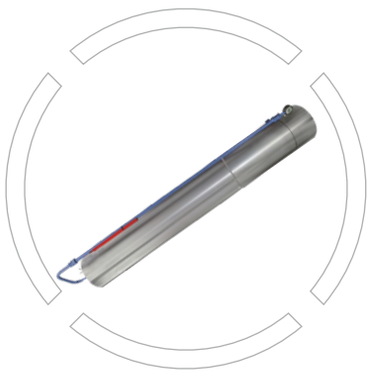
TS-KA & KAA

Piston Accumulator
Pressure: 250 Bar & 375 Bar
Volume: 0.5 to 500 Litres



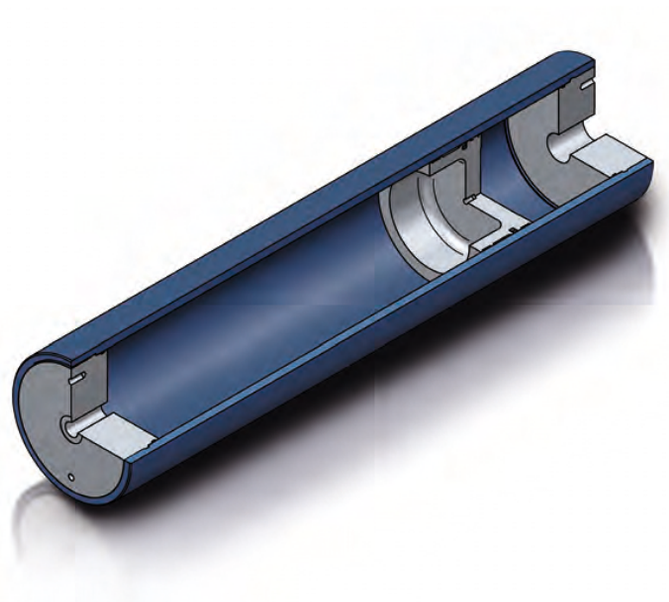
Index

Overview

Piston accumulators are hydroneumatic accumulators with a sliding rigid piston to separate gas side (nitrogen) and operation fluid side.
THM piston accumulators operation is based on the considerable difference in compressibility between gas (nitrogen) and operation fluid (liquid). This enables a large quantity of energy to be stored in an extremely compact form.
The piston accumulators can be used in a wide variety of applications, some of which are listed below:

- Energy storage
- Pulsation damping
- Shock absorption
- Stabilize pressure and flow
- Leakage compensation
- ...

The fluid side of the accumulator is connected to the hydraulic circuit and when the circuit pressure increases, the fluid enters in fluid side of accumulator and the gas is compressed. When the circuit pressure drops, the compressed gas expands and the stored fluid is forced into the circuit.
For the right choice of accumulator, is advisable to consider some parameters: operation fluid, pressure range, temperature, speed, response time, mounting orientation...



Advantages

There are different types of accumulators (piston, bladder, diaphagm ...) and accumulators provide major advantages to hydraulic circuits:

- Reduce pump size
- Reduce installed electical power
- Energy efficiency
- Increase response time

...

Piston accumulators have advantages over other types:

- High compression ratio (Po ÷ Pmax)
- Horizontal mounting position
- Pressure and position monitoring possible
- Low permeation
- High oil flow rate
- Total discharge is possible
- In failure case, gradual gas loss
- Different sealing solutions (fluids, temperature, pressure, speed...)
- Optimal application solution (changing diameter and length)

Technical characteristics

Design pressure

- 250 bar or 375 bar

Temperature range

- Standard temperature range -20ºC to +80ºC.
- Low temperature range: -40ºC to +80ºC.
- Others on request

Volume

- 97/23/CE: 0.5 to 500 liters
- ASME: 10 to 500 literss Fluids
- Mineral oil DIN51524 (HL, HLP).
- Phosphate ester (HFD-R).
- Other fluids

Gas load

- For safety reasons, for gas filling use only pure nitrogen 99,9%, class 4.0.
- Never use oxygen (this may lead to an explosion).
- See notes in «Operation and maintenance» manual

Fluid and gas connection
Different types of connections for oil and gas side are available.

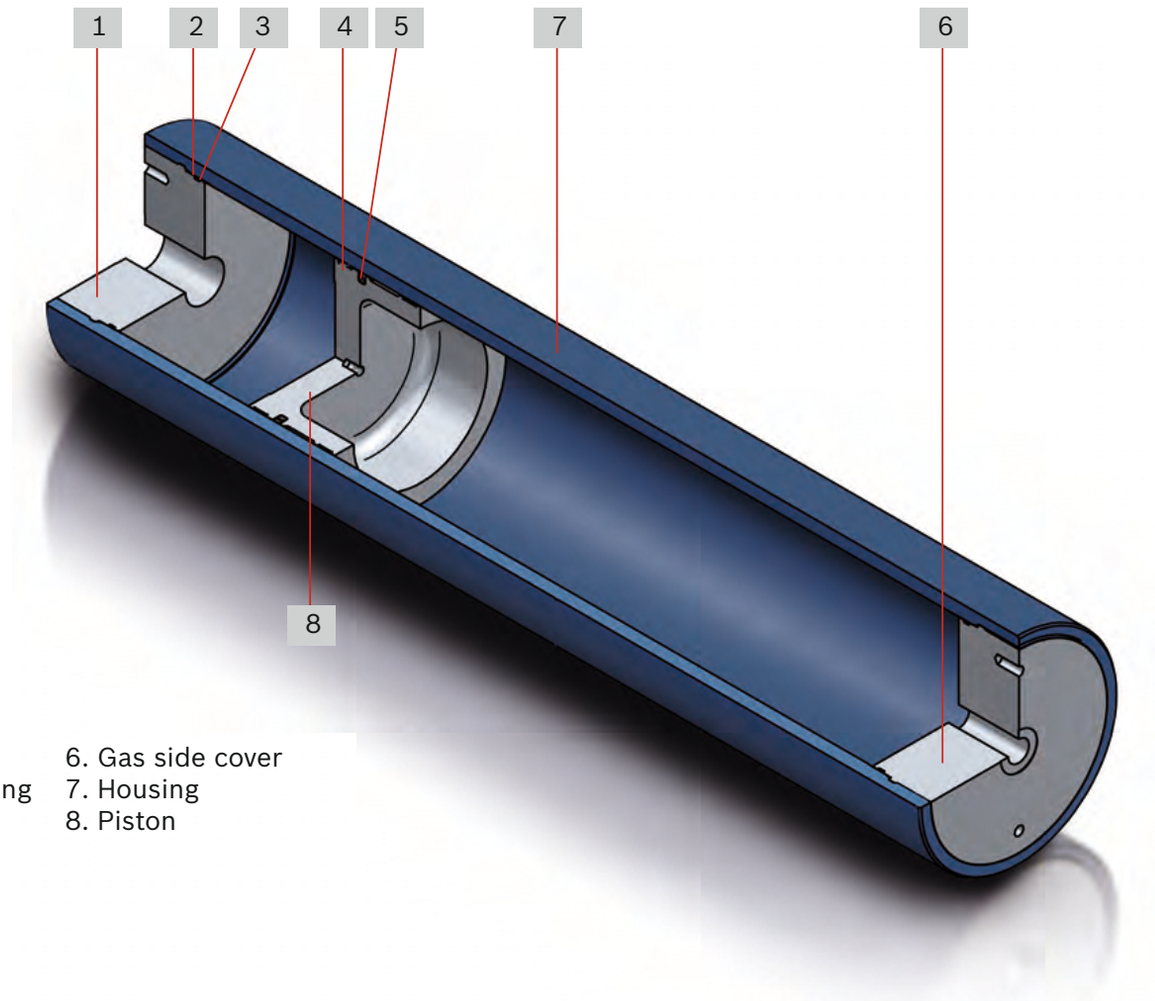
Operation and maintenance

To avoid injuries and damage to the devices, it is important to read (operation and maintenance manual) before installation of the accumulator in a hydraulic system.

