



## EHP2

Carbon steel piston accumulator











Oiltech, a member of the Olaer Group, and a global player specialising in innovative, efficient system solutions for temperature optimisation and energy storage.

All over the world, our products are working in the most diverse environments and applications, e.g. the aircraft, engineering, steel and mining industries,

as well as in sectors such as oil and gas, contracting and transport, farming and forestry, renewable energy, etc.

## EHP2

### Carbon steel piston accumulator

Many years of experience. Years of experience and extensive know-how enable us to provide a comprehensive range of piston accumulators, designed to suit standard as well as special applications in mobile as well as in industrial systems.

With today's increasing energy production costs and world-wide supply shortages, EHP2 piston accumulators offer an efficient, versatile energy source for a wide variety of fluid power systems, Hydraulic Energy Storage.

In practice each application is "special", for instance in some applications the working temperature is extremely variable, some applications require large volumes and small pressure differentials, and some applications operate with corrosion-causing fluids. These are all illustrative examples of where EHP2 piston accumulator is ideal due to its simplicity and reliability. EHP2 piston accumulators offer a versatile energy source for a wide variety of applications such as:

**Pulsation dampening and shock absorption.** With proper placement in the system, EHP2 piston accumulators can absorb and cushion shocks and surges, and reduce or eliminate the damaging effects of high pressure pumps or rapid opening and closure of the valves, the major reasons for leaks in oil tubings.

**Energy storage/stand-by power.** EHP2 piston accumulator stores energy in hydraulic systems, where work cycles are intermittent. This stored energy can supplement system flow during peak demand periods, amplifying the hydraulic system's capacity. Its simplicity and reliability make it an ideal emergency

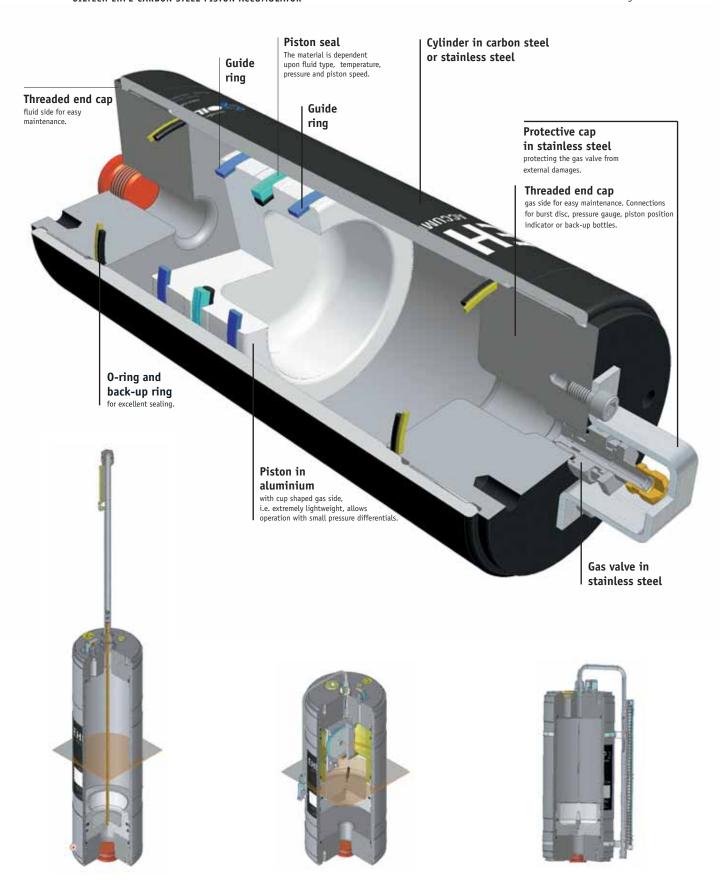
device whenever the system has pump or electric power failure.

**Pressure volume compensation/Expansion.** Liquids can be stored under constant and precise controlled pressure in the accumulator, and compensate for internal and external leakage in a fluid power system. The accumulator can also absorb volume changes originating from thermal effects in a closed system.

