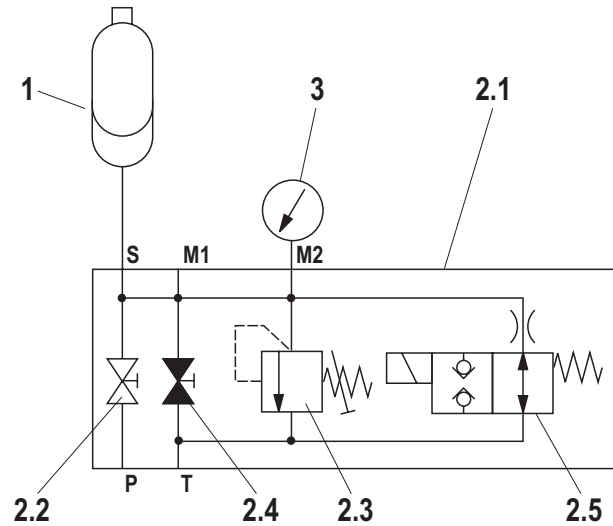
Surface treatment
All steel components and components without protective coating are coated prior to installation (minimum corrosion protection time of 12 h in salt spray test). Then, the devices, components and the piping are installed. All components, assemblies, controls, pipes, fittings and standard parts keep the supplied surface protection and are not additionally coated. The corrosion protection is determined by the least protected element in the assembly.

Symbols

Accumulator station with manually operated drain valve



Accumulator station with electro-mechanically operated drain valve



- 1** Hydraulic accumulator
- 2.1** Accumulator shut-off block with:
- 2.2** System shut-off cock
- 2.3** Pressure relief valve (type-examination tested)
- 2.4** Manual unloading
- 2.5** Electro-magnetic unloading (only version E)
- 3** Pressure gauge with red indication of the maximum admissible operating pressure

Spare parts and accessories

- Bladder-type accumulator according to data sheet 50171
- Shut-off block manually/electrically according to data sheet 50131
- Pressure gauge according to data sheet 50205
- Warning sign according to RNI 17506-001

Consoles contained in the assembly kit are intended for mounting by means of screws and nuts or for welding to suitable frames or design components.

Standard program including preferred types: Accumulator stations**Standard program including preferred types with manually operated drain valve** (other versions on request)

Accumulator type	Nominal volume in liters	Relief pressure in bar	Shut-off block DN	Q _{Vmax} DBDS in l/min	Acceptance CE/BA				Type of mounting	Acceptance China		Acceptance Russia	
					Denomination	Material no.	Weight in kg	MKZ ¹⁾		Material no.	MKZ ¹⁾	Material no.	MKZ ¹⁾
Bladder-type accumulator	1.0	100	10	25	ABSBG-2X/B 1,0N-BA /10M100 V/B6M DC	R901450000	14	A3	B	R901450000	A3	R901488461	A3
		140	10	52	ABSBG-2X/B 1,0N-BA /10M140 V/B6M DC	R901450001	14	A3		R901450001	A3	R901488462	A3
		210	10	52	ABSBG-2X/B 1,0N-BA /10M210 V/B6M DC	R901450002	14	A3		R901450002	A3	R901488463	A3
		330	10	52	ABSBG-2X/B 1,0N-BA /10M330 V/B6M DC	R901450003	14	A2		R901450003	A2	R901488464	A3
	2.5	100	10	25	ABSBG-2X/B 2,5N-CE /10M100 V/B6M DC	R901450004	18	A3	B	R901450004	A3	R901488465	A3
		140	10	52	ABSBG-2X/B 2,5N-CE /10M140 V/B6M DC	R901450005	18	A3		R901450005	A3	R901488466	A3
		210	10	52	ABSBG-2X/B 2,5N-CE /10M210 V/B6M DC	R901450006	18	A3		R901450006	A3	R901488467	A3
		330	10	52	ABSBG-2X/B 2,5N-CE /10M330 V/B6M DC	R901450007	18	A2		R901450007	A2	R901488468	A3
	4.0	100	10	25	ABSBG-2X/B 4,0N-CE /10M100 V/A6M DC	R901450008	28	A3	A	R901450008	A3	R901488469	A3
		140	10	52	ABSBG-2X/B 4,0N-CE /10M140 V/A6M DC	R901450009	28	A3		R901450009	A3	R901488470	A3
		210	10	52	ABSBG-2X/B 4,0N-CE /10M210 V/A6M DC	R901450010	28	A3		R901450010	A3	R901488471	A3
		330	10	52	ABSBG-2X/B 4,0N-CE /10M330 V/A6M DC	R901450011	28	A2		R901450011	A2	R901488472	A3
	6.0	330	10	52	ABSBG-2X/B 6,0N-CE /10M330 V/A6M DC	R901454612	31	A2	A	R901454612	A2	R901488391	A3
	10.0	210	20	140	ABSBG-2X/B10,0N-CE /20M210 V/A6M DC	R901450012	49	A3	A	R901450012	A3	R901488473	A3
		330	20	140	ABSBG-2X/B10,0N-CE /20M330 V/A6M DC	R901450013	49	A2		R901450013	A2	R901488474	A3
	20.0	210	20	140	ABSBG-2X/B20,0N-CE /20M210 V/A6M DC	R901450014	75	A3	A	R901450014	A3	R901488475	A3
		330	20	140	ABSBG-2X/B20,0N-CE /20M330 V/A6M DC	R901450015	75	A2		R901450015	A2	R901488476	A3
	24.0	210	20.0	140	ABSBG-2X/B24,0N-CE /20M210 V/A6M DC	R901450115	83	A3	A	R901450115	A3	R901488479	A3
		330	20.0	140	ABSBG-2X/B24,0N-CE /20M330 V/A6M DC	R901450116	83	A2		R901450116	A2	R901488480	A3
	32.0	315	30	165	ABSBG-2X/B32,0N-CE /30M315 V/A6M DC	R901450016	132	A2	A	R901450034	A3	R901488477	A3
	50.0	315	30	165	ABSBG-2X/B50,0N-CE /30M315 V/A6M DC	R901450017	170	A2	A	R901450035	A3	R901488478	A3

