

Mounting elements for hydraulic accumulators



1. DESCRIPTION

1.1. GENERAL

HYDAC mounting elements enable simple and secure mounting of all hydraulic accumulators. In addition to the standard product range described below, mounting technology for specific customer requirements and applications is available on request. For further information and notes, see:

- HYDAC Accessories product catalogue No. 61.000

Quick and easy – Accu-MOUNT

You can use our tool to find the matching accumulator mount, see: [www.hydac.com/Service/Online tools](http://www.hydac.com/Service/Online%20tools)

1.2. APPLICATION

The optimum mounting type strongly depends on the use, type and size of the accumulator. Clamps, consoles and accumulator mounting sets are all possible options. As they are safety equipment, our mounting elements must only be attached and installed by trained staff.

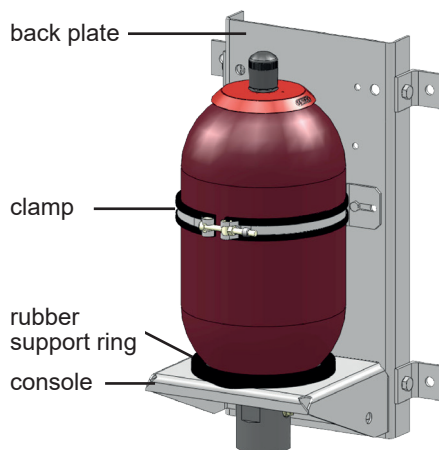
The clamp quantities for bladder and piston accumulators given in the following overviews are HYDAC recommendations that take static use and vertical mounting into account including the corresponding mounting element (e.g. HYDAC consoles).

More information on HYDAC hydraulic accumulators is available in the following catalogue sections:

- Bladder accumulators
Low pressure
No. 3.202
- Bladder accumulators
Standard design
No. 3.201
- Piston accumulators
Standard design
No. 3.301
- Piston accumulators
SK280
No. 3.303
- Diaphragm accumulators
No. 3.100
- Hydraulic accumulators with back-up nitrogen bottles
No. 3.553

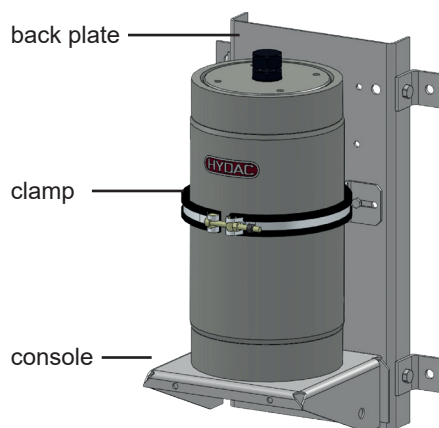
1.2.1 Bladder accumulators

Clamps, consoles and accumulator mounting sets can be used for optimum mounting of the bladder accumulator. The bladder accumulator console is equipped with a rubber support ring.



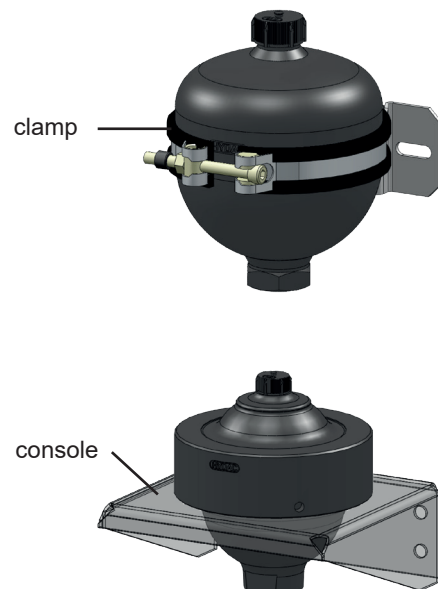
1.2.2 Piston accumulators

Clamps, consoles and accumulator mounting sets can also be used for piston accumulators. In this case, the console is not equipped with a rubber support ring. Please request accumulator mounting set for piston accumulators separately, as the design may vary considerably depending on the accumulator's nominal volume.



1.2.3 Diaphragm accumulators

Weld type diaphragm accumulators are fastened with an accumulator clamp and screw type diaphragm accumulators are fastened with a console. Accumulator mounting sets are not used for diaphragm accumulators.



1.3. MATERIALS

The following materials are available as standard:

Clamp	
Fastening, base	zinc-plated
Band clamp	stainless steel
Insert	PE/PP/NBR
	see section 3.1.
Console	
Rubber support ring ¹⁾	NBR
Accumulator mounting set	
Clamp	see above
Console	see above
Back plate	zinc-plated

Other materials (e.g. stainless steel) are available on request.

¹⁾ Only for bladder accumulators

2. SELECTION TABLES FOR MOUNTING ELEMENTS

2.1. BLADDER ACCUMULATORS AND GAS PRESSURE VESSELS

The following table shows the recommended mounting type for each series and volume. The number of clamps can vary depending on the requirements and on the length of the hydraulic accumulator and is a HYDAC recommendation (see section 1.2.).