Own design. EHP2 piston accumulators have been developed and designed by Oiltech and consists in principle of a cylinder with end caps, piston and piston seal. Standard material in the cylinder and end caps is carbon steel and painted in eco-friendly, rust-proof, two-component paint (black RAL 9005). They can, however, also be painted in accordance with other specifications, e.g. NORSOK. In applications with water or aggressive fluids and operation in demanding environments such as offshore, the EHP2 piston accumulator is made in stainless steel. Standard material in gas valve and protective cap is stainless steel. Threaded end caps for easy removal for service and maintenance.

Working temperature is -20 °C - +80 °C. Other temperatures are available on request.

**CE-marking.** EHP2 piston accumulators are CE-marked and designed to the Directive 97/23/EC and EN 14359. All piston accumulators are fully traceable. In addition, the EHP2 piston accumulators are covered by many other approvals, contact the Olaer Group.



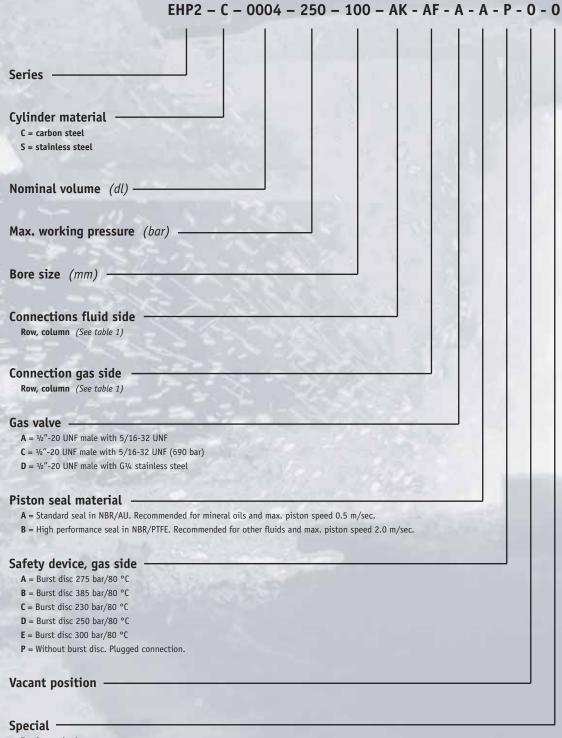
**Piston position indicator.** The piston position indicator is an additional function to the main function of the accumulator, indicating the position of the piston inside the accumulator, thereby ensuring a perfect accumulator operation. The piston position indicator is available with a visual indicator or with electrical monitoring providing 4-20 mA output signal, providing stand-by power during power failure.

EHP2 carbon steel piston accumulators. Max. working pressure 250 bar.