¹⁾ MKZ = Material mark: A2 = preferred delivery range; A3 = standard delivery range

Standard program including preferred types: Accumulator stations**Standard program including preferred types with electrically operated drain valve** (other versions on request)

Accumulator type	Nominal volume in liters	Relief pressure in bar	Shut-off block DN	~ Q_{Vmax} DBDS in l/min	Acceptance CE/BA				Type of mounting	Acceptance China		Acceptance Russia	
					Denomination	Material no.	Weight in kg	MKZ ¹⁾		Material no.	MKZ ¹⁾	Material no.	MKZ ¹⁾
Bladder-type accumulator	1.0	100	10	25	ABSBG-2X/B 1,0N-BA /10E100G 24V/B6M DC	R901450054	14	A3	B	R901450054	A3	R901488364	A3
		140	10	52	ABSBG-2X/B 1,0N-BA /10E140G 24V/B6M DC	R901450055	14	A3		R901450055	A3	R901488365	A3
		210	10	52	ABSBG-2X/B 1,0N-BA /10E210G 24V/B6M DC	R901450056	14	A3		R901450056	A3	R901488366	A3
		330	10	52	ABSBG-2X/B 1,0N-BA /10E330G 24V/B6M DC	R901450057	14	A2		R901450057	A2	R901488368	A3
	2.5	100	10	25	ABSBG-2X/B 2,5N-CE /10E100G 24V/B6M DC	R901450058	18	A3	B	R901450058	A3	R901488369	A3
		140	10	52	ABSBG-2X/B 2,5N-CE /10E140G 24V/B6M DC	R901450059	18	A3		R901450059	A3	R901488370	A3
		210	10	52	ABSBG-2X/B 2,5N-CE /10E210G 24V/B6M DC	R901450060	18	A3		R901450060	A3	R901488371	A3
		330	10	52	ABSBG-2X/B 2,5N-CE /10E330G 24V/B6M DC	R901450061	18	A2		R901450061	A2	R901488372	A3
	4.0	100	10	25	ABSBG-2X/B 4,0N-CE /10E100G 24V/A6M DC	R901450062	28	A3	A	R901450062	A3	R901488374	A3
		140	10	52	ABSBG-2X/B 4,0N-CE /10E140G 24V/A6M DC	R901450063	28	A3		R901450063	A3	R901488375	A3
		210	10	52	ABSBG-2X/B 4,0N-CE /10E210G 24V/A6M DC	R901450064	28	A3		R901450064	A3	R901488376	A3
		330	10	52	ABSBG-2X/B 4,0N-CE /10E330G 24V/A6M DC	R901450065	28	A2		R901450065	A2	R901488377	A3
	6.0	330	10	52	ABSBG-2X/B 6,0N-CE /10E330G 24V/A6M DC	R901467840	31	A2	A	R901467840	A2	R901488390	A3
	10.0	210	20	140	ABSBG-2X/B10,0N-CE /20E210G 24V/A6M DC	R901450066	49	A3	A	R901450066	A3	R901488378	A3
		330	20	140	ABSBG-2X/B10,0N-CE /20E330G 24V/A6M DC	R901450067	49	A2		R901450067	A2	R901488379	A3
	20.0	210	20	140	ABSBG-2X/B20,0N-CE /20E210G 24V/A6M DC	R901450068	75	A3	A	R901450068	A3	R901488380	A3
		330	20	140	ABSBG-2X/B20,0N-CE /20E330G 24V/A6M DC	R901450069	75	A2		R901450069	A2	R901488381	A3
	24.0	210	20.0	140	ABSBG-2X/B24,0N-CE /20E210G 24V/A6M DC	R901450121	83	A3	A	R901450121	A3	R901488384	A3
		330	20.0	140	ABSBG-2X/B24,0N-CE /20E330G 24V/A6M DC	R901450122	83	A2		R901450122	A2	R901488385	A3
	32.0	315	30	165	ABSBG-2X/B32,0N-CE /30E315G 24V/A6M DC	R901450070	132	A2	A	R901450088	A3	R901488382	A3
	50.0	315	30	165	ABSBG-2X/B50,0N-CE /30E315G 24V/A6M DC	R901450071	170	A2	A	R901450089	A3	R901488383	A3