Designation	Part no.	Nominal volume [l]																													
		SB330(H)						SB400			SB550 / SB690		SB690		SB500 / SB600		SB40(H)			SB35HB	SN360	SN600									
Clamp		1	2.5	4+6+10 slimline version	10-20	32+50	60+80	100+130	160+200	0.5	4	10-20	32+50	1	2.5+5	10	20	32+50	10+20	32+50	2.5+5	10+20	32+50	70-130	190+220	20	32+50	50	75(C)	50+75	
HyRac 106-114/115 H3 ST	444905																									2					
HyRac 110-118/124 H10 ST	445042	1	2																												
HyRac 121-129/133 H8 ST	444906													1	2																
HyRac 167-175/178 H5 ST	445043			1*						1																					
HyRac 216-224/226 H5 ST	445047																								1	2		1	2		
HyRac 223-230/231 H3 ST	445048				1	2																							2		
HyRac 225-234/234 H3 ST	445049											1	2																	3	3 ¹⁾
HSS 242	362712																					1	2								
HRVMS 3 R 248-259/256 ST	3489871																2														
HRVMS 3 R 268-279/276 ST	3559057																													2**	
HRGKSM 0 R 96-100/100 ST	444953								1																						
HRGKSM 3 R 242-253/250 ST	3302566															2															
HRGKSM 4 R 352-363/360 ST	444795						2	3																	2						
HRRBS 14 L 267 PP ST ZN	431645																					2									
HRRBS 17 B1L 406 PP ST M ZN B145 H525	3434519								4 ²⁾																	3					
Console																															
KBK 167/G	2107989			1											1																
KBK 222/G	2100651				1	1					1	1							1	1			1	1			1	1	1		1
KBK 360/G	2107990						1	1	1							1	1	1												1	
KHF 210/G	3111594																										1	1			
Accumulator mounting set																															
SEB 2.5	290787	1																													
SEB 4	238403								1																						
SEB 6	2115851																														
SEB 10 slimline version	4189835			1																											
SEB 10	238407				1							1																			
SEB 13-20	240598				1							1																			
SEB 32	238409					1							1																		
SEB 50	240599					1							1																		
SEBL 60-80*	3605561						1																								
SEBL 100-130*	372132							1																							
SEBL 160*	4482591								1																						
SEBL 200*	4500010									1																					
SEH 2.5	2105194													1																	
SEH 5	2105195													1																	
SEH 10	378952																					1									
SEH 20	298181																						1								
SEH 32	298182																						1								
SEH 50	298183																						1								
SEM 2.5	3007402																							1							
SEM 5	3007423																							1							
SEM 10	3007424																								1						
SEM 20	3007425																								1						
SEM 32	3007426																									1					
SEM 50	3007427																									1					
SEHB 20	3007431																											1			
SEHB 32	3007432																												1		
SEHB 50	3007433																												1		

* SEBL with back plate possible

** C = compact version

¹⁾ 2 clamps for SB330-10 litres slimline version or SN600-50 litres

²⁾ 3 clamps for SB330(H)-160 litres

Others on request

2.2. PISTON ACCUMULATORS

The following table shows the recommended mounting type for each piston accumulator type. The clamp is selected on the basis of the accumulator's external diameter. The number of clamps can vary depending on the requirements and on the length of the hydraulic accumulator and is a HYDAC recommendation (see section 1.2.).

To prevent deformation of the cylinder, clamps should preferably be mounted near the end caps.

Designation	Part no.	Piston diameter [mm]																																		
		Accumulator external diameter [mm]																																		
		50	60	80	100	125	150	180	200	250	> 250	60	75	80	95	100	120	125	150	160	175	180	210	220	235	286	300	> 300								
Clamps SK280																																				
HRGKSM 0 R 58-61/62 ST	3018442	●																											on request							
HRGKSM 0 R 73-76/76 ST	444912		●																																	
HRGKSM 0 R 92-95/96 ST	444995				●																															
HRGKSM 1 R 119-127/124 ST	444505						●																													
HRGKSM 1 R 146-154/151 ST	444321											●																								
HRGKSM 2 R 172-180/178 ST	444402																	●																		
Clamps SK 210/350																																				
HRGKSM 0 R 77-80/80 ST	3018445			●																								on request								
HRGKSM 0 R 96-100/100 ST	444953					●																														
HyRac 121-129/133 H8 ST	444906									●																										
HyRac 160-167/169 H5 ST	444910												●																							
HyRac 176-185/187 H5 ST	445044																		●																	
HyRac 209-217/223 H10 ST	445046																				●															
HyRac 216-224/226 H5 ST	445047																					●														
on request	-																								●											
HSS 286	237395																									●										
HSS 310	237389																										●									
Consoles																																				
KBK 126	290530											1																on request								
KBK 167	238526																		1	1																
KBK 219	238042																				1	1														
KBK 310	238043																									1	1									
on request	-																								1											

