



aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
**hydraulics**  
pneumatics  
process control  
sealing & shielding



# DA Series Diaphragm Accumulators

Previously known as ELM Series



ENGINEERING YOUR SUCCESS.

## Description

Diaphragm accumulators are inexpensive, compact and lightweight and are ideally suited where weight and space is an important consideration. Ideally suited to Mobile -Agricultural and Construction markets (140 to 350 bar/ 0.075 to 3.5L).

The DA diaphragm accumulator offers a reliable and efficient solution for storing energy under pressure and as an hydraulic spring. Utilizing comprehensive tools and resources including an applications database, CAD/CAM we offer an optimized design and performance membrane accumulator. (all hydraulic accumulators are compliant to 2014/68/EU regulation)

DA diaphragm accumulators (also referred to as membrane accumulators) are gas-loaded accumulators in which separation between the liquid and gas sides is achieved by a flexible diaphragm. They have a compact and lightweight design are available in 2 elastomer mixes; Nitrile and Hydrin (for low temperature working conditions) with a maximum pressure of 350bar (up to 2,8 liters) and volume of 3.5 Litres (up to 250 Bar).

DA accumulator range comes with a bonded seal (BS) fluid port with female or male and female fluid connection and M28x1,5 gas connection.

Accumulator accessories such as Safety Blocks, Clamps, Lock nut, Charging Sets (VGU), can aid the safe installation and operation of the accumulators in any hydraulic system.

Parker Olaer have developed very sophisticated simulation software to optimize sizing recommendations for hydraulic accumulators. You can download the accumulator sizing software from [www.Parker.com/acde](http://www.Parker.com/acde).

## Markets

- Mobile
- Industrial
- Defense
- Energy
- Renewable
- Marine
- Mining
- Oil and Gas
- Rail

## Features/Benefits

- **The adaption of a hydraulic shock absorber made up of a diaphragm accumulator improves driver comfort and offers immediate response times when driving over obstacles or rough terrain.**
- **The DA diaphragm accumulator offers a cost effective solution for hydraulic systems.**
- **The DA diaphragm accumulators are PED compliant and can be used in over 35 countries.**
- **The DA diaphragm accumulators offer high compression ratio (up to 8 – according to type)**
- **Low maintenance product**
- **We offer a wealth of product knowledge and experience thus enabling us to provide first class technical support and customer service.**

**E-configurable product**  
visit [Parker.com/acde](http://Parker.com/acde)

## Applications

- Agricultural equipment
- Construction equipment
- Forestry
- Handling/Cranes
- Truck
- Wind Energy
- Hydraulic Power Units
- Lubrication Systems
- Power Generation
- Energy Transmission & Distribution
- Defence
- Air & Gas Compressors
- Entertainment Automation
- Moulding
- Plastic Presses
- Die Casting
- Vehicle Assembly Facilities
- Machine Tools

# DA Series Technical Characteristics

The technical characteristics are as follows:

**Minimum/maximum temperature allowable (° Celsius) :**

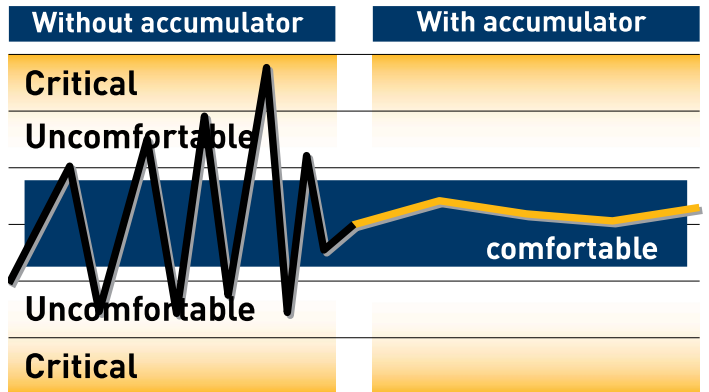
- 20/+80 for standard nitrile elastomers for models between 0.5 < V < 1.4 Litre
- 10/+80 for standard nitrile elastomers for models ≥ 2 Litres and < 0.32 Litre
- 35/+80 for hydrin elastomers

**Materials :** carbon steel, nitrile or hydrin diaphragm, for other constructions: please consult Parker.

This non-repairable accumulator comprises a shell electron beam welded in carbon steel or stainless steel, nitrile or hydrin diaphragm, for other constructions please consult Parker Olaer.