¹⁾ MKZ = Material mark: A2 = preferred delivery range; A3 = standard delivery range

Accumulator stations for advanced flows

Standard program including preferred types with manually operated drain valve (other versions on request)

Accumulator type	Nominal volume in liters	Relief pressure in bar	Shut-off block DN	~ Q _{Vmax} DBDS in l/min	Acceptance CE/BA						Acceptance China		Acceptance Russia	
					Denomination	Material no.	Weight in kg	MKZ ¹⁾	Type of mounting	Material no.	MKZ ¹⁾	Material no.	MKZ ¹⁾	
Bladder-type accumulator	1.0	330	20	140	ABSBG-2X/B 1,0N-BA /20M330 V/B6M DC	R901448603	17	A3	B	R901448603	A3	-	-	
	2.5	330	20	140	ABSBG-2X/B 2,5N-CE /20M330 V/B6M DC	R901448605	21	A3	B	R901448605	A3	-	-	
	4.0	330	20	140	ABSBG-2X/B 4,0N-CE /20M330 V/A6M DC	R901448607	31	A3	A	R901448607	A3	-	-	
	6.0	330	20	140	ABSBG-2X/B 6,0N-CE /20M330 V/A6M DC	R901495532	40	A3	A	R901495532	A3			
	10.0	315	30	165	ABSBG-2X/B10,0N-CE /30M315 V/A6M DC	R901448609	63	A3	A	R901448609	A3	-	-	
		315	31	165	ABSBG-2X/B10,0N-CE /31M315 V/A6M DC	R901448612	71	A3	A	R901448612	A3	-	-	
	20.0	315	30	165	ABSBG-2X/B20,0N-CE /30M315 V/A6M DC	R901448615	89	A3	A	R901448615	A3	-	-	
		315	31	300	ABSBG-2X/B20,0N-CE /31M315 V/A6M DC	R901448617	97	A3	A	R901448617	A3	-	-	
	32.0	315	31	300	ABSBG-2X/B32,0N-CE /31M315 V/A6M DC	R901448619	141	A3	A	R901448619	A3	R901488723	A3	
	50.0	315	31	300	ABSBG-2X/B50,0N-CE /31M315 V/A6M DC	R901448621	179	A3	A	R901448624	A3	R901488721	A3	

¹⁾ MKZ = Material mark: A2 = preferred delivery range; A3 = standard delivery range