● = the recommended number of clamps is available on request or from our online tool Accu-MOUNT

2.3. DIAPHRAGM ACCUMULATORS

2.3.1 Weld type

Clamps	Part no.	Accumulator type
HRGKSM 0 R 62-65/65 ST	444911	SBO250-0.075E
HRGKSM 0 R 73-76/76 ST	444912	SBO210-0.16E
HRGKSM 0 R 77-80/80 ST	3018445	SBO160-0.16E
		SBO300-0.16E
HRGKSM 0 R 92-95/96 ST	444995	SBO210-0.32E
		SBO300-0.32E
HyRac 100-105/106 H3 ST	444904	SBO160-0.5E
		SBO210-0.5E
HyRac 106-114/115 H3 ST	444905	SBO100-0.7E
		SBO140-0.75E
HyRac 110-118/124 H10 ST	445042	SBO330-0.6E
		SBO210-0.75E
HyRac 121-129/133 H8 ST	444906	SBO250-0.75E
		SBO250-1E
		SBO330-0.75E
		SBO330-1E
		SBO350-0.6E
HyRac 133-142/142 H3 ST	444907	SBO200-1E
HyRac 143-151/151 H3 ST	444908	SBO140-1.4E
		SBO210-1.4E
HyRac 152-159/160 H3 ST	444909	SBO250-1.4E
		SBO250-2E
		SBO330-1.4E
HyRac 160-167/169 H5 ST	444910	SBO100-2E
HyRac 167-175/178 H5 ST	445043	SBO210-2E
		SBO210-2.8E
		SBO250-2.8E
		SBO330-2E
		SBO330-2.8E
		SBO330-3.5E

2.3.2 Screw type

Consoles	Part no.	Accumulator type
KMS 210	358989	SBO400-1.3A6
KMS 220	359922	SBO100-2A6
		SBO250-2A6
KMS 280	359925	SBO400-2.8A6
KMS 310	359927	SBO400-4A6

2.4. SILENCERS

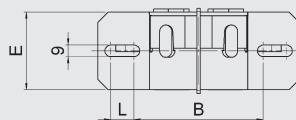
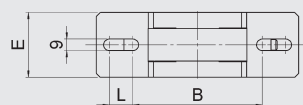
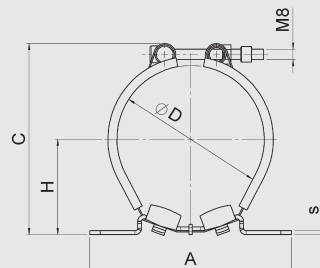
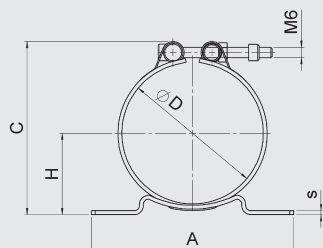
Clamps	Part no.	Series			
		SD330		SD280K	
		4.7	0.4	2.4	4.4
HyRac 167-175/178 H5 ST	445043	●			
HRGKSM 0 R 58-61/62 ST	3018442		●		
HRGKSM 1 R 119-127/124 ST	444505			●	
HRGKSM 1 R 146-154/151 ST	444321				●

3. TECHNICAL SPECIFICATIONS

3.1. CLAMPS

HRGKSM

HyRac (ØD ≥ 100 mm)



Fastening, base zinc-plated
Band clamp stainless steel
Insert PE

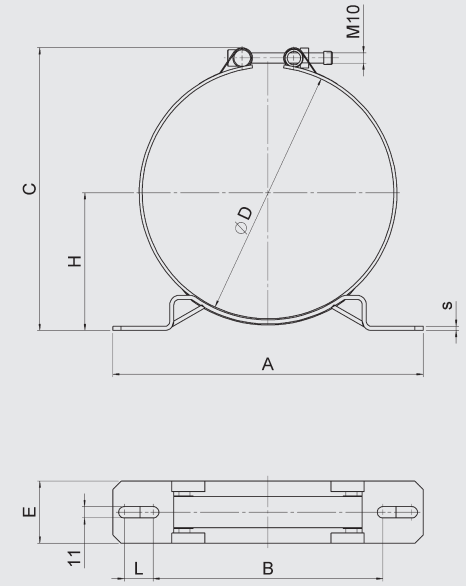
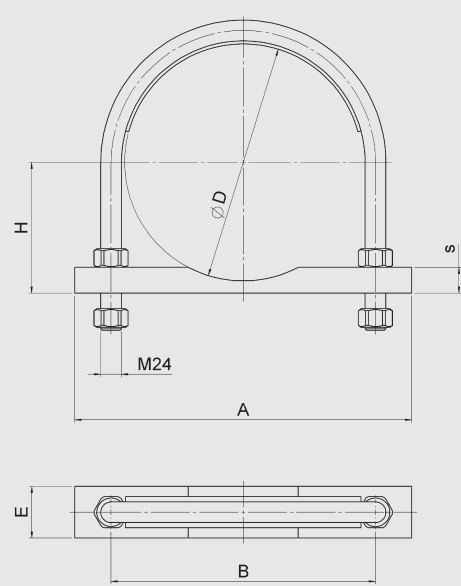
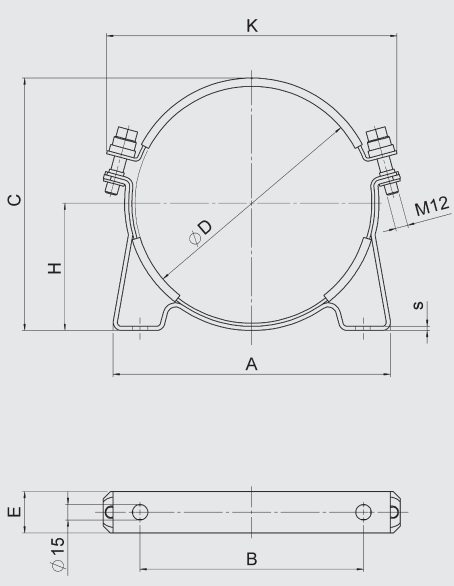
Fastening, base zinc-plated
Band clamp stainless steel
Insert PE, NBR