**Comparative cycle** for a tractor and its accessories in working conditions !



# DA Series: How to order a diaphragm accumulator

**DA - 140 - 140 90 A F 11 25 P000**

**Product Type**

DA Diaphragm Accumulators

**Volume**

007 0,075L  
 016 0.16L  
 032 0.32L  
 050 0.5L  
 075 0.75L  
 100 1L  
 140 1.4L  
 200 2L  
 280 2.8L  
 350 3.5L

**Working Pressure**

100 100 bar  
 140 140 bar  
 210 210 bar  
 250 250 bar  
 350 350 bar

**Approval**

00 PED 2014/68/EU Art. 4.3  
 90 EC (according to PED 2014/68/EU)

**Fluid connection**

A G 1/2"  
 B G 3/4"  
 C G 1/2" + External thread M33x1,5  
 D G 3/4" + External thread M45x1,5

**Gas connection**

F M28x1,5

**Construction**

11 Carbon steel shell

**Membrane rubber compound**

25 NBR  
 02 ECO

**Precharge**

000 No-precharge  
 XXX 005 to 130bar (Step 5 by 5)



# DA Series 140 - 350 BAR, 0.075 to 0.75 Litres

**NBR rubber mix (previous known as ELM range)**

Standard Version (Carbon steel /mix NBR) compatible with mineral oils (2)

According to PED 2014/68/EU

Product, Part numbers, Accessories

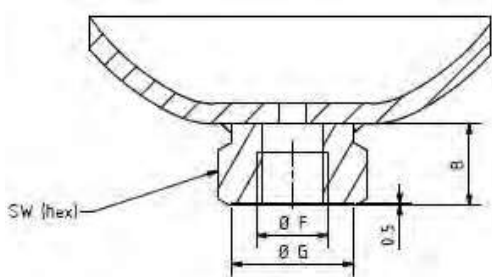
**E-configurable product**  
 visit [Parker.com/acde](http://Parker.com/acde)

Type Part number	Clamps Model	Lock nut Model	Cross Reference OLAER	Cross Reference ADE
DA-0.075L-250BAR-10849201125 DA-007-25000AF1125PXXX*	-	-	ELM 0.075-250/00/AF* 10849201125	ADE007-25R1A2
DA-0.16L-250BAR-10849301125 DA-016-25000AF1125PXXX*	-	-	ELM 0.16-250/00/AF* 10849301125	ADE016-25R1A2
DA-0.32L-210BAR-10986601125 DA-032-21000AF1125PXXX*	E95 (1) 20250803648	-	ELM 0.32-210/00/AF* 10986601125	ADE032-21R1A2
DA-0.50L-210BAR-10849501125 DA-050-21000AF1125PXXX*	E106 (1) 20250903648	-	ELM 0.5-210/00/AF* 10849501125	ADE050-21R1A2
DA-0.50L-210BAR-10849601125 DA-050-21000CF1125PXXX*	E106 (1) 20250903648	M33x1.5 10945700100	ELM 0.5-210/00/CF* 10849601125	
DA-0.75L-210BAR-10849701125 DA-075-21000AF1125PXXX*	E114 (1) 20251003648	-	ELM 0.75-210/00/AF* 10849701125	ADE075-21R1A2
DA-0.75L-210BAR-10849801125 DA-075-21000CF1125PXXX*	E114 (1) 20251003648	M33x1.5 10945700100	ELM 0.75-210/00/CF* 10849801125	
DA-0.75L-350BAR-10931801125 DA-075-35000AF1125PXXX*	E136 (1) 20251103648	-	ELM 0.75-350/00/AF* 10931801125	
DA-0.75L-350BAR-10931901125 DA-075-35000CF1125PXXX*	E136 (1) 20251103648	M33x1.5 10945700100	ELM 0.75-350/00/CF* 10931901125	