Accumulator stations for advanced flows

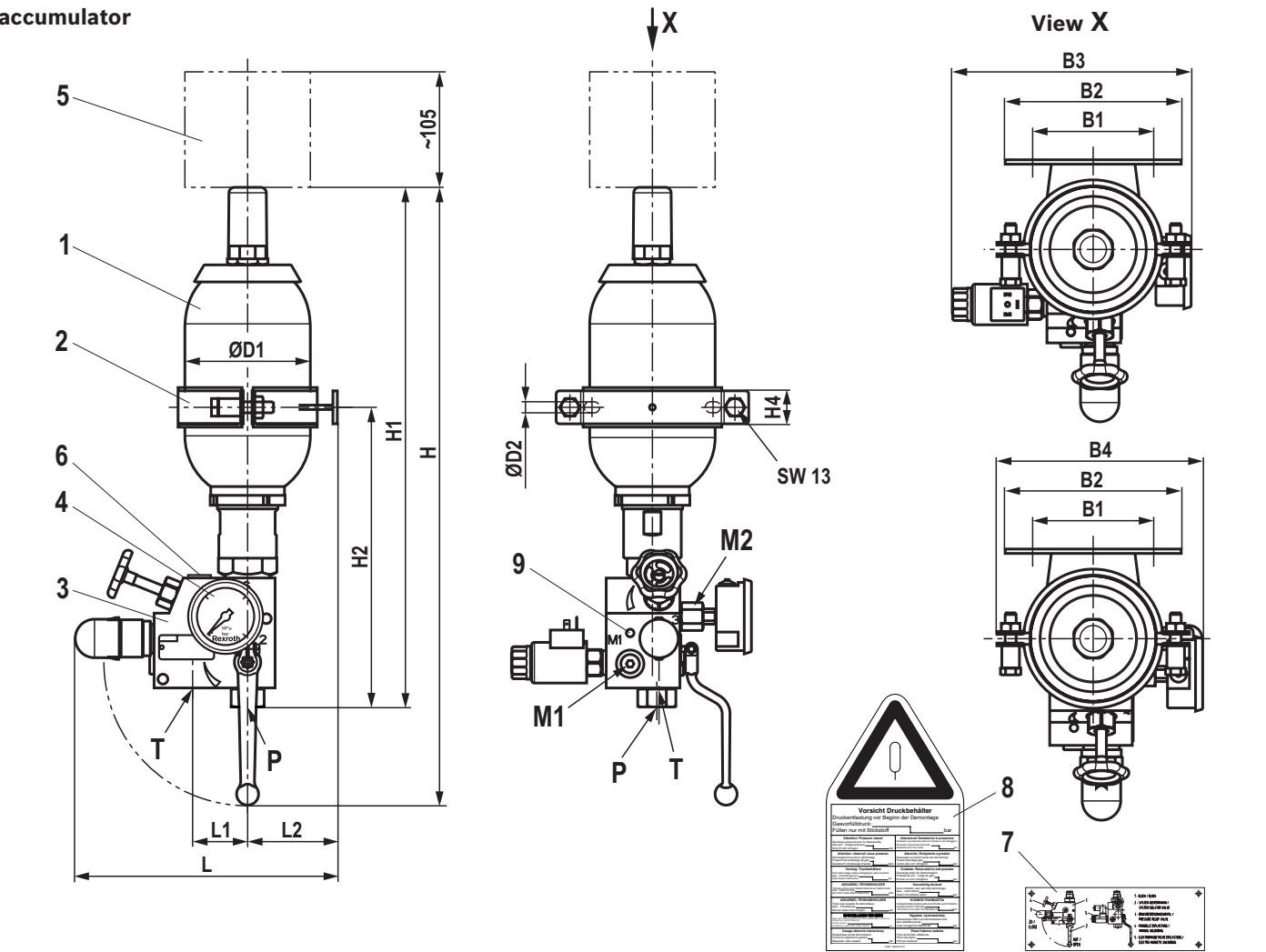
Standard program including preferred types with electrically operated drain valve (other versions on request)

Accumulator type	Nominal volume in liters	Relief pressure in bar	Shut-off block DN	~ Q _{Vmax} DBDS in l/min	Acceptance CE/BA					Acceptance China		Acceptance Russia	
					Denomination	Material no.	Weight in kg	MKZ ¹⁾	Type of mounting	Material no.	MKZ ¹⁾	Material no.	MKZ ¹⁾
Bladder-type accumulator	1.0	330	20	140	ABSBG-2X/B 1,0N-BA /20E330G 24V/B6M DC	R901448604	14	A3	B	R901448604	A3	-	-
	2.5	330	20	140	ABSBG-2X/B 2,5N-CE /20E330G 24V/B6M DC	R901448606	21	A3	B	R901448606	A3	-	-
	4.0	330	20	140	ABSBG-2X/B 4,0N-CE /20E330G 24V/A6M DC	R901448608	31	A3	A	R901448608	A3	-	-
	6.0	330	20	140	ABSBG-2X/B 6,0N-CE /20E330G 24V/A6M DC	R901495533	41	A3	A	R901495533	A3	-	-
	10.0	315	30	165	ABSBG-2X/B10,0N-CE /30E315G 24V/A6M DC	R901448611	63	A3	A	R901448611	A3	-	-
		315	31	165	ABSBG-2X/B10,0N-CE /31E315G 24V/A6M DC	R901448613	71	A3	A	R901448613	A3	-	-
	20.0	315	30	165	ABSBG-2X/B20,0N-CE /30E315G 24V/A6M DC	R901448616	89	A3	A	R901448616	A3	-	-
		315	31	300	ABSBG-2X/B20,0N-CE /31E315G 24V/A6M DC	R901448618	97	A3	A	R901448618	A3	-	-
	32.0	315	31	300	ABSBG-2X/B32,0N-CE /31E315G 24V/A6M DC	R901448620	141	A3	A	R901488718	A3	R901488716	A3
	50.0	315	31	300	ABSBG-2X/B50,0N-CE /31E315G 24V/A6M DC	R901448622	179	A3	A	R901488722	A3	R901488720	A3

¹⁾ MKZ = Material mark: A2 = preferred delivery range; A3 = standard delivery range

Dimensions: Mounting B with clamp
(dimensions in mm)

Accumulator station with 1.0 liter bladder-type accumulator



Connection designations:

M1	Measuring port	G1/4
M2	Pressure gauge connection	G1/4
P	Pump port	s. table
T	Tank port	s. table