Designation	Part no.	A [mm]	B [mm]	C max [mm]	ØD (from - to) [mm]	H (from - to) [mm]	E [mm]	L [mm]	s [mm]	K max. [mm]	Weight [kg]
HRGKSM 0 R 58-61/62 ST	3018442	120	85	83	58 - 61	37.3 - 38.8	40	6	3	-	0.16
HRGKSM 0 R 62-65/65 ST	444911			85	62 - 65	38 - 39.5					0.16
HRGKSM 0 R 73-76/76 ST	444912			96	73 - 76	43.5 - 45					0.22
HRGKSM 0 R 77-80/80 ST	3018445			100	77 - 80	45.5 - 47					0.22
HRGKSM 0 R 92-95/96 ST	444995			115	92 - 95	52.5 - 54					0.24
HRGKSM 0 R 96-100/100 ST	444953			120	96 - 100	54.5 - 56.5					0.17
HRGKSM 1 R 119-127/124 ST	444505	156	100	154	119 - 127	66.8 - 70.8	50	18	3	-	0.36
HRGKSM 1 R 146-154/151 ST	444321			181	146 - 154	80.5 - 84.5					0.39
HRGKSM 2 R 172-180/178 ST	444402	236	152	209	172 - 180	94.6 - 98.6	60	32	4	-	0.53
HRGKSM 3 R 242-253/250 ST	3302566	300	222	280	242 - 253	133.5 - 139					28
HRGKSM 4 R 352-363/360 ST	444795	400	322	398	352 - 363	187.7 - 193.2					1.4
HyRac 100-105/106 H3 ST	444904	156	100	135	100 - 105	59 - 62	60	18	3	-	0.4
HyRac 106-114/115 H3 ST	444905			143	106 - 114	62.5 - 66					0.41
HyRac 110-118/124 H10 ST	445042			156	110 - 118	72.5 - 77					0.42
HyRac 121-129/133 H8 ST	444906			165	121 - 129	75.5 - 80					0.43
HyRac 133-142/142 H3 ST	444907			174	133 - 142	76.5 - 82.5					0.44
HyRac 143-151/151 H3 ST	444908			182	143 - 151	83 - 86.5					0.45
HyRac 152-159/160 H3 ST	444909			191	152 - 159	87 - 91					0.46
HyRac 160-167/169 H5 ST	444910			197	160 - 167	89 - 93					0.7
HyRac 167-175/178 H5 ST	445043	207	167 - 175	92.5 - 96.5	0.72						
HyRac 176-185/187 H5 ST	445044	241	176 - 185	97 - 102.5	0.75						
HyRac 209-217/223 H10 ST	445046	236	152	255	209 - 217	122.5 - 126.5	60	32	4	-	0.77
HyRac 216-224/226 H5 ST	445047			256	216 - 224	120 - 124					0.77
HyRac 223-230/231 H3 ST	445048			259	223 - 230	120.5 - 123.5					0.78
HyRac 225-234/234 H3 ST	445049			265	225 - 234	123 - 127.5					0.79