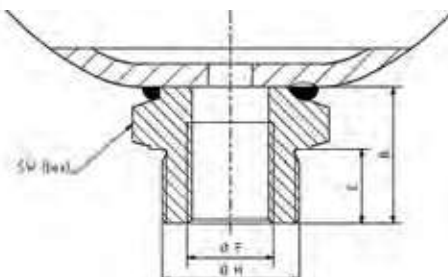
(2) For other fluids consult Parker

\* According to Article 4.3 PED 2014/68/EU

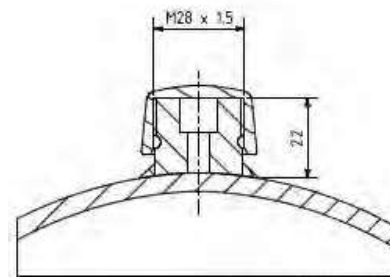
Form A/ Form B



Form C/ Form D

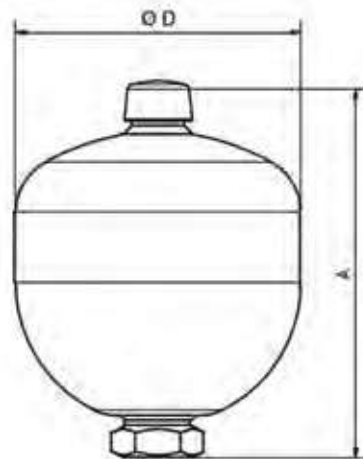
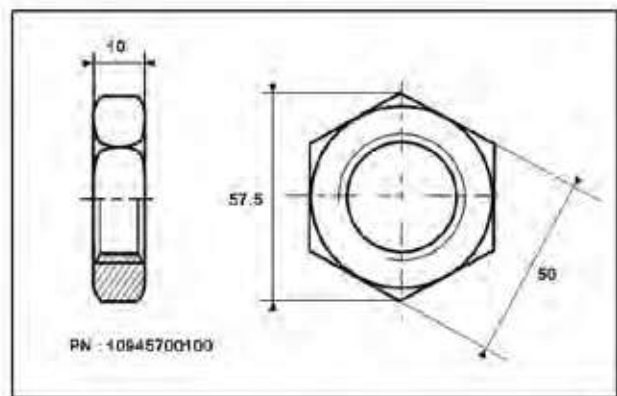


Gas Valve



Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Temp. Min/ Max (°C)	Max. Pre-charge bar	Max compression in bar ratio P2/P0	Max Pressure amplitude P2-P1	Weight kg	Dimensions in mm							Oilport	
								A max Height	B	C	SW	D	G	F	H	
DA-0.075L-250BAR-10849201125	0.075	250	-10/+80	130	8	210	0.7	112	20		32	64	29	G½	-	
DA-0.16L-250BAR-10849301125	0.16	250	-10/+80	130	6	210	1	120	20		32	75	29	G½	-	
DA-0.32L-210BAR-10986601125	0.32	210	-10/+80	130	8	140	1.4	135	20		32	92	29	G½	-	
DA-0.50L-210BAR-10849501125	0.5	210	-20/+80	130	8	175	2	153	22		41	107	34	G½	-	
DA-0.50L-210BAR-10849601125	0.5	210	-20/+80	130	8	175	2	164	33	18	41	107	-	G½	M33x1.5	
DA-0.75L-210BAR-10849701125	0.75	210	-20/+80	130	8	175	2.6	167	22		41	122	34	G½	-	
DA-0.75L-210BAR-10849801125	0.75	210	-20/+80	130	8	175	2.6	178	33	18	41	122	-	G½	M33x1.5	
DA-0.75L-350BAR-10931801125	0.75	350	-20/+80	130	8	150	4	174	22		41	128	34	G½	-	
DA-0.75L-350BAR-10931901125	0.75	350	-20/+80	130	8	150	4	185	33	18	41	128	-	G½	M33x1.5	

Lock-nut





# DA Series 140 - 350 BAR, 1 to 1.4 Litres

**NBR rubber mix (previous known as ELM range)**

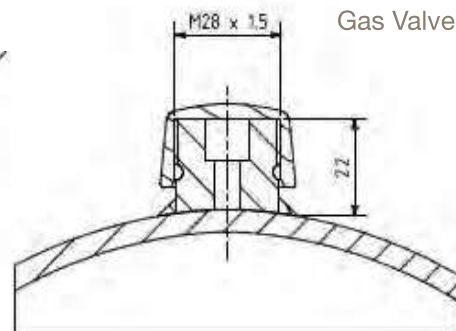
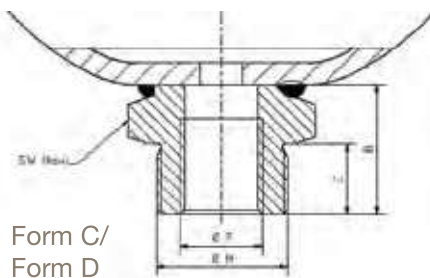
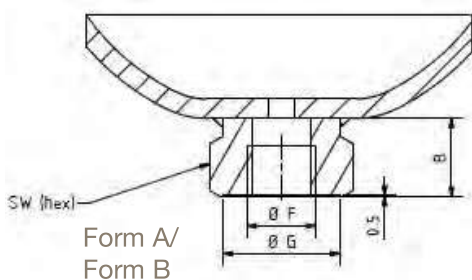
Standard Version (Carbon steel /mix NBR) compatible with mineral oils (2)  
 According to PED 2014/68/EU