Gas filling pressure of the accumulators upon delivery:

BA/CE	0 bar
EAC	0 bar
China > 30 l	2 ... 5 bar

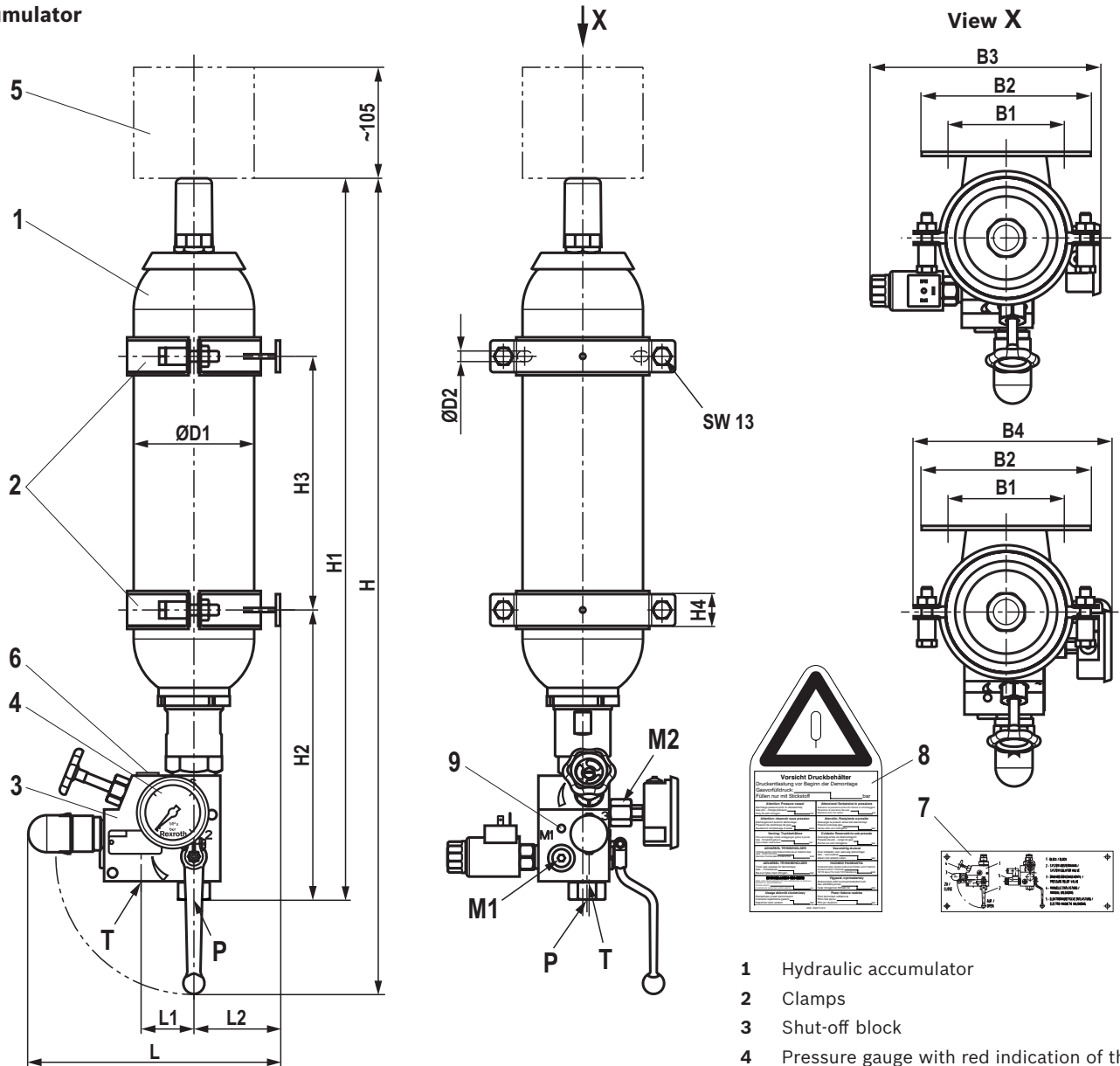
- 1 Hydraulic accumulator
- 2 Clamp
- 3 Shut-off block
- 4 Pressure gauge with red indication of the maximum admissible operating pressure
- 5 Space required for filling device
- 6 Name plate of the accumulator station
- 7 Functional sign (loose)
- 8 Warning sign (loose)
- 9 Threaded connection M8 for equipotential bonding

Assembly kit ABSBG-...	ØD1 _{max}	ØD2	B1	B2	B3	B4	H1	H2	H4	H _{max}	L1	L2	L	P	T
B 1.0.../10M	116	10	110	160	–	178	490	275	30	557	50	82	239	G1/2	G3/8
B 1.0.../10E	116	10	110	160	223	–	490	275	30	557	50	82	239	G1/2	G3/8
B 1.0.../20M	116	10	110	160	–	191	516	301	30	631	56	82	253	G1	G1/2
B 1.0.../20E	116	10	110	160	234	–	516	301	30	631	56	82	253	G1	G1/2

approx. dimensions - for precise dimensions, please refer to the dimensional drawings