HSS

HRRBS

HRVMS



Clamp zinc-plated
Insert NBR

Clamp zinc-plated
Insert PP

Clamp zinc-plated
Clamping band stainless steel
Insert PE

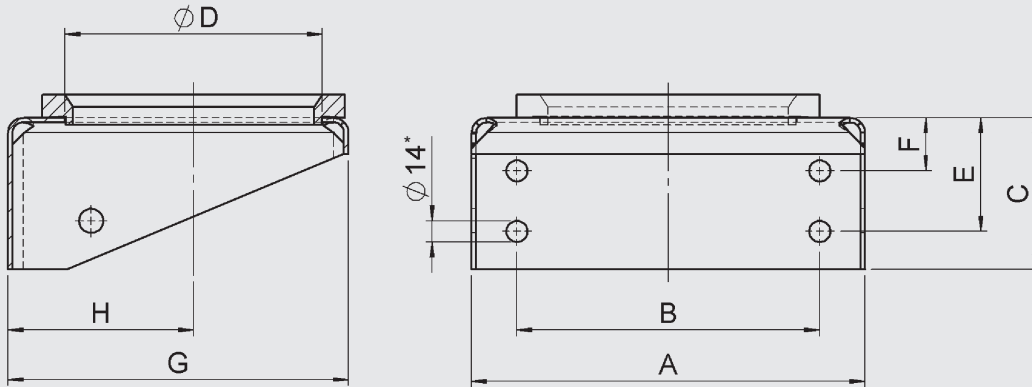
Designation	Part no.	A [mm]	B [mm]	C max [mm]	ØD (from - to) [mm]	H (from - to) [mm]	E [mm]	L [mm]	s [mm]	K max. [mm]	Weight [kg]
HSS 222/229	235224*	270	216	244	226	123	40	-	4	295	1.7
HSS 242	362712	268	216	265	242	136				305	1.7
HSS 286	237395	332	280	314	286	163				355	2.1
HSS 310	237389	332	280	333	310	170				380	2.1
HRRBS 14 L 267 PP ST ZN	431645	370	302	-	267 - 273	121.5 - 124.5	50	-	25	-	2.66
HRRBS 17 B1L 406 PP ST M ZN B145 H525	3434519	540	440	-	406.4 - 419	401.4 - 405	60	-	30	-	6.15
HRVMS 3 R 248-259/256 ST	3489871	300	222	292	248 - 259	135.5 - 141	60	28	4	-	1.05
HRVMS 3 R 268-279/276 ST	3559057			311	268 - 279	144.8 - 150.9					1.1

* Alternative to part no. 445048 and 445049

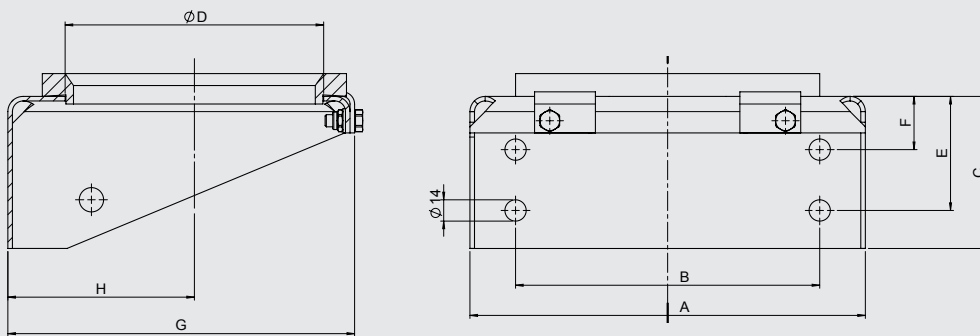
3.2. CONSOLES

3.2.1 KBK consoles for bladder accumulators and gas pressure vessels

KBK



KHF



* Ø22 for KBK 360/G

Designation	Part no.	A [mm]	B [mm]	C [mm]	ØD [mm]	E [mm]	F [mm]	G [mm]	H [mm]	Weight [kg]
KBK 167/G	2107989	260	200	100	120	75	35	225	92	2.5
KBK 222/G	2100651	260	200	100	170	75	35	225	123	2.4
KBK 360/G	2107990	390	270	240	211	180	60	390	195	20.1
KHF 210/G ¹⁾	3111594	260	200	100	170	75	35	230	123	2

Spare parts

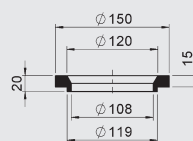
Designation	Part no.
KBK 167	238526
G 167	236997
KBK 222	3002160
G 222 ²⁾	236996
KBK 360	357959
G 360	355966
KHF 210	239965