Characteristics

Material	1	Carbon Steel (Tmin=-20°C)
	2	Stainless Steel
	3	Carbon Steel (Tmin=-40°C)
	4	Nickel-plated (Tmin=-20°C)
Volume (L)		From 0.5 to 500 Liters
Maximum working pressure		250 or 375 Bar according to model
Piston Diameter		Ø60, Ø100, Ø125, Ø180, Ø200, Ø250, Ø300, Ø360
Sealing type	1	Standard (mineral oil)
	2	Viton (example HFD fluids)
	3	NBR (for HFC)
Connections (oil side)	1	Threaded ISO 228-1 (G)
	2	SAE 6000psi -ISO 6162
	3	Others
Connections (gas side)	0	There are no GAS bottles, just GAS valve.
	1	Threaded ISO 228-1 (G) (If there is GAS Bottle)
	2	SAE 6000psi -ISO 6162 (If there is GAS Bottle)
	3	Others
Position control accessories	0	None
	1	Electric limit switch
	2	Piston position switch
	3	Piston position transducer
	4	Ultrasonic position sensor
Fluids	M	Mineral Oil DIN51524 (HL, HLP)
	V	Phosphoric Ester
	O	Other fluids according to customer needs
Acceptance		CE according to PED 97/23/CE
		ASME U Stamp (According to Section VIII div. 1)
		Others

Description of position



1. Oil side cover
2. Anti-extrusion ring
3. O-ring
4. Guide ring
5. Piston seal
6. Gas side cover
7. Housing
8. Piston

Spare kit of seals

TS	KA	250	60

Type of seals:
Standard (mineral oil) = S
Viton (HFD fluids) = V
NBR (HFC fluids) = N
Others = O

Type:
97/23/CE = KA
ASME Section VII div. 1 = KAA

Design pressure (bar)
250 or 375 bar

Piston diameter (mm)
Ø60, Ø100, Ø125, Ø180; Ø200, Ø250, Ø300; Ø360

Ordering Code

TS	KA	250	20	60	S	1	1	N1	1	0	CE

THM = TS

Type
97/23/CE = KA
ASME Section VII div. 1 = KAA

Design pressure (bar)
250 or 375 bar

Volume (L)
0,5 to 500 liters

Piston diameter (mm)
Ø60, Ø100, Ø125, Ø180, Ø200, Ø250, Ø300; Ø360,

Type of seals
Standard (mineral oil) = S
Viton (HFD fluids) = V
NBR (HFC fluids) = N
Others = O

Material
Carbon steel (Tmin -20ºC) = 1
Carbon steel (Tmin -40ºC) = 2
Niquel plated = 3
Sainless Steel = 4

Fluid connection
Thread –ISO 228-1 (G) = 1
SAE-6000 PSI-ISO 6162 = 2
Others = 3

Gas connection

YES adapted nitrogen bottles		NO adapted nitrogen bottles	
Thread –ISO 228-1 (G)	= Y1	Minimess M16x2	= N1
SAE-6000 PSI-ISO6162	= Y2	Others	= N2
Others	= Y3		

Gas valve
M16x2 = 1
Others = 2

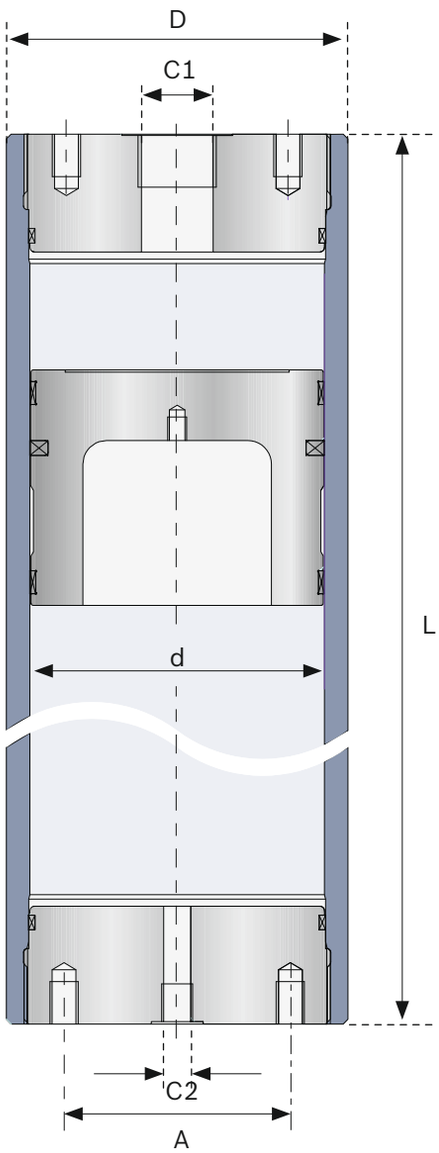
Piston position indicators
None = 0
Electric limit switch = 1
Piston position switch = 2
Piston position transducer = 3
Ultrasonic position sensor = 4

Acceptance
According PED 97/23/EC = CE
ASME (Section VIII- div 1) = U
Others = O

Unit Dimensions

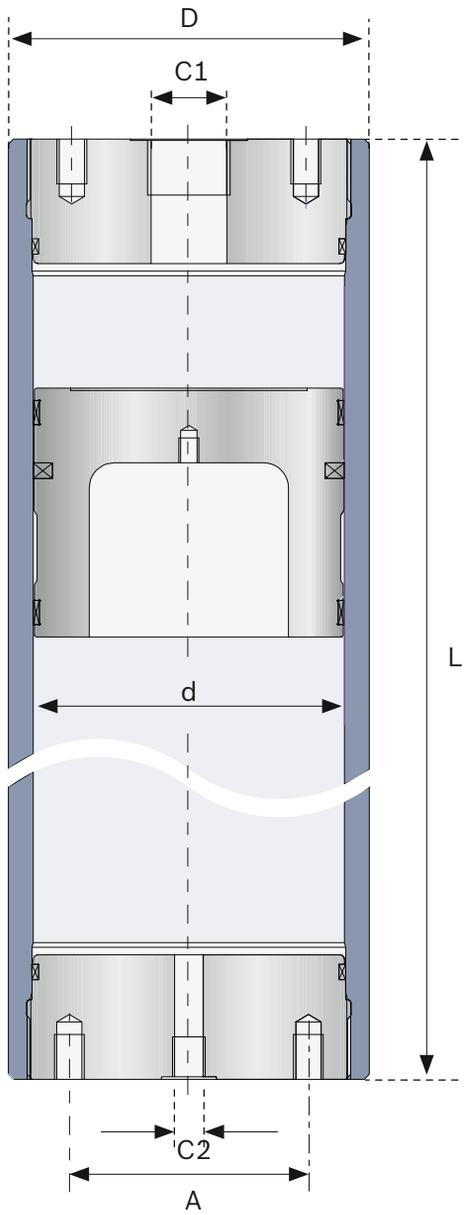
Max working pressure

250 Bar



V	d	D	L	C1	C2	A		P-V-d
Volume (L)	Piston Ø (mm)	Outside Ø (mm)	Length (mm)	Conn. OIL	Conn. GAS	Fastening	Weight (Kg)	Type
0.5	60	72	295	1/2´G	1/4´G	M6 Ø45	5	TS-KA-250-0.5-60
	100	116	245	3/4´G	1/4´G	M8 Ø80	12	TS-KA-250-0.5-100
1	60	72	470	1/2´G	1/4´G	M6 Ø45	7	TS-KA-250-1-60
	100	116	310	3/4´G	1/4´G	M8 Ø80	13	TS-KA-250-1-100
1.5	60	72	650	1/2´G	1/4´G	M6 Ø45	8	TS-KA-250-1.5-60
	100	116	375	3/4´G	1/4´G	M8 Ø80	15	TS-KA-250-1.5-100
2	60	72	825	1/2´G	1/4´G	M6 Ø45	10	TS-KA-250-2-60
	100	116	435	3/4´G	1/4´G	M8 Ø80	16	TS-KA-250-2-100
2.5	60	72	1000	1/2´G	1/4´G	M6 Ø45	12	TS-KA-250-2.5-60
	100	116	500	3/4´G	1/4´G	M8 Ø80	17	TS-KA-250-2.5-100
3	60	72	1180	1/2´G	1/4´G	M6 Ø45	14	TS-KA-250-3-60
	100	116	565	3/4´G	1/4´G	M8 Ø80	19	TS-KA-250-3-100
	125	145	445	1/2´G	1/4´G	M12 Ø90	27	TS-KA-250-3-125
4	60	72	1535	3/4´G	1/4´G	M6 Ø45	17	TS-KA-250-4-60
	100	116	590	1/2´G	1/4´G	M8 Ø80	19	TS-KA-250-4-100
	125	145	530	3/4´G	1/4´G	M12 Ø90	30	TS-KA-250-4-125
5	60	72	1885	1/2´G	1/4´G	M6 Ø45	20	TS-KA-250-5-60
	100	116	820	3/4´G	1/4´G	M8 Ø80	24	TS-KA-250-5-100
	125	145	610	1´G	1/4´G	M12 Ø90	32	TS-KA-250-5-125
6	100	116	945	3/4´G	1/4´G	M8 Ø80	27	TS-KA-250-6-100
	125	145	690	1´G	1/4´G	M12 Ø90	35	TS-KA-250-6-125
8	100	116	1200	1´G	1/4´G	M8 Ø80	32	TS-KA-250-8-100
	125	145	855	1´G	1/4´G	M12 Ø90	40	TS-KA-250-8-125
10	100	116	1455	3/4´G	1/4´G	M8 Ø80	38	TS-KA-250-10-100
	125	145	1020	1´G	1/4´G	M12 Ø90	46	TS-KA-250-10-125
	180	210	615	1 1/2´G	3/4´G	M12 Ø140	72	TS-KA-250-10-180
	200	230	1180	1 1/2´G	3/4´G	M12 Ø160	134	TS-KA-250-10-200
12	100	116	1710	3/4´G	1/4´G	M8 Ø80	44	TS-KA-250-12-100
	125	145	1425	1´G	1/4´G	M12 Ø90	59	TS-KA-250-12-125
	180	210	695	1 1/2´G	3/4´G	M12 Ø140	78	TS-KA-250-12-180
	200	230	590	1 1/2´G	3/4´G	M12 Ø160	87	TS-KA-250-12-200
15	100	116	2095	3/4´G	1/4´G	M8 Ø80	51	TS-KA-250-15-100
	125	145	1835	1´G	1/4´G	M12 Ø90	73	TS-KA-250-15-125
	180	210	810	1 1/2´G	3/4´G	M12 Ø140	86	TS-KA-250-15-180
	200	230	655	1 1/2´G	3/4´G	M12 Ø160	92	TS-KA-250-15-200
20	125	145	2240	1´G	1/4´G	M12 Ø90	86	TS-KA-250-20-125
	180	210	1010	1 1/2´G	3/4´G	M12 Ø140	101	TS-KA-250-20-180
	200	230	750	1 1/2´G	3/4´G	M12 Ø160	100	TS-KA-250-20-200
25	125	145	2240	1´G	1/4´G	M12 Ø90	86	TS-KA-250-25-125
	180	210	1205	1 1/2´G	3/4´G	M12 Ø140	115	TS-KA-250-25-180
	200	230	910	1 1/2´G	3/4´G	M12 Ø160	112	TS-KA-250-25-200
30	125	145	2650	1´G	1/4´G	M12 Ø90	100	TS-KA-250-30-125
	180	210	1400	1 1/2´G	3/4´G	M12 Ø140	129	TS-KA-250-30-180
	200	230	1070	1 1/2´G	3/4´G	M12 Ø160	125	TS-KA-250-30-200
	250	290	925	1 1/2´G	3/4´G	M12 Ø210	197	TS-KA-250-30-250
35	125	145	3055	1´G	1/4´G	M12 Ø90	114	TS-KA-250-35-125
	180	210	1600	1 1/2´G	3/4´G	M12 Ø140	143	TS-KA-250-35-180
	200	230	1230	1 1/2´G	3/4´G	M12 Ø160	138	TS-KA-250-35-200
	250	290	1025	1 1/2´G	3/4´G	M12 Ø210	211	TS-KA-25035-250
40	125	145	3465	1´G	1/4´G	M12 Ø90	127	TS-KA-250-40-125
	180	210	1795	1 1/2´G	3/4´G	M12 Ø140	157	TS-KA-250-40-180
	200	230	1385	1 1/2´G	3/4´G	M12 Ø160	150	TS-KA-250-40-200
	250	290	1130	1 1/2´G	3/4´G	M12 Ø210	225	TS-KA-250-40-250
45	180	210	2000	1 1/2´G	3/4´G	M12 Ø140	172	TS-KA-250-45-180
	200	230	1545	1 1/2´G	3/4´G	M12 Ø160	163	TS-KA-250-45-200
	250	290	1230	1 1/2´G	3/4´G	M12 Ø210	238	TS-KA-250-45-250
50	180	210	2190	1 1/2´G	3/4´G	M12 Ø140	186	TS-KA-250-50-180
	200	230	1705	1 1/2´G	3/4´G	M12 Ø160	176	TS-KA-250-50-200
	250	290	1330	1 1/2´G	3/4´G	M12 Ø210	251	TS-KA-250-50-250