Volume	Model	L	ØD	Ød	Weight	Oil port	Burst disc	Additional
(l)		(mm)	(mm)	(mm)	(kg)	(l/min)	conn.	conn.
0.5	EHP2 -C-0005-250-080-AF00AA000	264	92	80	8	G <sup>3</sup> / <sub>4</sub>		
1	EHP2 -C-0010-250-080-AF00AA000	384	92	80	9	G 3/4		
1	EHP2 -C-0010-250-100-AD00AA000	311	115	100	13	G 1/2		
2	EHP2 -C-0020-250-080-AF00AA000	583	92	80	12	G <sup>3</sup> / <sub>4</sub>		
2	EHP2 -C-0020-250-100-AF00AA000	438	115	100	15	G 1/2		
3	EHP2 -C-0030-250-080-AF00AA000	782	92	80	14	G <sup>3</sup> / <sub>4</sub>		
4	EHP2 -C-0040-250-080-AF00AA000	981	92	80	17	G 3/4		
4	EHP2 -C-0040-250-100-AD00AA000 EHP2 -C-0040-250-140-AKAFAAP00	693	115	100	20	G 1/2	G 1/4	C 3/
6	EHP2 -C-0060-250-140-AKAFAAF00	488 948	160 115	140	35 25	G1½ G1	G <sup>1</sup> / <sub>4</sub>	G <sup>3</sup> / <sub>4</sub>
6	EHP2 -C-0060-250-140-AKAFAAP00	618	160	140	40	G 1 ½	G 1/4	G 3/4
8	EHP2 -C-0080-250-100-AH00AA000	1202	115	100	30	G1	G 1/4	G <sup>3</sup> / <sub>4</sub>
8	EHP2 -C-0080-250-140-AKAFAAP00	748	160	140	44	G 1 ½	G 1/4	G 3/4
10	EHP2 -C-0100-250-100-AH00AA000	1457	115	100	35	G 1	G 1/4	G 3/4
10	EHP2 -C-0100-250-140-AKAFAAP00	878	160	140	49	G 1 ½	G 1/4	G 3/4
10	EHP2 -C-0100-250-180-ADADAAP00	643	215	180	86	G ½	G 1/4	G 1/2
15	EHP2 -C-0150-250-140-AKAFAAP00	1203	160	140	61	G 1 ½	G 1/4	G 3/4
15	EHP2 -C-0150-250-180-ADADAAP00	839	215	180	102	G ½	G 1/4	G ½
20	EHP2 -C-0200-250-140-AKAFAAP00	1508	160	140	73	G1½	G 1/4	G 3/4
20	EHP2 -C-0200-250-180-ADADAAP00 EHP2 -C-0200-250-200-KAKCAAP00	1036 897	215	180 200	119	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>4</sub>	G ½
25	EHP2 -C-0250-250-140-AKAFAAP00	1834	228 160	140	108 85	SAE2 / G½ SAE2 / G½	G <sup>1</sup> / <sub>4</sub>	G 1 G <sup>3</sup> / <sub>4</sub>
25	EHP2 -C-0250-250-180-ADADAAP00	1232	215	180	136	G <sup>1</sup> / <sub>2</sub>	G 1/4	G <sup>1</sup> / <sub>2</sub>
30	EHP2 -C-0300-250-140-AKAFAAP00	2177	160	140	97	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G 3/4
30	EHP2 -C-0300-250-180-ADADAAP00	1429	215	180	152	G ½	G 1/4	G ½
30	EHP2 -C-0300-250-200-KAKCAAP00	1216	228	200	131	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
35	EHP2 -C-0350-250-180-ADADAAP00	1625	215	180	169	G ½	G 1/4	G 1/2
40	EHP2 -C-0400-250-200-KAKCAAP00	1534	228	200	155	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
40	EHP2 -C-0400-250-180-ADADAAP00	1822	215	180	186	G 1/2	G 1/4	G 1/2
45	EHP2 -C-0450-250-180-ADADAAP00	2018	215	180	202	G ½	G 1/4	G ½
50	EHP2 -C-0500-250-180-ADADAAP00	2215	215	180	219	G ½	G 1/4	G 1/2
50	EHP2 -C-0500-250-200-KAKCAAP00	1852	228	200	178	SAE2 / G1/2	G 1/4	G1