¹⁾ See also section 3.3., SEHB

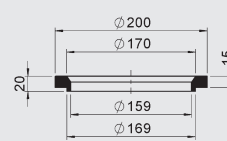
²⁾ Also for KHF 210

Rubber support ring

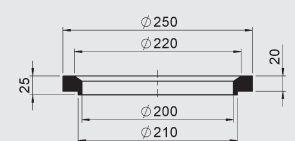
G 167



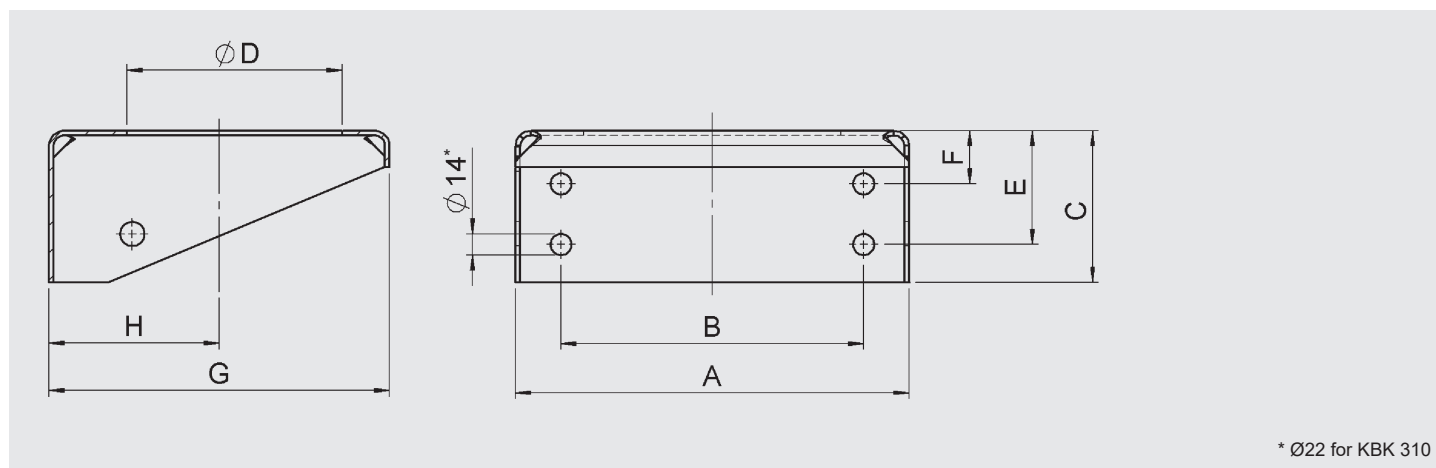
G 222



G 360



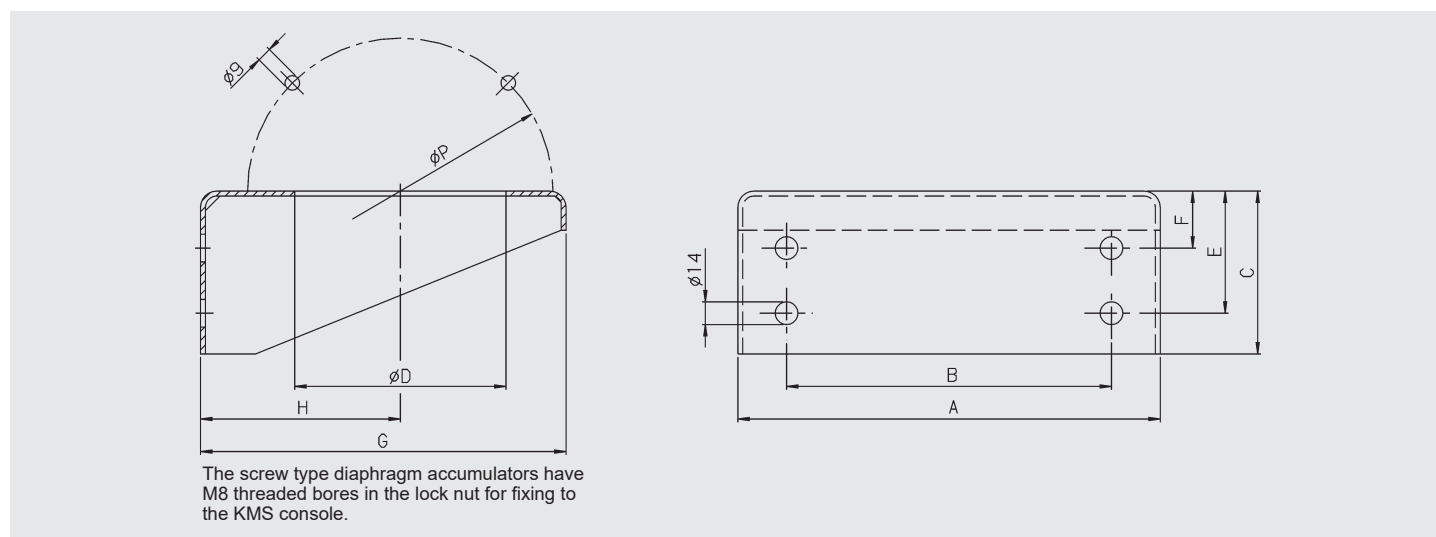
3.2.2 KBK consoles for piston accumulators



* Ø22 for KBK 310

Designation	Part no.	A [mm]	B [mm]	C [mm]	ØD [mm]	E [mm]	F [mm]	G [mm]	H [mm]	Weight [kg]
KBK 126	290530	175	100	60	65	36	–	150	77	1.1
KBK 167	238526	260	200	100	120	65	25	225	92	2.4
KBK 219	238042	270	180	100	135	80	40	250	123	6.5
KBK 310	238043	330	220	200	190	140	60	340	170	18.3