Unit Dimensions

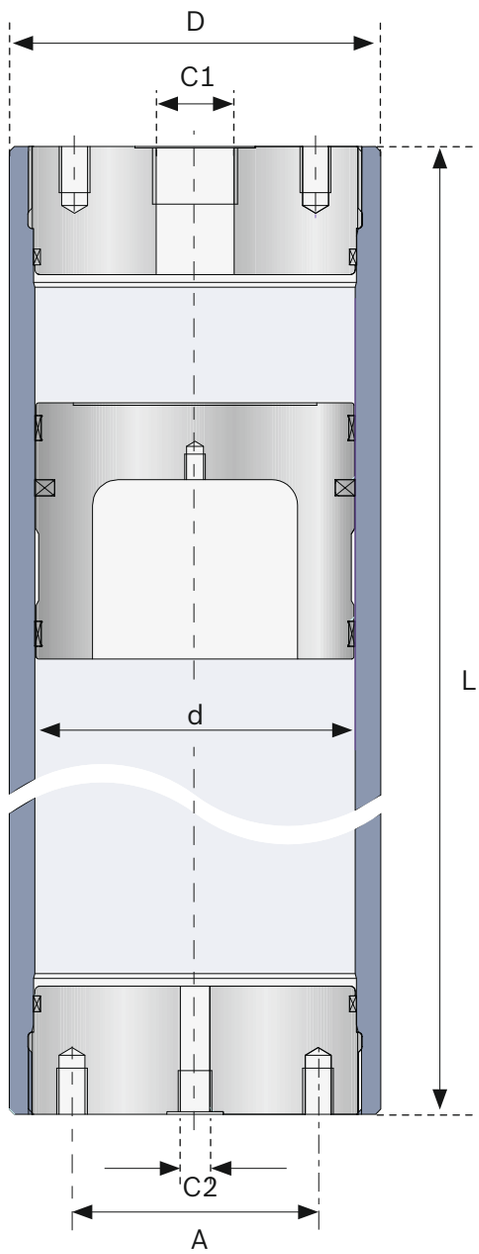


V	d	D	L	C1	C2	A		P-V-d
Volume (L)	Piston Ø (mm)	Outside Ø (mm)	Length (mm)	Conn. OIL	Conn. GAS	Fastening	Weight (Kg)	Type
60	180	210	2580	1 1/2´G	3/4´G	M12 Ø140	214	TS-KA-250-60-180
	200	230	1865	1 1/2´G	3/4´G	M12 Ø160	188	TS-KA-250-60-200
	250	290	1535	1 1/2´G	3/4´G	M12 Ø210	278	TS-KA-250-60-250
70	180	210	2975	1 1/2´G	3/4´G	M12 Ø140	242	TS-KA-250-70-180
	200	230	2500	1 1/2´G	3/4´G	M12 Ø160	239	TS-KA-250-70-200
	250	290	1740	1 1/2´G	3/4´G	M12 Ø210	306	TS-KA-250-70-250
	300	345	1345	1 1/2´G	3/4´G	M12 Ø240	371	TS-KA-250-70-300
80	180	210	3370	1 1/2´G	3/4´G	M12 Ø140	270	TS-KA-250-80-180
	200	230	2820	1 1/2´G	3/4´G	M12 Ø160	264	TS-KA-250-80-200
	250	290	1945	1 1/2´G	3/4´G	M12 Ø210	333	TS-KA-250-80-250
	300	345	1485	1 1/2´G	3/4´G	M12 Ø240	396	TS-KA-250-80-300
90	180	210	3760	1 1/2´G	3/4´G	M12 Ø140	299	TS-KA-250-90-180
	200	230	3140	1 1/2´G	3/4´G	M12 Ø160	289	TS-KA-250-90-200
	250	290	2145	1 1/2´G	3/4´G	M12 Ø210	360	TS-KA-250-90-250
	300	345	1625	1 1/2´G	3/4´G	M12 Ø240	421	TS-KA-250-90-300
100	200	230	3455	1 1/2´G	3/4´G	M12 Ø160	314	TS-KA-250-100-200
	250	290	2350	1 1/2´G	3/4´G	M12 Ø210	387	TS-KA-250-100-250
	300	345	1770	1 1/2´G	3/4´G	M12 Ø240	447	TS-KA-250-100-300
	360	420	1365	1 1/2´G	3/4´G	M12 Ø300	603	TS-KA-250-100-360
120	200	230	4095	1 1/2´G	3/4´G	M12 Ø160	365	TS-KA-250-120-200
	250	290	2760	1 1/2´G	3/4´G	M12 Ø210	441	TS-KA-250-120-250
	300	345	2050	1 1/2´G	3/4´G	M12 Ø240	497	TS-KA-250-120-300
	360	420	1560	1 1/2´G	3/4´G	M12 Ø300	659	TS-KA-250-120-360
140	250	290	3165	1 1/2´G	3/4´G	M12 Ø210	495	TS-KA-250-140-250
	300	345	2335	1 1/2´G	3/4´G	M12 Ø240	548	TS-KA-250-140-300
	360	420	1760	1 1/2´G	3/4´G	M12 Ø300	717	TS-KA-250-140-360
150	250	290	3370	1 1/2´G	3/4´G	M12 Ø210	522	TS-KA-250-150-250
	300	345	2475	1 1/2´G	3/4´G	M12 Ø240	573	TS-KA-250-150-300
	360	420	1855	1 1/2´G	3/4´G	M12 Ø300	744	TS-KA-250-150-360
160	250	290	3575	1 1/2´G	3/4´G	M12 Ø210	550	TS-KA-250-160-250
	300	345	2615	1 1/2´G	3/4´G	M12 Ø240	598	TS-KA-250-160-300
	360	420	1955	1 1/2´G	3/4´G	M12 Ø300	773	TS-KA-250-160-360
180	250	290	3980	1 1/2´G	3/4´G	M12 Ø210	603	TS-KA-250-180-250
	300	345	2900	1 1/2´G	3/4´G	M12 Ø240	649	TS-KA-250-180-300
	360	420	2150	1 1/2´G	3/4´G	M12 Ø300	829	TS-KA-250-180-360
200	300	345	3185	1 1/2´G	3/4´G	M12 Ø240	700	TS-KA-250-200-300
	360	420	2350	1 1/2´G	3/4´G	M12 Ø300	887	TS-KA-250-200-360
225	300	345	3535	1 1/2´G	3/4´G	M12 Ø240	763	TS-KA-250-225-300
	360	420	2595	1 1/2´G	3/4´G	M12 Ø300	957	TS-KA-250-225-360
250	300	345	3890	1 1/2´G	3/4´G	M12 Ø240	826	TS-KA-250- 300
	360	420	2840	1 1/2´G	3/4´G	M12 Ø300	1028	TS-KA-250- 360
275	300	345	4245	1 1/2´G	3/4´G	M12 Ø240	889	TS-KA-250-275-300
	360	420	3085	1 1/2´G	3/4´G	M12 Ø300	1098	TS-KA-250-275-360
300	300	345	4600	1 1/2´G	3/4´G	M12 Ø240	953	TS-KA-250-300-300
	360	420	3330	1 1/2´G	3/4´G	M12 Ø300	1169	TS-KA-250-300-360
325	300	345	4955	1 1/2´G	3/4´G	M12 Ø240	1016	TS-KA-250-325-300
	360	420	3575	1 1/2´G	3/4´G	M12 Ø300	1239	TS-KA-250-325-360
350	300	345	5305	1 1/2´G	3/4´G	M12 Ø240	1079	TS-KA-250-350-300
	360	420	3825	1 1/2´G	3/4´G	M12 Ø300	1311	TS-KA-250-350-360
375	300	345	5660	1 1/2´G	3/4´G	M12 Ø240	1142	TS-KA-250-375-300
	360	420	4070	1 1/2´G	3/4´G	M12 Ø300	1382	TS-KA-250-375-360
400	360	420	4315	1 1/2´G	3/4´G	M12 Ø300	1452	TS-KA-250-400-360
425	360	420	4560	1 1/2´G	3/4´G	M12 Ø300	1523	TS-KA-250-425-360
450	360	420	4805	1 1/2´G	3/4´G	M12 Ø300	1593	TS-KA-250-450-360
475	360	420	5050	1 1/2´G	3/4´G	M12 Ø300	1664	TS-KA-250-475-360
500	360	420	5295	1 1/2´G	3/4´G	M12 Ø300	1734	TS-KA-250-500-360