50	EHP2 -C-0500-250-250-KAKCAAP00	1324	292	250	263 236	SAE2 / G½ G½	G 1/4	G 1 G ½
55 60	EHP2 -C-0550-250-180-ADADAAP00 EHP2 -C-0600-250-180-ADADAAP00	2411 2608	215 215	180 180	252	G <sup>1</sup> /2	G <sup>1</sup> / <sub>4</sub>	G <sup>1</sup> / <sub>2</sub>
60	EHP2 -C-0600-250-200-KAKCAAP00	2171	228	200	201	SAE2 / G1/2	G 1/4	G 1
60	EHP2 -C-0600-250-250-KAKCAAP00	1527	292	250	291	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
70	EHP2 -C-0700-250-200-KAKCAAP00	2489	228	200	225	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
70	EHP2 -C-0700-250-250-KAKCAAP00	1731	292	250	320	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
75	EHP2 -C-0750-250-200-KAKCAAP00	2648	228	200	238	SAE2 / G1/2	G 1/4	G1
75	EHP2 -C-0750-250-250-KAKCAAP00	1833	292	250	334	SAE2 / G1/2	G 1/4	G1
80	EHP2 -C-0800-250-200-KAKCAAP00	2807	228	200	248	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
80	EHP2 -C-0800-250-250-KAKCAAP00	1935	292	250	334	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
90	EHP2 -C-0900-250-200-KAKCAAP00	3126	228	200	272	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
90	EHP2 -C-0900-250-250-KAKCAAP00	2139	292	250	377	SAE2 / G1/2	G 1/4	G1
100	EHP2 -C-1000-250-200-KAKCAAP00 EHP2 -C-1000-250-250-KAKCAAP00	3444 2342	228 292	200 250	295 405	SAE2 / G <sup>1</sup> / <sub>2</sub> SAE2 / G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>4</sub>	G1 G1
110	EHP2 -C-1100-250-250- KAKCAAP00	2546	292	250	434	SAE2 / G1/2	G 1/4	G1
120	EHP2 -C-1200-250-250- KAKCAAP00	2750	292	250	462	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
130	EHP2 -C-1300-250-250- KAKCAAP00	2953	292	250	490	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
140	EHP2 -C-1400-250-250- KAKCAAP00	3157	292	250	519	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
150	EHP2 -C-1500-250-250- KAKCAAP00	3361	292	250	547	SAE2 / G1/2	G 1/4	G 1
160	EHP2 -C-1600-250-250- KAKCAAP00	3565	292	250	576	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
170	EHP2 -C-1700-250-250- KAKCAAP00	3768	292	250	604	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
180	EHP2 -C-1800-250-250- KAKCAAP00	3972	292	250	633	SAE2 / G <sup>1</sup> / <sub>2</sub>	G 1/4	G1
190	EHP2 -C-1900-250-250- KAKCAAP00	4176	292	250	661	SAE2 / G1/2	G 1/4	G1
200	EHP2 -C-2000-250-250- KAKCAAP00	4379	292	250	690	SAE2 / G1/2	G 1/4	G1
210	EHP2 -C-2100-250-250- KAKCAAP00 EHP2 -C-2200-250-250- KAKCAAP00	4583 4787	292 292	250 250	718 747	SAE2 / G1/2	G <sup>1</sup> / <sub>4</sub>	G1 G1
220	LIII 2 -C-2200-230-230- NANCAAFUU	4/0/	292	250	747	SAE2 / G <sup>1</sup> / <sub>2</sub>	U 74	G1