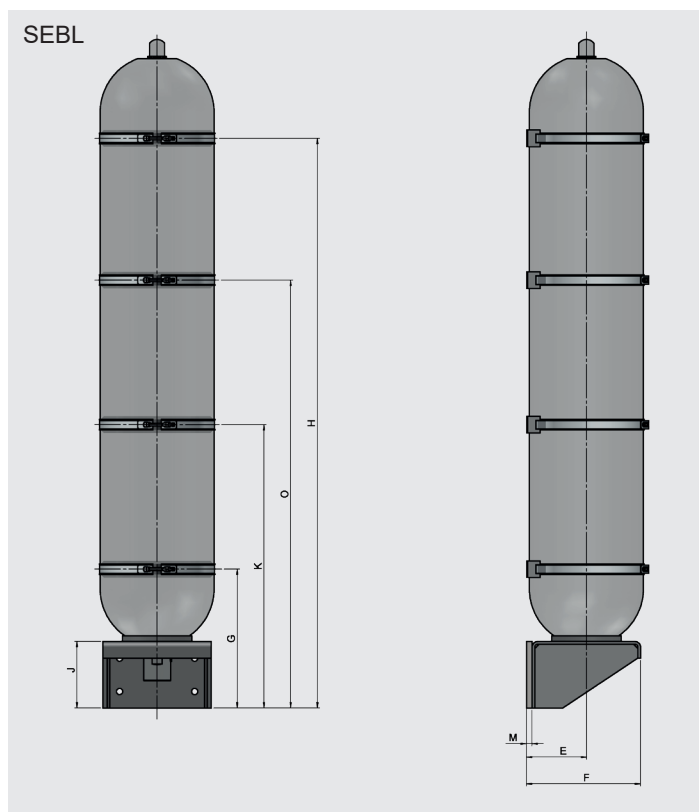
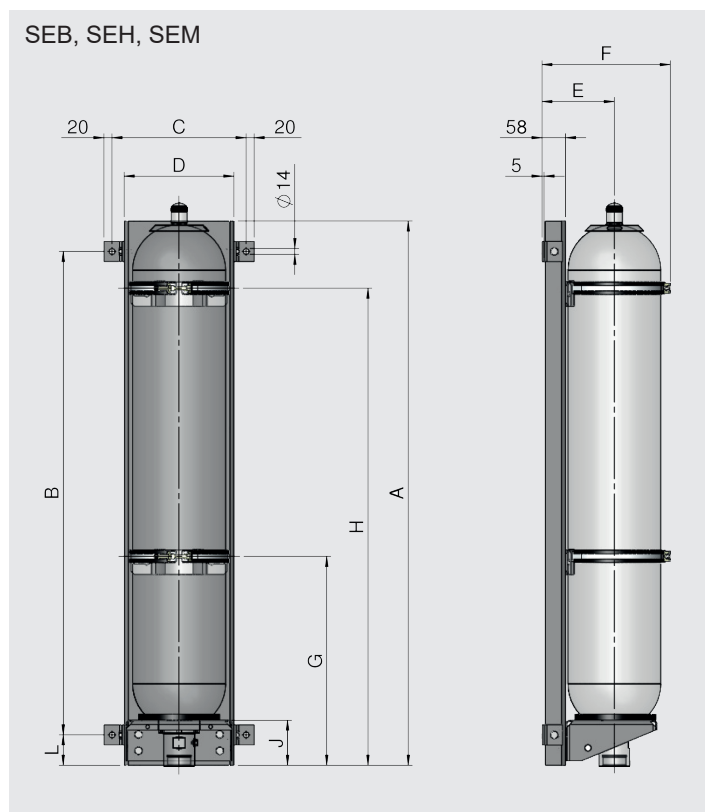
3.2.3 KMS consoles for screw type diaphragm accumulators



The screw type diaphragm accumulators have M8 threaded bores in the lock nut for fixing to the KMS console.

Designation	Part no.	A [mm]	B [mm]	C [mm]	ØD [mm]	ØP [mm]	E [mm]	F [mm]	G [mm]	H [mm]	ØI [mm]	Weight [kg]
KMS 210	358989	260	200	100	170	180	75	35	225	123	14	2.4
KMS 220	359922				170	188						
KMS 280	359925	330	220	200	215	230	140	60	340	170	22	18.3
KMS 310	359927				245	265						

3.3. ACCUMULATOR MOUNTING SET FOR BLADDER ACCUMULATORS



Designation	Part no.	Vol. [l]	A [mm]	B [mm]	C [mm]	D [mm]	E max. [mm]	F max. [mm]	G [mm]	H [mm]	K [mm]	O [mm]	M [mm]	L [mm]	J [mm]
-------------	----------	----------	--------	--------	--------	--------	-------------	-------------	--------	--------	--------	--------	--------	--------	--------