Unit Dimensions

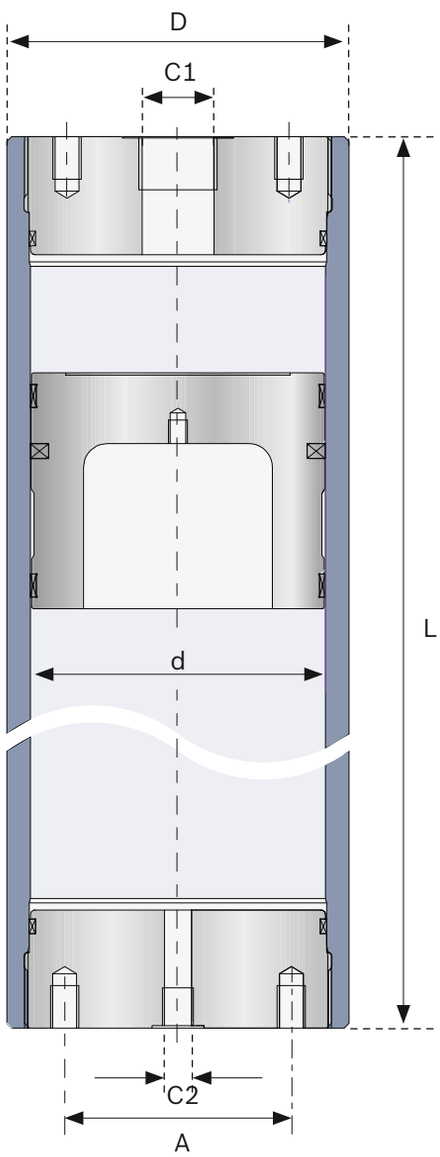
Max working pressure

375 Bar



V	d	D	L	C1	C2	A		P-V-d
Volume (L)	Piston Ø (mm)	Outside Ø (mm)	Length (mm)	Conn. OIL	Conn. GAS	Fastening	Weight (Kg)	Type
0.5	60	76	340	1/2´G	1/4´G	M6 Ø45	7	TS-KA-375-0.5-60
	100	120	275	3/4´G	1/4´G	M8 Ø80	16	TS-KA-375-0.5-100
1	60	76	515	1/2´G	1/4´G	M6 Ø45	10	TS-KA-375-1-60
	100	120	340	3/4´G	1/4´G	M8 Ø80	18	TS-KA-375-1-100
1,5	60	76	695	1/2´G	1/4´G	M6 Ø45	12	TS-KA-375-1.5-60
	100	120	405	3/4´G	1/4´G	M8 Ø80	20	TS-KA-375-1.5-100
2	60	76	870	1/2´G	1/4´G	M6 Ø45	14	TS-KA-375-2-60
	100	120	465	3/4´G	1/4´G	M8 Ø80	21	TS-KA-375-2-100
2,5	60	76	1045	1/2´G	1/4´G	M6 Ø45	17	TS-KA-375-2.5-60
	100	120	530	3/4´G	1/4´G	M8 Ø80	23	TS-KA-375-2.5-100
3	60	76	1225	1/2´G	1/4´G	M6 Ø45	19	TS-KA-375-3-60
	100	120	595	3/4´G	1/4´G	M8 Ø80	25	TS-KA-375-3-100
	125	150	465	1/2´G	1/4´G	M12 Ø90	34	TS-KA-375-3-125
4	60	76	1580	3/4´G	1/4´G	M6 Ø45	24	TS-KA-375-4-60
	100	120	720	1/2´G	1/4´G	M8 Ø80	28	TS-KA-375-4-100
	125	150	550	3/4´G	1/4´G	M12 Ø90	37	TS-KA-375-4-125
5	60	76	1930	1/2´G	1/4´G	M6 Ø45	29	TS-KA-375-5-60
	100	120	850	3/4´G	1/4´G	M8 Ø80	32	TS-KA-375-5-100
	125	150	630	1´G	1/4´G	M12 Ø90	41	TS-KA-375-5-125
6	100	120	975	3/4´G	1/4´G	M8 Ø80	35	TS-KA-375-6-100
	125	150	710	1´G	1/4´G	M12 Ø90	44	TS-KA-375-6-125
8	100	120	1230	1´G	1/4´G	M8 Ø80	42	TS-KA-375-8-100
	125	150	875	1´G	1/4´G	M12 Ø90	51	TS-KA-375-8-125
10	100	120	1485	3/4´G	1/4´G	M8 Ø80	49	TS-KA-375-10-100
	125	150	1040	1´G	1/4´G	M12 Ø90	58	TS-KA-375-10-125
	180	222	655	1 1/2´G	3/4´G	M12 Ø140	104	TS-KA-375-10-180
	200	240	630	1 1/2´G	3/4´G	M12 Ø160	116	TS-KA-375-10-200
12	100	120	1740	3/4´G	1/4´G	M8 Ø80	56	TS-KA-375-12-100
	125	150	1200	1´G	1/4´G	M12 Ø90	65	TS-KA-375-12-125
	180	222	735	1 1/2´G	3/4´G	M12 Ø140	112	TS-KA-375-12-180
	200	240	695	1 1/2´G	3/4´G	M12 Ø160	125	TS-KA-375-12-200
15	100	120	2125	3/4´G	1/4´G	M8 Ø80	66	TS-KA-375-15-100
	125	150	1445	1´G	1/4´G	M12 Ø90	75	TS-KA-375-15-125
	180	222	790	1 1/2´G	3/4´G	M12 Ø140	118	TS-KA-375-15-180
	200	240	655	1 1/2´G	3/4´G	M12 Ø160	121	TS-KA-375-15-200
20	125	150	1855	1´G	1/4´G	M12 Ø90	92	TS-KA-375-20-125
	180	222	950	1 1/2´G	3/4´G	M12 Ø140	134	TS-KA-375-20-180
	200	240	750	1 1/2´G	3/4´G	M12 Ø160	131	TS-KA-375-20-200
25	125	150	2260	1´G	1/4´G	M12 Ø90	110	TS-KA-375-25-125
	180	222	1110	1 1/2´G	3/4´G	M12 Ø140	151	TS-KA-375-25-180
	200	240	910	1 1/2´G	3/4´G	M12 Ø160	149	TS-KA-375-25-200
30	125	150	2670	1´G	1/4´G	M12 Ø90	127	TS-KA-375-30-125
	180	222	1440	1 1/2´G	3/4´G	M12 Ø140	185	TS-KA-375-30-180
	200	240	1270	1 1/2´G	3/4´G	M12 Ø160	188	TS-KA-375-30-200
	250	300	985	1 1/2´G	3/4´G	M12 Ø210	264	TS-KA-375-30-250
35	125	150	3075	1´G	1/4´G	M12 Ø90	144	TS-KA-375-35-125
	180	222	1640	1 1/2´G	3/4´G	M12 Ø140	206	TS-KA-375-35-180
	200	240	1425	1 1/2´G	3/4´G	M12 Ø160	204	TS-KA-375-35-200
	250	300	1085	1 1/2´G	3/4´G	M12 Ø210	281	TS-KA-375-35-250
40	125	150	3485	1´G	1/4´G	M12 Ø90	161	TS-KA-375-40-125
	180	222	1835	1 1/2´G	3/4´G	M12 Ø140	226	TS-KA-375-40-180
	200	240	1585	1 1/2´G	3/4´G	M12 Ø160	222	TS-KA-375-40-200
	250	300	1190	1 1/2´G	3/4´G	M12 Ø210	299	TS-KA-375-40-250
45	180	222	2030	1 1/2´G	3/4´G	M12 Ø140	247	TS-KA-375-45-180
	200	240	1745	1 1/2´G	3/4´G	M12 Ø160	239	TS-KA-375-45-200
	250	300	1290	1 1/2´G	3/4´G	M12 Ø210	316	TS-KA-375-45-250
50	180	222	2230	1 1/2´G	3/4´G	M12 Ø140	267	TS-KA-375-50-180
	200	240	1905	1 1/2´G	3/4´G	M12 Ø160	256	TS-KA-375-50-200
	250	300	1390	1 1/2´G	3/4´G	M12 Ø210	333	TS-KA-375-50-250