## EHP2 carbon steel piston accumulators. Max. working pressure 350 bar.

Volume	Model	L	ØD	Ød	Weight	Oil port	Burst disc	Additional
<i>(l)</i>		(mm)	(mm)	(mm)	(kg)	(l/min)	conn.	conn.
1	EHP2 -C-0010-350-100-ADADABP00	311	125	100	16	G 1/2	G 1/4	G 1/2
2	EHP2 -C-0020-350-100-ADADABP00	438	125	100	21	G ½	G 1/4	G ½
4	EHP2 -C-0040-350-100-ADADABP00	693	125	100	30	G 1/2	G 1/4	G 1/2
6	EHP2 -C-0060-350-100-ADADABP00	948	125	100	39	G ½	G 1/4	G 1/2
8	EHP2 -C-0080-350-100-ADADABP00	1202	125	100	47	G ½	G 1/4	G ½
10	EHP2 -C-0100-350-100-ADADABP00	1457	125	100	56	G ½	G 1/4	G ½
10	EHP2 -C-0100-350-180-ADADABP00	643	220	180	94	G ½	G 1/4	G 1/2
10	EHP2 -C-0100-350-200-ADADABP00	553	245	200	119	G 1/2	G 1/4	G 1/2
12	EHP2 -C-0120-350-180-ADADABP00	721	220	180	101	G ½	G 1/4	G 1/2
15 15	EHP2 -C-0150-350-180-ADADABP00 EHP2 -C-0150-350-200-ADADABP00	839 712	220	180 200	113	G ½	G 1/4	G ½ G ½
20	EHP2 -C-0200-350-180-ADADABP00	1036	245	180	132	G 1/2 G 1/2	G 1/4	G ½
20	EHP2 -C-0200-350-180-ADADABP00	871	245	200	168	G 1/2	G 1/4	G 1/2
25	EHP2 -C-0250-350-200-ADADABP00	1232	220	180	152	G ½	G 1/4	G ½
25	EHP2 -C-0250-350-180-ADADABP00	1031	245	200	193	G 1/2	G 1/4	G ½
30	EHP2 -C-0300-350-180-ADADABP00	1429	220	180	171	G ½	G 1/4	G 1/2
30	EHP2 -C-0300-350-200-ADADABP00	1190	245	200	218	G 1/2	G 1/4	G ½
35	EHP2 -C-0350-350-180-ADADABP00	1625	220	180	190	G ½	G 1/4	G 1/2
35	EHP2 -C-0350-350-200-ADADABP00	1349	245	200	243	G ½	G 1/4	G 1/2
40	EHP2 -C-0400-350-180-ADADABP00	1822	220	180	209	G ½	G 1/4	G 1/2
40	EHP2 -C-0400-350-200-ADADABP00	1508	245	200	367	G ½	G 1/4	G ½
45	EHP2 -C-0450-350-180-ADADABP00	2018	220	180	229	G ½	G 1/4	G 1/2
45	EHP2 -C-0450-350-200-ADADABP00	1667	245	200	292	G ½	G 1/4	G 1/2
50	EHP2 -C-0500-350-180-ADADABP00	2215	220	180	248	G ½	G 1/4	G 1/2
50	EHP2 -C-0500-350-200-ADADABP00	1826	245	200	317	G ½	G 1/4	G ½
50	EHP2 -C-0500-350-250-BSAKABP00	1324	318	250	388	SAE2	G 1/4	G1
55	EHP2 -C-0550-350-180-ADADABP00	2411	220	180	267	G 1/2	G 1/4	G 1/2
55	EHP2 -C-0550-350-200-ADADABP00	1986	245	200	341	G ½	G 1/4	G ½
55	EHP2 -C-0550-350-250-BSAKABP00	1426	318	250	412	SAE2	G 1/4	G1
60	EHP2 -C-0600-350-180-ADADABP00	2608	220	180	287	G ½	G 1/4	G 1/2
60	EHP2 -C-0600-350-200-ADADABP00	2145	245	200	366	G ½	G 1/4	G 1/2
60	EHP2 -C-0600-350-250-BSAKABP00	1527	318	250	436	SAE2	G 1/4	G1
65	EHP2 -C-0650-350-200-ADADABP00	2304	245	200	391	G 1/2	G 1/4	G 1/2
65	EHP2 -C-0650-350-250-BSAKABP00	1629	318	250	460	SAE2	G 1/4	G1
70	EHP2 -C-0700-350-200-ADADABP00	2463	245	200	415	G 1/2	G 1/4	G 1/2
70	EHP2 -C-0700-350-250-BSAKABP00	1731	318	250	484	SAE2	G 1/4	G1
75	EHP2 -C-0750-350-200-ADADABP00	2622	245	200	440	G ½	G 1/4	G 1/2
75	EHP2 -C-0750-350-250-BSAKABP00	1833	318	250	509	SAE2	G 1/4	G1
80	EHP2 -C-0800-350-200-ADADABP00	2781	245	200	465	G 1/2	G 1/4	G 1/2
80	EHP2 -C-0800-350-250-BSAKABP00	1935	318	250	533	SAE2	G 1/4	G1
85	EHP2 -C-0850-350-200-ADADABP00	2940	245	200	490	G <sup>1</sup> / <sub>2</sub>	G 1/4	G <sup>1</sup> / <sub>2</sub>
90	EHP2 -C-0900-350-200-ADADABP00	3100	245	200	514	G 1/2	G 1/4	G 1/2
90	EHP2 -C-0900-350-250-BSAKABP00	2139	318	250	581	SAE2	G 1/4	G1
95	EHP2 -C-0950-350-200-ADADABP00	3259	245	200	539	G ½	G 1/4	G 1/2
95	EHP2 -C-0950-350-250-BSAKABP00	2240	318	250	605	SAE2	G 1/4	G1
100	EHP2 -C-1000-350-200-ADADABP00	3418	245	200	564	G ½	G 1/4	G ½
100	EHP2 -C-1000-350-250-BSAKABP00	2342	318	250	629	SAE2	G 1/4	G1
110	EHP2 -C-1100-350-250-BSAKABP00	2546	318	250	678	SAE2	G 1/4	G1
120	EHP2 -C-1200-350-250-BSAKABP00	2750	318	250	726	SAE2	G 1/4	G1
130	EHP2 -C-1300-350-250-BSAKABP00	2953	318	250	774	SAE2	G 1/4	G1
140	EHP2 -C-1400-350-250-BSAKABP00	3157	318	250	823	SAE2	G 1/4	G1
150	EHP2 -C-1500-350-250-BSAKABP00	3361	318	250	871	SAE2	G 1/4	G1
160	EHP2 -C-1600-350-250-BSAKABP00	3565	318	250	919	SAE2	G 1/4	G1 G1
170	EHP2 -C-1700-350-250-BSAKABP00 EHP2 -C-1800-350-250-BSAKABP00	3768	318	250	968	SAE2	G 1/4	G1
180	EHP2 -C-1900-350-250-BSAKABP00	3972 4176	318 318	250 250	1016	SAE2 SAE2	G 1/4	G1
200	EHP2 -C-2000-350-250-BSAKABP00	4176	318	250	1113	SAE2 SAE2	G 1/4	G1
210	EHP2 -C-2100-350-250-BSAKABP00	4579	318	250	1113	SAE2	G <sup>1</sup> / <sub>4</sub>	G1
220	EHP2 -C-2200-350-250-BSAKABP00	4787	318	250	1209	SAE2	G 1/4	G1
	0		5.10		2233	J. ILL	C /4	