**E-configurable product**  
 visit [Parker.com/acde](http://Parker.com/acde)

Type Part number	Clamps Model (quantity) Part number	Lock nut Model (quantity) Part number	Cross Reference OLAER	Cross Reference ADE
DA-1.00L-210BAR-10984701125 DA-100-21000AF1125PXXX*	E136 (1) 20251103648	-	ELM 1-210/00/AF* 10984701125	ADE100-21R1A2
DA-1.00L-210BAR-10984801125 DA-100-21000CF1125PXXX*	E136 (1) 20251103648	M33x1.5 10945700100	ELM 1-210/00/CF* 10984801125	
DA-1.00L-350BAR-11110901125 DA-100-35000AF1125PXXX*	E136 (1) 20251103648	-	ELM 1-350/00/AF* 11110901125	
DA-1.00L-350BAR-11111001125 DA-100-35000CF1125PXXX*	E136 (1) 20251103648	M33x1.5 10945700100	ELM 1-350/00/CF* 1111101125	
DA-1.40L-140BAR-10850201125 DA-140-14090AF1125PXXX	E155 (1) 20251203648	-	ELM 1.4-140/90/AF 10850201125	ADE140-14R1C2
DA-1.40L-140BAR-10850301125 DA-140-14090CF1125PXXX	E155 (1) 20251203648	M33x1.5 10945700100	ELM 1.4-140/90/CF 10850301125	
DA-1.40L-210BAR-10996501125 DA-140-21090AF1125PXXX	E155 (1) 20251203648	-	ELM 1.4-210/90/AF 10996501125	
DA-1.40L-210BAR-10996601125 DA-140-21090CF1125PXXX	E155 (1) 20251203648	M33x1.5 10945700100	ELM 1.4-210/90/CF 10996601125	
DA-1.40L-250BAR-11013201125 DA-140-25090AF1125PXXX	E155 (1) 20251203648	-	ELM 1.4-250/90/AF 11013201125	ADE140-25R1C2
DA-1.40L-250BAR-11013301125 DA-140-25090CF1125PXXX	E155 (1) 20251203648	M33x1.5 10945700100	ELM 1.4-250/90/CF 11013301125	
DA-1.40L-350BAR-10932101125 DA-140-35090AF1125PXXX	E160 (1) 20259003648	-	ELM 1.4-350/90/AF 10932101125	
DA-1.40L-350BAR-10932201125 DA-140-35090CF1125PXXX	E160 (1) 20259003648	M33x1.5 10945700100	ELM 1.4-350/90/CF 10932201125	

(2) For other fluids consult Parker

\* According to Article 4.3 PED 2014/68/EU





Type	Effective Gas vol. Litres	Max. Working pressure (PS) bar	Temp. Min/Max (°C)	Max. Pre-charge bar	Max compression in bar ratio P2/P0	Max Pressure amplitude P2-P1	Weight kg	Dimensions in mm						Oilport	
								A max Height	B	C	SW	D	G	F	H
DA-1.00L-210BAR-10984701125	1	210	-20/+80	130	8	170	3.5	182	22		41	136	34	G½	-
DA-1.00L-210BAR-10984801125	1	210	-20/+80	130	8	170	3.5	192	33	18	41	136	-	G½	M33x1.5
DA-1.00L-350BAR-11110901125	1	350	-10/+80	130	8	150	5	200	22		41	129	34	G½	-
DA-1.00L-350BAR-11111001125	1	350	-10/+80	130	8	150	5	211	33	18	41	129		G½	M33x2
DA-1.40L-140BAR-10850201125	1.4	140	-20/+80	130	8	120	4.2	192	22		41	147	34	G½	-
DA-1.40L-140BAR-10850301125	1.4	140	-20/+80	130	8	120	4.2	203	33	18	41	147	-	G½	M33x1.5
DA-1.40L-210BAR-10996501125	1.4	210	-20/+80	130	8	120	4.2	192	22		41	148	34	G½	-
DA-1.40L-210BAR-10996601125	1.4	210	-20/+80	130	8	120	4.2	203	33	18	41	148	-	G½	M33x1.5
DA-1.40L-250BAR-11013201125	1.4	250	-20/+80	130	8	140	5.4	196	22		41	152	34	G½	
DA-1.40L-250BAR-11013301125	1.4	250	-20/+80	130	8	140	6	207	33	18	41	152	-	G½	M33x1.5
DA-1.40L-350BAR-10932101125	1.4	350	-20/+80	130	8	150	7	199	22		41	156	34	G½	
DA-1.40L-350BAR-10932201125	1.4	350	-20/+80	130	8	150	7	221	44	18	44	156	-	G½	M33x1.5

Lock-nut