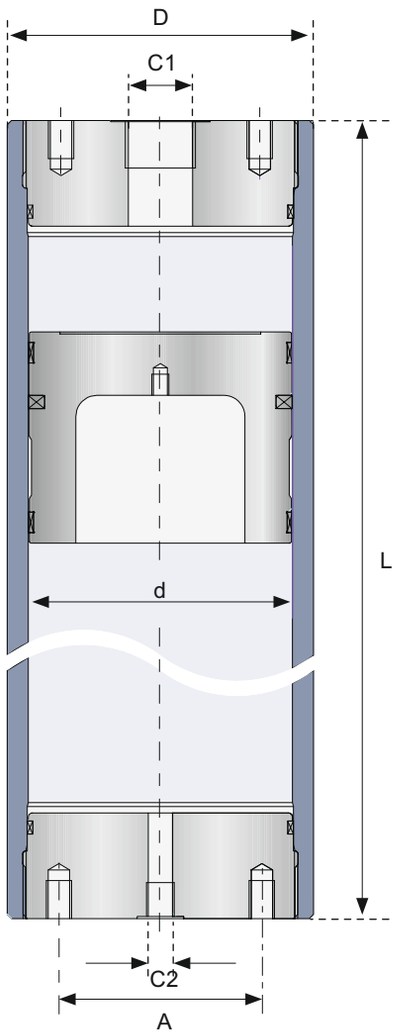
Unit Dimensions



V	d	D	L	C1	C2	A		P-V-d
Volume (L)	Piston Ø (mm)	Outside Ø (mm)	Length (mm)	Conn. OIL	Conn. GAS	Fastening	Weight (Kg)	Type
60	180	222	2620	1 1/2´G	3/4´G	M12 Ø140	308	TS-KA-375-60-180
	200	240	2225	1 1/2´G	3/4´G	M12 Ø160	291	TS-KA-375-60-200
	250	300	1595	1 1/2´G	3/4´G	M12 Ø210	368	TS-KA-375-60-250
70	180	222	3015	1 1/2´G	3/4´G	M12 Ø140	349	TS-KA-375-70-180
	200	240	2540	1 1/2´G	3/4´G	M12 Ø160	325	TS-KA-375-70-200
	250	300	1800	1 1/2´G	3/4´G	M12 Ø210	402	TS-KA-375-70-250
	300	360	1415	1 1/2´G	3/4´G	M12 Ø240	515	TS-KA-375-70-300
80	180	222	3410	1 1/2´G	3/4´G	M12 Ø140	390	TS-KA-375-80-180
	200	240	2860	1 1/2´G	3/4´G	M12 Ø160	360	TS-KA-375-80-200
	250	300	2005	1 1/2´G	3/4´G	M12 Ø210	437	TS-KA-375-80-250
	300	360	1545	1 1/2´G	3/4´G	M12 Ø240	547	TS-KA-375-80-300
90	180	222	3800	1 1/2´G	3/4´G	M12 Ø140	430	TS-KA-375-90-180
	200	240	3180	1 1/2´G	3/4´G	M12 Ø160	394	TS-KA-375-90-200
	250	300	2205	1 1/2´G	3/4´G	M12 Ø210	471	TS-KA-375-90-250
	300	360	1695	1 1/2´G	3/4´G	M12 Ø240	583	TS-KA-375-90-300
100	200	240	3495	1 1/2´G	3/4´G	M12 Ø160	428	TS-KA-375-100-200
	250	300	2410	1 1/2´G	3/4´G	M12 Ø210	505	TS-KA-375-100-250
	300	360	1840	1 1/2´G	3/4´G	M12 Ø240	619	TS-KA-375-100-300
	360	435	1445	1 1/2´G	3/4´G	M12 Ø300	804	TS-KA-375-100-360
120	200	240	4135	1 1/2´G	3/4´G	M12 Ø160	498	TS-KA-375-120-200
	250	300	2820	1 1/2´G	3/4´G	M12 Ø210	575	TS-KA-375-120-250
	300	360	2405	1 1/2´G	3/4´G	M12 Ø240	756	TS-KA-375-120-300
	360	435	1640	1 1/2´G	3/4´G	M12 Ø300	875	TS-KA-375-120-360
140	250	300	3225	1 1/2´G	3/4´G	M12 Ø210	643	TS-KA-375-140-250
	300	360	2335	1 1/2´G	3/4´G	M12 Ø240	739	TS-KA-375-140-300
	360	435	1840	1 1/2´G	3/4´G	M12 Ø300	949	TS-KA-375-140-360
150	250	300	3430	1 1/2´G	3/4´G	M12 Ø210	678	TS-KA-375-150-250
	300	360	2545	1 1/2´G	3/4´G	M12 Ø240	790	TS-KA-375-150-300
	360	435	1935	1 1/2´G	3/4´G	M12 Ø300	983	TS-KA-375-150-360
160	250	300	3635	1 1/2´G	3/4´G	M12 Ø210	713	TS-KA-375-160-250
	300	360	2685	1 1/2´G	3/4´G	M12 Ø240	824	TS-KA-375-160-300
	360	435	2035	1 1/2´G	3/4´G	M12 Ø300	1020	TS-KA-375-160-360
180	250	300	4040	1 1/2´G	3/4´G	M12 Ø210	781	TS-KA-375-180-250
	300	360	2970	1 1/2´G	3/4´G	M12 Ø240	894	TS-KA-375-180-300
	360	435	2230	1 1/2´G	3/4´G	M12 Ø300	1092	TS-KA-375-180-360
200	300	360	3255	1 1/2´G	3/4´G	M12 Ø240	963	TS-KA-375-200-300
	360	435	2430	1 1/2´G	3/4´G	M12 Ø300	1165	TS-KA-375-200-360
225	300	360	3605	1 1/2´G	3/4´G	M12 Ø240	1049	TS-KA-375-225-300
	360	435	2675	1 1/2´G	3/4´G	M12 Ø300	1255	TS-KA-375-225-360
250	300	360	3960	1 1/2´G	3/4´G	M12 Ø240	1135	TS-KA-375-250-300
	360	435	2920	1 1/2´G	3/4´G	M12 Ø300	1345	TS-KA-375-250-360
275	300	360	4315	1 1/2´G	3/4´G	M12 Ø240	1222	TS-KA-375-275-300
	360	435	3165	1 1/2´G	3/4´G	M12 Ø300	1435	TS-KA-375-275-360
300	300	360	4670	1 1/2´G	3/4´G	M12 Ø240	1308	TS-KA-375-300-300
	360	435	3410	1 1/2´G	3/4´G	M12 Ø300	1524	TS-KA-375-300-360
325	300	360	5025	1 1/2´G	3/4´G	M12 Ø240	1394	TS-KA-375-325-300
	360	435	3655	1 1/2´G	3/4´G	M12 Ø300	1614	TS-KA-375-325-360
350	300	360	5375	1 1/2´G	3/4´G	M12 Ø240	1480	TS-KA-375-350-300
	360	435	3905	1 1/2´G	3/4´G	M12 Ø300	1706	TS-KA-375-350-360
375	300	360	5730	1 1/2´G	3/4´G	M12 Ø240	1566	TS-KA-375- 300
	360	435	4150	1 1/2´G	3/4´G	M12 Ø300	179	TS-KA-375- 360
400	360	435	4395	1 1/2´G	3/4´G	M12 Ø300	1886	TS-KA-375-400-360
425	360	435	4640	1 1/2´G	3/4´G	M12 Ø300	1976	TS-KA-375-425-360
450	360	435	4885	1 1/2´G	3/4´G	M12 Ø300	2066	TS-KA-375-450-360
475	360	435	5130	1 1/2´G	3/4´G	M12 Ø300	2155	TS-KA-375-475-360
500	360	435	5375	1 1/2´G	3/4´G	M12 Ø300	2245	TS-KA-375-500-360

Unit Dimensions

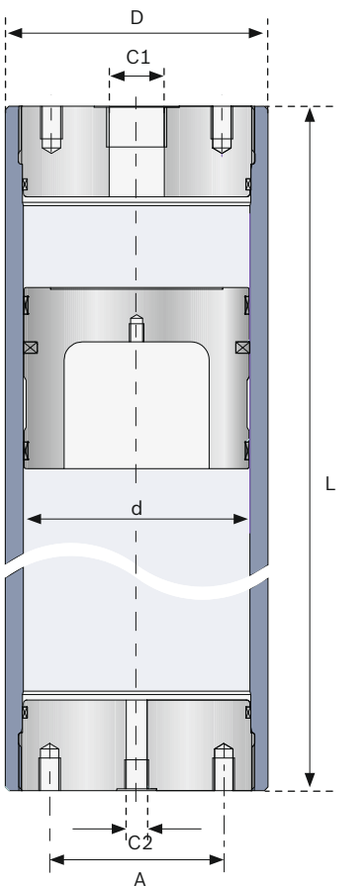
Max working pressure
250 Bar



According to the Code, ASME acceptance is not necessary when the piston diameter is smaller than 150mm. For Ø≤150mm, THM TS-KA 97/23/CE accumulators are available.