<b>Z</b> =	Customized

SPECIFICATION		Α	В	С	D	E	F	G	Н	I	K	L
Thread to ISO 228-1 (G)	Α	G%	G1/4	G%	G1/2	G%	G3/4	G%	G1	G1 <sup>1</sup> / <sub>4</sub>	G1 <sup>1</sup> / <sub>2</sub>	G2
SAE thread ISO 6162	В	1/2	3/4	1	11/4	11/2	2	21/2	3			
SAE connection (UN)	D	1/2-20	9/16-18	3/4-16	%-14	11/16 -12	$15/_{16}$ -12	1%-12	1%-12	21/2-12		
Thread to ISO 6149-1 (M)	Ε	M10x1	M12x1.5	M14x1.5	M18x1.5	M22x1.5	M27x2	M33x2	M42x2	M48x2		
Combined connection	K	SAE2/ G1½		G1/G1/2	G½/G½	G½/G¼						
NPT thread to ANSI												
B1.20.1	F	⅓	1/4	%	1/2	%	3/4	%	1	11/4	11/2	2



Professional competence as well as advanced technology and extensive knowledge from the industry, allow us to provide many accumulator combinations, which meet your unique needs.

## Accessories

## A professional choice will improve the hydraulic system operation

The EHP2 piston accumulators can be fitted with accessories to provide optimal efficiency, added reliability in operation, increased dependable performance and to facilitate maintenance and reduce repair costs. Applications and environments are all unique. A professional choice of accessories will improve the hydraulic system operation. For further information, contact the Olaer Group.



### Clamps, mounting brackets, damping rings and burst discs

We can provide a wide range of clamps, mounting brackets and damping rings for safe and flexible installation of the EHP2

piston accumulators. All clamps and brackets are available in AISI 316 acid proof steel and electroplated carbon steel.