Dimensions: Mounting B with clamps
(dimensions in mm)

Accumulator station with 2.5 liters bladder-type accumulator



Connection designations:

M1 Measuring port	G1/4
M2 Pressure gauge connection	G1/4
P Pump port	s. table
T Tank port	s. table

Gas filling pressure of the accumulators upon delivery:

BA/CE	0 bar
EAC	0 bar
China > 30 l	2 ... 5 bar

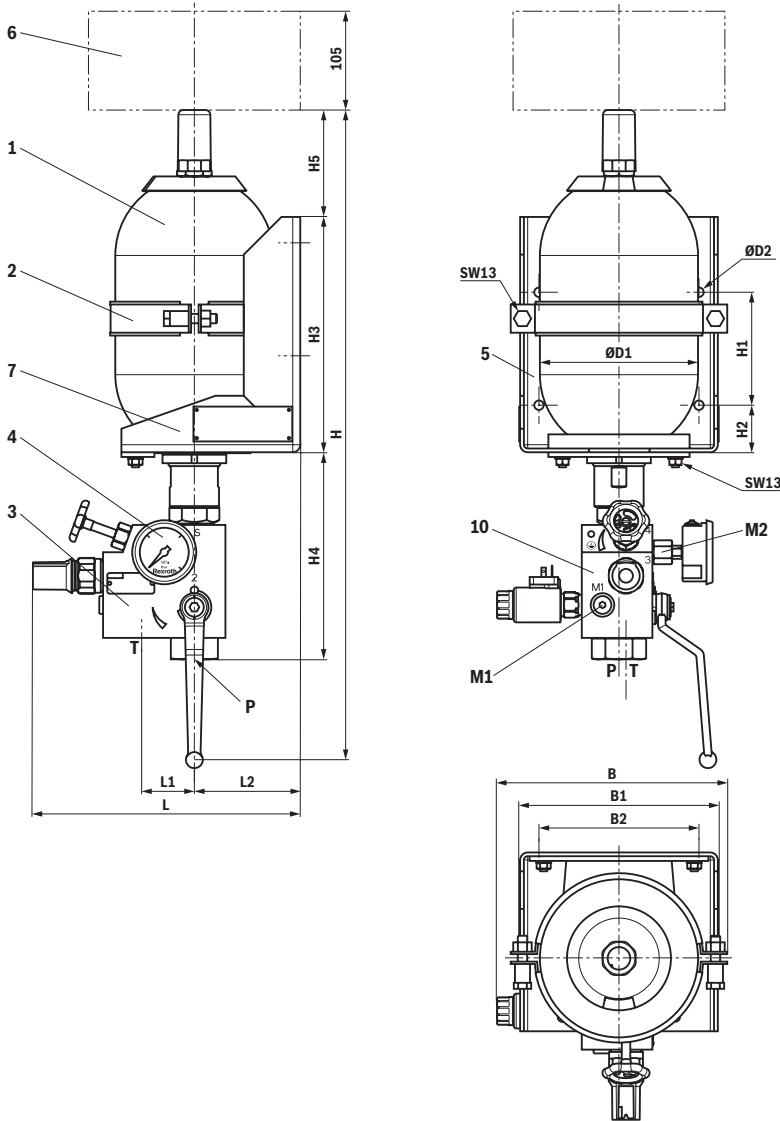
- 1 Hydraulic accumulator
- 2 Clamps
- 3 Shut-off block
- 4 Pressure gauge with red indication of the maximum admissible operating pressure
- 5 Space required for filling device
- 6 Name plate of the accumulator station
- 7 Functional sign (loose)
- 8 Warning sign (loose)
- 9 Threaded connection M8 for equipotential bonding

Assembly kit ABSBG-...	ØD1 _{max}	ØD2	B1	B2	B3	B4	H1	H2	H3	H4	H _{max}	L1	L2	L	P	T
B 2.5.../10M...	116	10	110	160	–	178	699	276	240	30	766	50	82	239	G1/2	G3/8
B 2.5.../10E...	116	10	110	160	223	–	699	276	240	30	766	50	82	239	G1/2	G3/8
B 2.5.../20M...	116	10	110	160	–	191	725	302	240	30	840	56	82	253	G1	G1/2
B 2.5.../20E...	116	10	110	160	234	–	725	302	240	30	840	56	82	253	G1	G1/2

approx. dimensions - for precise dimensions, please refer to the dimensional drawings

Dimensions: Mounting A in console (dimensions in mm)