V	d	D	L	C1	C2	A		P-V-d
Volume (L)	Piston Ø (mm)	Outside Ø (mm)	Length (mm)	Conn. OIL	Conn. GAS	Fastening	Weight (Kg)	Type
10	180	230	630	1 1/2´G	3/4´G	M12 Ø140	111	TS-KAA-250-10-180
	200	255	600	1 1/2´G	3/4´G	M12 Ø160	135	TS-KAA-250-10-200
12	180	230	705	1 1/2´G	3/4´G	M12 Ø140	120	TS-KAA-250-12-180
	200	255	665	1 1/2´G	3/4´G	M12 Ø160	145	TS-KAA-250-12-200
15	180	230	825	1 1/2´G	3/4´G	M12 Ø140	135	TS-KAA-250-15-180
	200	255	760	1 1/2´G	3/4´G	M12 Ø160	160	TS-KAA-250-15-200
20	180	230	1020	1 1/2´G	3/4´G	M12 Ø140	160	TS-KAA-250-20-180
	200	255	915	1 1/2´G	3/4´G	M12 Ø160	184	TS-KAA-250-20-200
25	180	230	1220	1 1/2´G	3/4´G	M12 Ø140	185	TS-KAA-250-25-180
	200	255	1075	1 1/2´G	3/4´G	M12 Ø160	209	TS-KAA-250-25-200
30	180	230	1415	1 1/2´G	3/4´G	M12 Ø140	210	TS-KAA-250-30-180
	200	255	1235	1 1/2´G	3/4´G	M12 Ø160	233	TS-KAA-250-30-200
	250	315	940	1 1/2´G	3/4´G	M16 Ø210	294	TS-KAA-250-30-250
35	180	230	1610	1 1/2´G	3/4´G	M12 Ø140	235	TS-KAA-250-35-180
	200	255	1395	1 1/2´G	3/4´G	M12 Ø160	258	TS-KAA-250-35-200
	250	315	1040	1 1/2´G	3/4´G	M16 Ø210	316	TS-KAA-250-35-250
40	180	230	1810	1 1/2´G	3/4´G	M12 Ø140	260	TS-KAA-250-40-180
	200	255	1555	1 1/2´G	3/4´G	M12 Ø160	283	TS-KAA-250-40-200
	250	315	1140	1 1/2´G	3/4´G	M16 Ø210	339	TS-KAA-250-40-250
45	180	230	2005	1 1/2´G	3/4´G	M12 Ø140	284	TS-KAA-250-45-180
	200	255	1715	1 1/2´G	3/4´G	M12 Ø160	307	TS-KAA-250-45-200
	250	TS- 315	1245	1 1/2´G	3/4´G	M16 Ø210	363	TS-KAA-250-45-250
50	180	230	2200	1 1/2´G	3/4´G	M12 Ø140	309	TS-KAA-250-50-180
	200	255	1875	1 1/2´G	3/4´G	M12 Ø160	332	TS-KAA-250-50-200
70	180	230	2985	1 1/2´G	3/4´G	M12 Ø140	408	TS-KAA-250-70-180
	200	255	2510	1 1/2´G	3/4´G	M12 Ø160	430	TS-KAA-250-70-200
	250	315	1755	1 1/2´G	3/4´G	M16 Ø210	478	TS-KAA-250-70-250
	300	380	1355	1 1/2´G	3/4´G	M16 Ø240	593	TS-KAA-250-70-300
80	180	230	3380	1 1/2´G	3/4´G	M12 Ø140	458	TS-KAA-250-80-180
	200	255	2830	1 1/2´G	3/4´G	M12 Ø160	479	TS-KAA-250-80-200
	250	315	1955	1 1/2´G	3/4´G	M16 Ø210	524	TS-KAA-250-80-250
	300	380	1495	1 1/2´G	3/4´G	M16 Ø240	640	TS-KAA-250-80-300
90	180	230	3775	1 1/2´G	3/4´G	M12 Ø140	508	TS-KAA-250-90-180
	200	255	3145	1 1/2´G	3/4´G	M12 Ø160	528	TS-KAA-250-90-200
	250	315	2160	1 1/2´G	3/4´G	M16 Ø210	570	TS-KAA-250-90-250
	300	380	1635	1 1/2´G	3/4´G	M16 Ø240	687	TS-KAA-250-90-300
100	200	255	3465	1 1/2´G	3/4´G	M12 Ø160	577	TS-KAA-250-100-200
	250	315	2365	1 1/2´G	3/4´G	M16 Ø210	616	TS-KAA-250-100-250
	300	380	1780	1 1/2´G	3/4´G	M16 Ø240	735	TS-KAA-250-100-300
	360	455	1390	1 1/2´G	3/4´G	M16 Ø300	894	TS-KAA-250-100-360

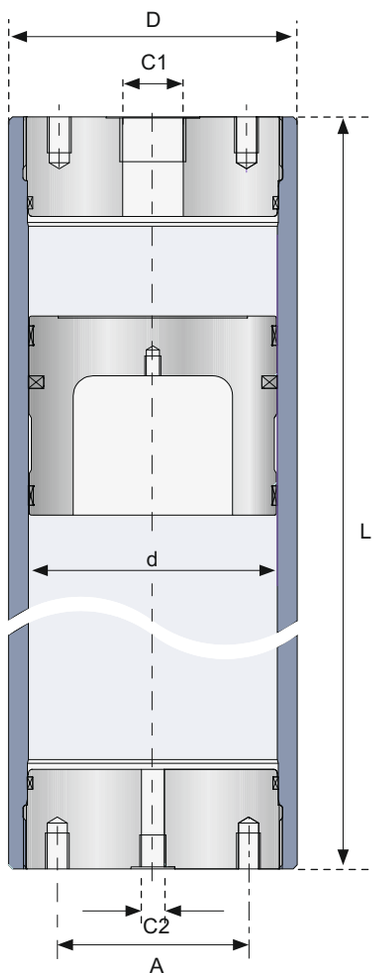
Unit Dimensions



V	d	D	L	C1	C2	A		P-V-d
Volume (L)	Piston Ø (mm)	Outside Ø (mm)	Length (mm)	Conn. OIL	Conn. GAS	Fastening	Weight (Kg)	Type
120	200	255	4100	1 1/2´G	3/4´G	M12 Ø160	675	TS-KAA-250-120-200
	250	315	2770	1 1/2´G	3/4´G	M16 Ø210	708	TS-KAA-250-120-250
	300	380	2060	1 1/2´G	3/4´G	M16 Ø240	829	TS-KAA-250-120-300
	360	455	1585	1 1/2´G	3/4´G	M16 Ø300	987	TS-KAA-250-120-360
140	250	315	3180	1 1/2´G	3/4´G	M16 Ø210	801	TS-KAA-250-140-250
	300	380	2345	1 1/2´G	3/4´G	M16 Ø240	925	TS-KAA-250-140-300
	360	455	1785	1 1/2´G	3/4´G	M16 Ø300	1082	TS-KAA-250-140-360
150	250	315	3385	1 1/2´G	3/4´G	M16 Ø210	847	TS-KAA-250-150-250
	300	380	2485	1 1/2´G	3/4´G	M16 Ø240	972	TS-KAA-250-150-300
	360	455	1880	1 1/2´G	3/4´G	M16 Ø300	1128	TS-KAA-250-150-360
160	250	315	3590	1 1/2´G	3/4´G	M16 Ø210	894	TS-KAA-250-160-250
	300	380	2630	1 1/2´G	3/4´G	M16 Ø240	1020	TS-KAA-250-160-300
	360	455	1980	1 1/2´G	3/4´G	M16 Ø300	1175	TS-KAA-250-160-360
180	250	315	3995	1 1/2´G	3/4´G	M16 Ø210	986	TS-KAA-250-180-250
	300	380	2910	1 1/2´G	3/4´G	M16 Ø240	1114	TS-KAA-250-180-300
	360	455	2175	1 1/2´G	3/4´G	M16 Ø300	1269	TS-KAA-250-180-360
200	300	380	3195	1 1/2´G	3/4´G	M16 Ø240	1210	TS-KAA-250-200-300
	360	455	2375	1 1/2´G	3/4´G	M16 Ø300	1364	TS-KAA-250-200-360
225	300	380	3550	1 1/2´G	3/4´G	M16 Ø240	1329	TS-KAA-250-225-300
	360	455	2620	1 1/2´G	3/4´G	M16 Ø300	1481	TS-KAA-250-225-360
250	300	380	3900	1 1/2´G	3/4´G	M16 Ø240	1446	TS-KAA-250-250-300
	360	455	2865	1 1/2´G	3/4´G	M16 Ø300	1598	TS-KAA-250-250-360
275	300	380	4255	1 1/2´G	3/4´G	M16 Ø240	1565	TS-KAA-250-275-300
	360	455	3110	1 1/2´G	3/4´G	M16 Ø300	1715	TS-KAA-250-275-360
300	300	380	4610	1 1/2´G	3/4´G	M16 Ø240	1684	TS-KAA-250-300-300
	360	455	3355	1 1/2´G	3/4´G	M16 Ø300	1832	TS-KAA-250-300-360
325	300	380	4965	1 1/2´G	3/4´G	M16 Ø240	1807	TS-KAA-250-325-300
	360	455	3600	1 1/2´G	3/4´G	M16 Ø300	1949	TS-KAA-250-325-360
350	300	380	5315	1 1/2´G	3/4´G	M16 Ø240	1924	TS-KAA-250-350-300
	360	455	3845	1 1/2´G	3/4´G	M16 Ø300	2066	TS-KAA-250-350-360
375	300	380	5670	1 1/2´G	3/4´G	M16 Ø240	2043	TS-KAA-250-375-300
	360	455	4095	1 1/2´G	3/4´G	M16 Ø300	2185	TS-KAA-250-375-360
400	360	455	4340	1 1/2´G	3/4´G	M16 Ø300	2302	TS-KAA-250-400-360
425	360	455	4585	1 1/2´G	3/4´G	M16 Ø300	2419	TS-KAA-250-425-360
450	360	455	4830	1 1/2´G	3/4´G	M16 Ø300	2536	TS-KAA-250-450-360
475	360	455	5075	1 1/2´G	3/4´G	M16 Ø300	2653	TS-KAA-250-475-360
500	360	455	5320	1 1/2´G	3/4´G	M16 Ø300	2770	TS-KAA-250-500-360