In addition to the relief valve, which protects the hydraulic system against extremely high pressure levels above maximum pressure, the piston accumulator should be fitted with a burst disc protecting the system against any defect in the control equipment, pressure relief valves or in case of extremely high temperatures such as fire.



#### Safety block

A safety block between the accumulator and the hydraulic system protects the accumulator against high pressures, facilitating maintenance and repair work as this can be made without stopping the system. Few connections and seals mean less risk for leakage. The safety block can be provided with a relief valve to relief the accumulator during power failure.



#### Pre-charging assembly

The pre-charging assembly is used to pre-charge, control and expel nitrogen gas from the accumulator. The ideal type of assembly to be used, depends not only on the individual accumulator gas valve but also on other equipment fitted to the system. Our universal

pre-charging assembly VGU suits most accumulator makes on the market. \\



#### Back-up bottles and support

EHP2 piston accumulator can easily be linked to gas bottles, so called back-up bottles, forming large accumulator systems. This solution is economical compared to installing 100% of the volume in the form of accumulators.

Oiltech can customize supports for large piston accumu-

lator systems. Contact the Olaer Group for further information.



#### Calculation program

Correct dimensioning requires knowledge and experience.

Our engineers' know-how and the Olaer Group's accumulator calculation program will provide you with the most efficient accumulator solution for your application.













Olaer Energy

Olaer Oil & Gas

Olaer Special

The Olaer Group develops, manufactures and markets products and systems in five business areas.

# Global perspective

### and local entrepreneurial flair



The Olaer Group is a global player specialising in innovative, efficient system solutions for temperature optimisation and energy storage.

The Group develops, manufactures and markets products and systems for a number of different sectors, e.g. the aircraft, engineering, steel and mining industries, as well as for sectors such as oil and gas, contracting and transport, farming and forestry, renewable energy, etc.

All over the world, our products operate in the most diverse environments and applications. One constantly repeated demand in the market is for optimal energy storage and temperature optimisation.

We work at a local level with a whole world as our workplace – local entrepreneurial flair and a global perspective go hand in hand.

Our local presence, long experience and a wealth of knowledge combine with our cutting-edge expertise to give you the best possible conditions for making a professional choice.



The Professional Choice – in Fluid Management

Olaer Group Network









THE OLAER GROUP: AUSTRALIA Olaer FCH. Tel: +61 2 9981 6888. AUSTRIA Olaer Austria GmbH . Tel: +43 7229 80306. BELGIUM S.A. Olaer Benelux, Tel: +32 2 466 15 15. CZECH REPUBLIC Olaer CZ s.r.o. Tel: +42 5 47125 601-8. DENMARK Oiltech DK. Tel: +45 86 69 20 38. FINLAND Oiltech Hydraulics OY. Tel: +358 9 413 755 00. FRANCE Olaer Industries S.A. Tel: +33 1 41 19 17 00. GERMANY Olaer Industries GmbH. Tel: +49 6842 9204-0. HOLLAND Olaer Nederland B.V. Tel: +31 76 5412453. INDIA FCH India. Tel: +91 802 6533587. ITALY Olaer Italiana S.p.A. Tel: +39 011 991 85 11. KOREA Hyundai Olaer Hydraulic Co. Tel: +82 31 499 0897. NORWAY Oiltech AS. Tel: +47 64 91 11 80. POLAND Oiltech Polska. Tel: +48 22 6738162. SOUTH AFRICA FCH c/O Rolton Products CC. Tel: +27 11 474 3095. SPAIN Olaer-Oiltech Iberica SAU. Tel: +34 933 368 900. SWEDEN Oiltech AB. Tel: +46 8 636 07 00. SWITZERLAND Olaer (Schweiz) AG. Tel: +41 26 492 70 00. UK FCH Ltd. Tel: +44 1244 535515. USA Oil Air Hydraulics Inc. Tel: +1713 937 89 00.