Accumulator station with 4.0 ... 50.0 liters bladder-type accumulator



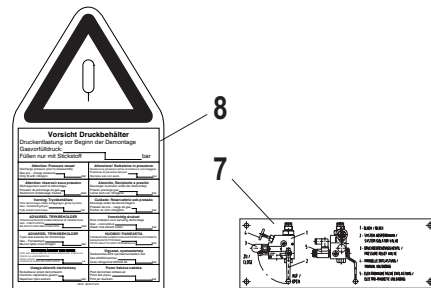
- 1 Hydraulic accumulator
- 2 Clamp
- 3 Shut-off block
- 4 Pressure gauge with red indication of the maximum admissible operating pressure
- 5 Console
- 6 Space required for filling device
- 7 Name plate of accumulator station
- 8 Functional sign (loose)
- 9 Warning sign (loose)
- 10 Threaded connection M8 for equipotential bonding

Connection designations:

M1	Measuring port	G1/4
M2	Pressure gauge connection	G1/4
P	Pump port	s. table
T	Tank port	s. table

Gas filling pressure of the accumulators upon delivery:

BA/CE	0 bar
EAC	0 bar
China >30 l	2 ... 5 bar



Dimensions: Mounting A in console
(dimensions in mm)

Assembly kit ABSBG-...	ØD1 _{max}	ØD2	B1	B2	B	H1	H2	H3	H4±10	H5	H _{max}	L1	L2	L	P	T
B 4.0.../10M...	170	10	212	170	230	120	50	250	200	112	640	50	113	277	G1/2	G3/8
B 4.0.../10E...	170	10	212	170	243	120	50	250	200	112	640	50	113	277	G1/2	G3/8
B 4.0.../20M...	170	10	212	170	230	120	50	250	220	114	700	56	113	284	G1	G1/2
B 4.0.../20E...	170	10	212	170	245	120	50	250	220	114	700	56	113	284	G1	G1/2
B 6.0.../10M...	170	10	212	170	230	120	50	250	200	240	776	50	113	278	G1/2	G3/8
B 6.0.../10E...	170	10	212	170	243	120	50	250	200	240	776	50	113	278	G1/2	G3/8
B 6.0.../20M...	170	10	212	170	230	120	50	250	220	243	830	56	113	284	G1	G1/2
B 6.0.../20E...	170	10	212	170	245	120	50	250	220	243	830	56	113	284	G1	G1/2
B10.0.../20...	221	10	288	250	-	130	75	280	269	208	872	56	113	284	G1	G1/2
B10.0.../30...	221	10	288	250	-	130	75	280	314	208	972	80	128	361	G1 1/2	G1/2
B10.0.../31...	221	10	288	250	-	130	75	280	336	208	994	111	128	361	G1 1/2	G1 1/2
B20.0.../20...	221	10	288	250	-	360	100	560	269	238	1182	56	126	297	G1	G1/2
B20.0.../30...	221	10	288	250	-	360	100	560	314	238	1282	80	126	359	G1 1/2	G1/2
B20.0.../31...	221	10	288	250	-	360	100	560	336	238	1304	111	126	359	G1 1/2	G1 1/2
B24.0.../20...	221	10	288	250	-	360	100	560	269	373	1317	56	126	297	G1	G1/2
B32.0.../30...	221	12	288	250	-	820	150	1120	314	198	1802	80	127	360	G1 1/2	G1/2
B32.0.../31...	221	12	288	250	-	820	150	1120	336	198	1824	111	127	360	G1 1/2	G1 1/2
B50.0.../30...	221	12	288	250	-	820	150	1120	314	713	2317	80	127	360	G1 1/2	G1/2
B50.0.../31...	221	12	288	250	-	820	150	1120	336	713	2339	111	127	360	G1 1/2	G1 1/2

approx. dimensions - for precise dimensions, please refer to the dimensional drawings

Commissioning, maintenance and operating instructions

General Information

- ▶ Observe the documentation for the machinery.
- ▶ Also observe the documentation pertaining to the other components, assemblies and partly completed machinery, which form part of the complete machinery.
- ▶ Observe the generally applicable, legal or otherwise binding European and national regulations as well as the relevant legislation for your country pertaining to the prevention of accidents and protection of the environment.
- ▶ Operating instructions according to the data sheet of the accumulator
- ▶ Depending on the country of installation, national pressure vessel regulations need to be complied with.
- ▶ In the standard, the country acceptance is effected according to BA, CE as well as for China and Russia. Other acceptances on request.
- ▶ Please indicate the country of installation in the order.
- ▶ Keep all documents included in the delivery in a safe place; they will be required by the expert in recurring tests.
- ▶ The machine end-user will have sole responsibility for complying with existing provisions.
- ▶ The accumulator stations in this edition are assemblies in the sense of directive 2014/68/EU, article 2, section 6 (Pressure Equipment Directive). However, they are not intended for exclusive commissioning. They are installed as a component of a larger assembly or system.
- ▶ The accumulator stations described here contain the entire equipment which is required for safety reasons according to DIN EN ISO 4413.
- ▶ The accumulator stations must not be modified; otherwise, the operating license according to directive 2014/68/EU will be lost and the dealer and/or manufacturer warranty will be forfeited.
- ▶ The accumulator stations may only be operated within the admissible limit values.
- ▶ Repair works may only be carried out by the manufacturer or their authorized dealers and agencies. Repair works performed by third parties invalidate the approval and release the manufacturer from all claims resulting from an unauthorized intervention.
- ▶ Assembly and maintenance must be implemented by authorized, instructed persons only.