Unit Dimensions

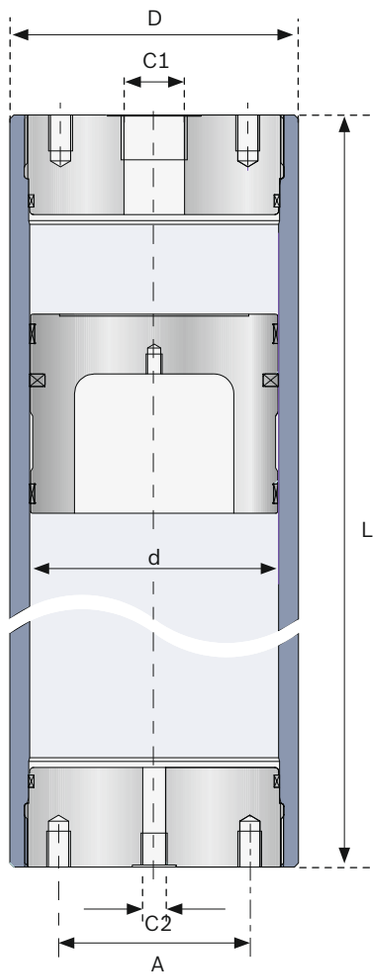
Max working pressure
375 Bar



According to the Code, ASME acceptance is not necessary when the piston diameter is smaller than 150mm. For Ø≤150mm, THM TS-KA 97/23/CE accumulators are available.

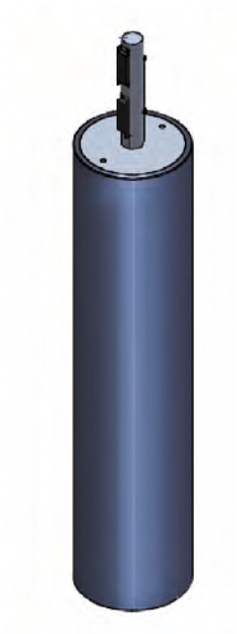
V	d	D	L	C1	C2	A		P-V-d
Volume (L)	Piston Ø (mm)	Outside Ø (mm)	Length (mm)	Conn. OIL	Conn. GAS	Fastening	Weight (Kg)	Type
10	180	255	660	1 1/2´G	3/4´G	M12 Ø140	170	TS-KAA-375-10-180
	200	285	630	1 1/2´G	3/4´G	M12 Ø160	211	TS-KAA-375-10-200
12	180	255	735	1 1/2´G	3/4´G	M12 Ø140	185	TS-KAA-375-12-180
	200	285	695	1 1/2´G	3/4´G	M12 Ø160	227	TS-KAA-375-12-200
15	180	255	855	1 1/2´G	3/4´G	M12 Ø140	209	TS-KAA-375-15-180
	200	285	790	1 1/2´G	3/4´G	M12 Ø160	252	TS-KAA-375-15-200
20	180	255	1050	1 1/2´G	3/4´G	M12 Ø140	248	TS-KAA-375-20-180
	200	285	950	1 1/2´G	3/4´G	M12 Ø160	292	TS-KAA-375-20-200
25	180	255	1250	1 1/2´G	3/4´G	M12 Ø140	288	TS-KAA-375-25-180
	200	285	1110	1 1/2´G	3/4´G	M12 Ø160	333	TS-KAA-375-25-200
30	180	255	1445	1 1/2´G	3/4´G	M12 Ø140	328	TS-KAA-375-30-180
	200	285	1270	1 1/2´G	3/4´G	M12 Ø160	374	TS-KAA-375-30-200
	250	355	980	1 1/2´G	3/4´G	M16 Ø210	481	TS-KAA-250-30-250
35	180	255	1640	1 1/2´G	3/4´G	M12 Ø140	367	TS-KAA-375-35-180
	200	285	1425	1 1/2´G	3/4´G	M12 Ø160	413	TS-KAA-375-35-200
	250	355	1080	1 1/2´G	3/4´G	M16 Ø210	520	TS-KAA-250-35-250
40	180	255	1840	1 1/2´G	3/4´G	M12 Ø140	407	TS-KAA-375-40-180
	200	285	1585	1 1/2´G	3/4´G	M12 Ø160	454	TS-KAA-375-40-200
	250	355	1185	1 1/2´G	3/4´G	M12 Ø210	561	TS-KAA-375-40-250
45	180	255	2035	1 1/2´G	3/4´G	M12 Ø140	446	TS-KAA-375-45-180
	200	285	1745	1 1/2´G	3/4´G	M12 Ø160	494	TS-KAA-375-45-200
	250	355	1285	1 1/2´G	3/4´G	M16 Ø210	600	TS-KAA-375-45-250
50	180	255	2230	1 1/2´G	3/4´G	M12 Ø140	486	TS-KAA-375-50-180
	200	285	1905	1 1/2´G	3/4´G	M12 Ø160	535	TS-KAA-375-50-200
70	180	255	3015	1 1/2´G	3/4´G	M12 Ø140	643	TS-KAA-375-70-180
	200	285	2540	1 1/2´G	3/4´G	M12 Ø160	696	TS-KAA-375-70-200
	250	355	1795	1 1/2´G	3/4´G	M16 Ø210	800	TS-KAA-375-70-250
	300	425	1405	1 1/2´G	3/4´G	M16 Ø240	951	TS-KAA-375-70-300
80	180	255	3410	1 1/2´G	3/4´G	M12 Ø140	723	TS-KAA-375-80-180
	200	285	2860	1 1/2´G	3/4´G	M12 Ø160	778	TS-KAA-375-80-200
	250	355	2000	1 1/2´G	3/4´G	M16 Ø210	880	TS-KAA-375-80-250
	300	425	1545	1 1/2´G	3/4´G	M16 Ø240	1029	TS-KAA-375-80-300
90	180	255	3805	1 1/2´G	3/4´G	M12 Ø140	802	TS-KAA-375-90-180
	200	285	3180	1 1/2´G	3/4´G	M12 Ø160	859	TS-KAA-375-90-200
	250	355	2205	1 1/2´G	3/4´G	M16 Ø210	960	TS-KAA-375-90-250
	300	425	1685	1 1/2´G	3/4´G	M16 Ø240	1107	TS-KAA-375-90-300
100	200	285	3495	1 1/2´G	3/4´G	M12 Ø160	939	TS-KAA-375-100-200
	250	355	2405	1 1/2´G	3/4´G	M16 Ø210	1039	TS-KAA-375-100-250
	300	425	1830	1 1/2´G	3/4´G	M16 Ø240	1188	TS-KAA-375-100-300
	360	505	1450	1 1/2´G	3/4´G	M16 Ø300	1399	TS-KAA-375-100-360