SEB for SB330/440

SEB 2.5	290787	2.5	460	310	198	138	134	209	220	410				75	—
SEB 4	238403	4	410	320						270				45	95
SEB 6	2115851	6	570	420			154	285		415					
SEB 10 narrow	4189835	10	1340	1190	330	270				500	1160				
SEB 10	238407		580	330											
SEB 13-20	240598	13	570	420			185	318		500				75	111
		20								500					
SEB 32	238409	32	1340	1190						1160					
SEB 50	240599	50								1160					
SEBL 60-80 ¹⁾	3605561	60					195	390	500	930					
		80								1200					
SEBL 100-130 ¹⁾	372132	100								1450	950				240
		130								1750	1100				
SEBL 160 ¹⁾	4482591	160					215	410	500	1750	1125		20		
SEBL 200 ¹⁾	4500010	200								2050	1020				

SEH for SB500/550/600

SEH 2.5	2105194	2.5	460	310	198	138	136	215	220	410				75	—
SEH 5	2105195	5	750	600						650					
SEH 10	378952	10	570	420	330	270	197	326		330				75	111
SEH 20	298181	20								500					
SEH 32	298182	32	1340	1190						500	1160				
SEH 50	298183	50								1160					

SEM for SB40

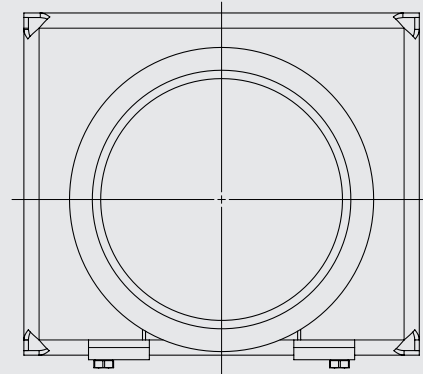
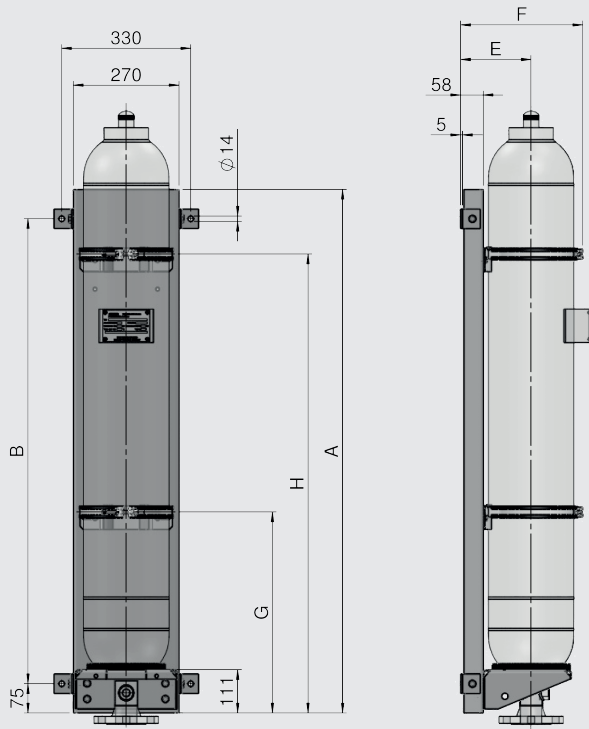
SEM 2.5	3007402	2.5	460	310	198	138	123	194	220	410				75	—
SEM 5	3007423	5	750	600						650					
SEM 10	3007424	10	570	420	330	270	179	307		330				75	111
SEM 20	3007425	20								500					
SEM 32	3007426	32	1340	1190						500	1160				
SEM 50	3007427	50								1160					

¹⁾ SEBL with back plate possible on request

The SEB accumulator mounting set is also available with an SAF and SB330 as a compact unit (ACCUSET SB330). See catalogue section:

- ACCUSET SB
No. 3.503

SEHB



Notice: The console (KHF 210/G) included in the SEHB accumulator mounting sets is opened at the front for easier mounting of the bladder accumulator.

Designation	Part no.	Vol. [l]	A [mm]	B [mm]	C [mm]	ØD [mm]	E max. [mm]	F max. [mm]	G [mm]	H [mm]	L [mm]	J [mm]	Weight [kg]
SEHB accumulator mounting set for SB35HB													
SEHB 20	3007431	20	570	420	-	-	184	312	-	500	75	111	-
SEHB 32	3007432	32	1340	1190	-	-	184	312	500	1160	75	111	-
SEHB 50	3007433	50	1340	1190	-	-	184	312	500	1160	75	111	-

6. 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.

HYDAC Technology GmbH
 Industriegebiet
66280 Sulzbach/Saar, Germany
 Tel.: +49 (0) 68 97 / 509 - 01
 Fax: +49 (0) 68 97 / 509 - 464
 Internet: www.hydac.com
 E-mail: speichertechnik@hydac.com