Commissioning, maintenance and operating instructions

- The accumulator stations are provided with signs: **1**

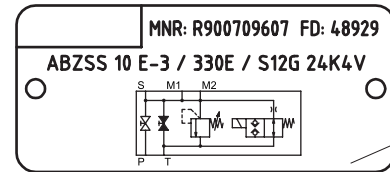
- 1. Name plate** specifying the pressure rating, identifies the device
- 2. Functional sign** identifies the components and elementary lever positions
- 3. Warning sign** has to be clearly visible and attached at the device or next to it, however not at the pressure vessel itself.

Usually, the warning sign is in the languages according to the country acceptance. Further languages at request.

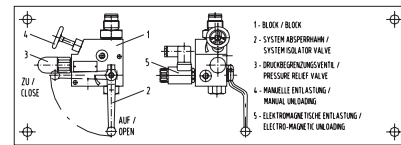
For hydraulic systems with one or several hydraulic accumulators whose warning signs are not visible after installation into the machine, an additional warning sign has to be attached visibly to the system, stating:

"CAUTION -- system contains hydraulic accumulators."

The circuit diagram has to contain the same notice. With mounting "B" and "K", the warning signs and functional signs are supplied loosely and must be attached to or close to the accumulator station in a clearly visible position. The attachment of the signs must already be considered in the design.





Example




Commissioning, maintenance and operating instructions

Commissioning - Operating instructions according to the data sheet of the accumulator!

	<p>DANGER Do not charge hydraulic accumulators with oxygen or air. Explosion hazard!</p> <ul style="list-style-type: none"> ▶ Prior to the initial commissioning, the hydraulic accumulator must be filled with nitrogen of class 4.0, pure (N₂ content 99.99 vol. %). The preset gas pressure necessary for the operation is indicated in the circuit diagrams and operating instructions. ▶ Only use suitable filling and testing devices for filling. We recommend using the charging and test devices by Bosch Rexroth according to data sheet 50150.
	<p>WARNING</p> <ul style="list-style-type: none"> ▶ Risk of injury caused by improper assembly. ▶ Hydraulic accumulators are energy stores. They may supply the energy for uncontrolled movements to actuators. ▶ Before beginning any repairs, the system must be depressurized on the oil and gas side and protected against unauthorized re-start. ▶ Do not carry out welding and soldering works or any mechanical processing on the accumulator tank! Any kind of processing at the product invalidates the declaration of conformity and the operating license! <ul style="list-style-type: none"> – Explosion hazard due to welding and soldering works! – Danger of bursting during and after mechanical processing. ▶ A warning sign is enclosed to the accumulator station. It is to be attached to or close to the accumulator station in a clearly visible position.

Maintenance

	<p>Attention</p> <ul style="list-style-type: none"> ▶ In case of damage at the accumulator bladder or diaphragm, the accumulator will lose its function immediately. ▶ Loss of the initial gas tension will lead to damage at the accumulator bladder or the accumulator diaphragm if operation of the system is continued nevertheless. ▶ Check the initial gas tension in regular intervals.
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Legal provisions

- ▶ Hydraulic accumulators are pressure vessels and subject to the application of national provisions and/or regulations valid at the place of installation.
- ▶ In Germany, the Ordinance on Industrial Safety and Health (BetrSichV) applies.
- ▶ As a standard, country acceptances are effected according to BA, CE as well as for China and Russia. Other acceptances on request.
- ▶ Special regulations are to be observed in shipbuilding, aircraft construction, mining, etc.
- ▶ Design, production and testing are effected according to the data sheets according to AD 2000. Installation, equipment and operation are regulated by the "Technical rules for pressure vessels" (TRB).

Notes pursuant to the EC Machinery

Directive 2006/42/EC, according to annex II part 1, section A, manufacturer's declaration:

- ▶ The assemblies were manufactured in accordance with the harmonized standards DIN EN ISO 4413, DIN EN ISO 12100, EN 983, and EN 60204-1.
- ▶ Commissioning is prohibited until it was confirmed that the machine into which the assemblies are to be integrated complies with the regulations laid down in the EC Directives.

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It must be remembered that our products are subject to a natural process of wear and aging.