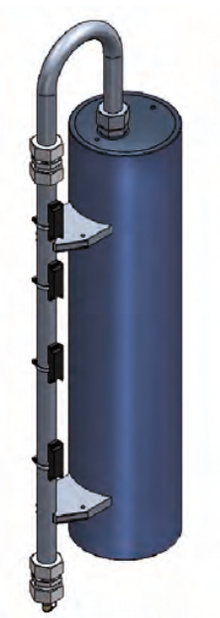
Unit Dimensions



V	d	D	L	C1	C2	A		P-V-d
Volume (L)	Piston Ø (mm)	Outside Ø (mm)	Length (mm)	Conn. OIL	Conn. GAS	Fastening	Weight (Kg)	Type
120	200	285	4135	1 1/2´G	3/4´G	M12 Ø160	1102	TS-KAA-375-120-200
	250	355	2815	1 1/2´G	3/4´G	M16 Ø210	1199	TS-KAA-375-120-250
	300	425	2210	1 1/2´G	3/4´G	M16 Ø240	1400	TS-KAA-375-120-300
	360	505	1645	1 1/2´G	3/4´G	M16 Ø300	1550	TS-KAA-375-120-360
140	250	355	3220	1 1/2´G	3/4´G	M16 Ø210	1358	TS-KAA-375-140-250
	300	425	2395	1 1/2´G	3/4´G	M16 Ø240	1504	TS-KAA-375-140-300
	360	505	1845	1 1/2´G	3/4´G	M16 Ø300	1704	TS-KAA-375-140-360
150	250	355	3425	1 1/2´G	3/4´G	M16 Ø210	1438	TS-KAA-375-150-250
	300	425	2535	1 1/2´G	3/4´G	M16 Ø240	1582	TS-KAA-375-150-300
	360	505	1940	1 1/2´G	3/4´G	M16 Ø300	1778	TS-KAA-375-150-360
160	250	355	3630	1 1/2´G	3/4´G	M16 Ø210	1519	TS-KAA-375-160-250
	300	425	2675	1 1/2´G	3/4´G	M16 Ø240	1660	TS-KAA-375-160-300
	360	505	2040	1 1/2´G	3/4´G	M16 Ø300	1855	TS-KAA-375-160-360
180	250	355	4035	1 1/2´G	3/4´G	M16 Ø210	1677	TS-KAA-375-180-250
	300	425	2960	1 1/2´G	3/4´G	M16 Ø240	1819	TS-KAA-375-180-300
	360	505	2235	1 1/2´G	3/4´G	M16 Ø300	2006	TS-KAA-375-180-360
200	300	425	3245	1 1/2´G	3/4´G	M16 Ø240	1979	TS-KAA-375-200-300
	360	505	2430	1 1/2´G	3/4´G	M16 Ø300	2157	TS-KAA-375-200-360
225	300	425	3595	1 1/2´G	3/4´G	M16 Ø240	2174	TS-KAA-375-225-300
	360	505	2680	1 1/2´G	3/4´G	M16 Ø300	2350	TS-KAA-375-225-360
250	300	425	3950	1 1/2´G	3/4´G	M16 Ø240	2373	TS-KAA-375-250-300
	360	505	2925	1 1/2´G	3/4´G	M16 Ø300	2540	TS-KAA-375-250-360
275	300	425	4305	1 1/2´G	3/4´G	M16 Ø240	2571	TS-KAA-375-275-300
	360	505	3170	1 1/2´G	3/4´G	M16 Ø300	2729	TS-KAA-375-275-360
300	300	425	4660	1 1/2´G	3/4´G	M16 Ø240	2769	TS-KAA-375-300-300
	360	505	3415	1 1/2´G	3/4´G	M16 Ø300	2918	TS-KAA-375-300-360
325	300	425	5015	1 1/2´G	3/4´G	M16 Ø240	2971	TS-KAA-375-325-300
	360	505	3660	1 1/2´G	3/4´G	M16 Ø300	3108	TS-KAA-375-325-360
350	300	425	5365	1 1/2´G	3/4´G	M16 Ø240	3167	TS-KAA-375-350-300
	360	505	3905	1 1/2´G	3/4´G	M16 Ø300	3297	TS-KAA-375-350-360
375	300	425	5720	1 1/2´G	3/4´G	M16 Ø240	3365	TS-KAA-375-375-300
	360	505	4155	1 1/2´G	3/4´G	M16 Ø300	3491	TS-KAA-375-375-360
400	360	505	4400	1 1/2´G	3/4´G	M16 Ø300	3680	TS-KAA-375-400-360
425	360	505	4645	1 1/2´G	3/4´G	M16 Ø300	3870	TS-KAA-375-425-360
450	360	505	4890	1 1/2´G	3/4´G	M16 Ø300	4059	TS-KAA-375-450-360
475	360	505	5135	1 1/2´G	3/4´G	M16 Ø300	4248	TS-KAA-375-475-360
500	360	505	5380	1 1/2´G	3/4´G	M16 Ø300	4438	TS-KAA-375-500-360

Optional: Electrical limit switching device



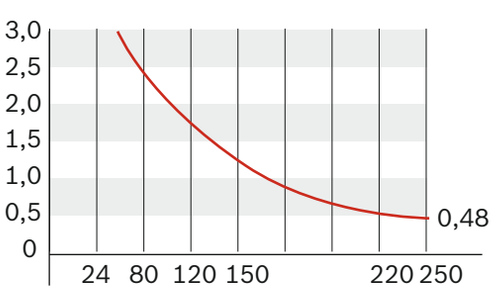


Electric limit switch

The system consists in a N/C and N/O switch.
When the piston reaches the up switch position, the switch (N/C) is activated. When the oil pressure falls and the piston reaches down switch position, the switch (N/O) is activated.
The switch is reset by a spring and it allows any mounting position, but a vertical mounting is preferable.
In the limit switch stroke, the maximum piston speed should not exceed 0,5 m/s.
Electric switch characteristics:
• Compliance with the Directives
• Approval: USA/CAN
• Ambient conditions:
• Ambient temperature
- Min. environmental temperature –25 °C
- Max. environmental temperature +75 °C
• Protection class IP67 to IEC/EN 60529

Electrical data
• Switching voltage max. 250 VAC/DC
• Switching current max. 3 A
• Switching capacity max. 120 VA / W

Characteristic curve:



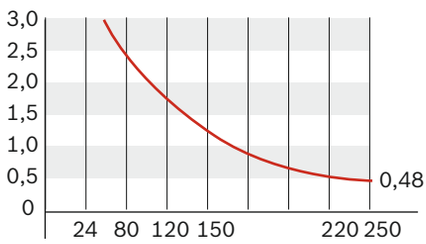
Piston position switch

The system consists in a magnet element that is moved with the piston.
The device is mounted on the gas side of the accumulator and according the piston reaches the switches position, the correspondent switch is activated. Depending the piston direction (up or down) the switches works as breaker or closing contact.
When the piston reaches the switch position, the switch is activated. Several switched could be mounted and the total stroke could be controlled.
The accumulator must only be installed vertically and gas side on top.
In the controlled stroke, the maximum piston speed should not exceed 0,5 m/s.
Electric switch characteristics:
• Compliance with the Directives
• Approval: USA/CAN

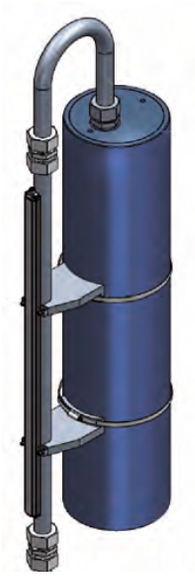
Ambient conditions:
• Ambient temperature
- Min. environmental temperature –25 °C
- Max. environmental temperature +75 °C
- Protection class IP67 to IEC/EN 60529

Electrical data
• Switching voltage max. 250 VAC/DC
• Switching current max. 3 A
• Switching capacity max. 120 VA / W

Characteristic curve:



Piston Position Transducer & Ultrasonic Position transducer



Piston position transducer

The system consists in a magnet element that is moved with the piston.
The device is mounted on the gas side of the accumulator and according the piston is moved, the analogical output signal of the transducer can by displayed.
The accumulator must only be installed vertically and gas side on top (the casing is pressurised)
The total piston stroke could be controlled.
In the controlled stroke, the maximum piston speed should not exceed 0,5 m/s.

Position transducer characteristics:

- Compliance with the Directives
- Approval: USA/CAN

Ambient conditions:

- Ambient temperature Ta min. -25 °C
- Ambient temperature Ta max. 70 °C
- Storage temperature min. -40 °C
- Storage temperature max. 100 °C

Electrical data

- Ripple 0.5 Vpp
- Current consumption (at 24 V DC) ≤ 150 mA
- Inrush current ≤ 3 A / 0.5 ms
- Overvoltage protected Up to 36 V
- Voltage-proof (GND – housing) 500 V DC
- Galvanic isolation No
- Output signal adjustable Via programming inputs
- Error signal output 1 10.5 V
- Programming inputs 10 ... 30 V DC, High-active

Output signal . 0-10 v or 4-20 Ma
Electrical connection: 8-pin, M12 plug

Ultrasonic Position transducer

The system consists in ultrasonic sensor. The sensors recognize the piston position by means of ultrasonic. The sensors sound through the wall of the accumulator, so the installation is possible without process interruption. Ultrasound is produced by an electrical impulse and is reflected at the rear wall of the accumulator and evaluated afterwards
Several switched could be mounted and the total piston stroke could be controlled.
The accumulator could be installed in any position.

Ambient conditions for sensors:

- Temperature of accumulator:: -20 ... +80 °C
- Ambient temperature: -20 ... +60 °C
- Storage temperature: -40 ... +85 °C
- Attention: The range of working temperature is further restricted by the absolute viscosity.

Electrical data:

- Protection class: IP 67, oil resistant
- Hydraulic fluid Mineral oil (HL, HLP), HFA, (HFB), HFC, HFD
- Max. absolute viscosity 100 cSt
- Out signal: NPN or PNP
- Power supply 18 ... 30 VDC, max. 80 mA, ripple 10 %- low voltage identification- inverse-polarity protection
- CE Conformity Ingress protection:

DIN EN 60529:1991 + A1:2000
EMC active: DIN EN 61326-1:2006
EMC passive: IEC61000-4-2, -3, -4, -5, -6

The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.

THM Huade Hydraulics Pvt Ltd
F-127, Phase-VIII, Focal Point,
Ludhiana-141010, Punjab (INDIA)
PH: 0161-2672777, 0161-2672778
E-mail: sales@thmhuade.com
Website: www.thmhuade.com

Follow us: