THAD Series

Diaphragm Accumulators

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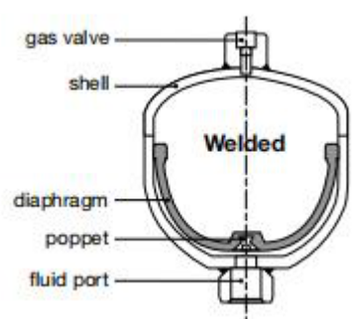
Introduction

Description
Diaphragm accumulators are a cost effective option for numerous functions involving energy storage, shock absorption or pulsation dampening in a hydraulic or fluid system. They are well suited for applications where smaller fluid volumes and flow rates are adequate and that require or involve:

- Compact design
- Low weight
- Flexible mounting positions
- Extremely quick shock response
- Low cost
- Low lubricity fluids, like water
- Diaphragm Accumulators have been successfully applied in both industrial and mobile applications for energy storage, maintaining pressure, leakage compensation, and vehicle hydraulic systems.

THM manufactures two types of diaphragm accumulators:
Carbon steel diaphragm accumulator (Welded)
Stainless steel diaphragm accumulator (Welded)

Construction
The welded version has a shell that is electron-beam welded, and therefore cannot be repaired.



Diaphragm Materials
Not all fluids are compatible with every elastomer at all temperatures, therefore, THM offers the following materials:

- NBR (Standard Nitrile)
- HNBR (Low Temperature Nitrile)
- IIR (Butyl)
- FPM (Fluoroelastomer)
- EPDM
- others (available upon request)

Corrosion Protection
For use with certain aggressive or corrosive fluids, or in a corrosive environment, THM offers protective coatings and corrosive resistant materials (i.e. stainless steel) for the parts that interface with the fluid or are exposed to the hostile environment.

Mounting Position
Diaphragm accumulators are designed to mount in any position. In systems where contamination is a problem, we recommend a vertical mount with the fluid port oriented downward

System Mounting
THM diaphragm accumulators are designed to be screwed directly onto the system. We also recommend the use of our mounting components, to minimize the risk of failure due to system vibrations.

Applications
Several applications possible, e.g. in:
Machines with hydraulic drives
Presses
Agricultural- and construction machines
Modern industrial robots
Gear Technology
Braking Systems
High-pressure cleaner
Drive hydraulics
Noise minimization
Vibration reduction
Axle suspension
Driver's cabs

Ordering code

Series:
THAD XXX = Diaphragm Accumulator (XXX = series designmation

Size (in Liters,see tables on dimension pages to follow)
0.075 = 0.075Liters
0.16 = 0.16Liters
0.25 = 0.25Liters
0.32 = 0.32Liters
0.5 = 0.5Liters
0.75 = 0.75Liters
1.0 = 1.0Liters
1.4 = 1.4Liters
2.0 = 2.0Liters
2.8 = 2.8Liters
3.5 = 3.5Liters

Fluid Port Connection
Connect Size For Fluid Port
M:Metric thread = M
U:American thread = U
G:Inch unsealed pipe thread = G
N:American pipe thread = N

Connection Type
F:Female thread = F
M:Male thread = M
FM:Female and Male thread = FM

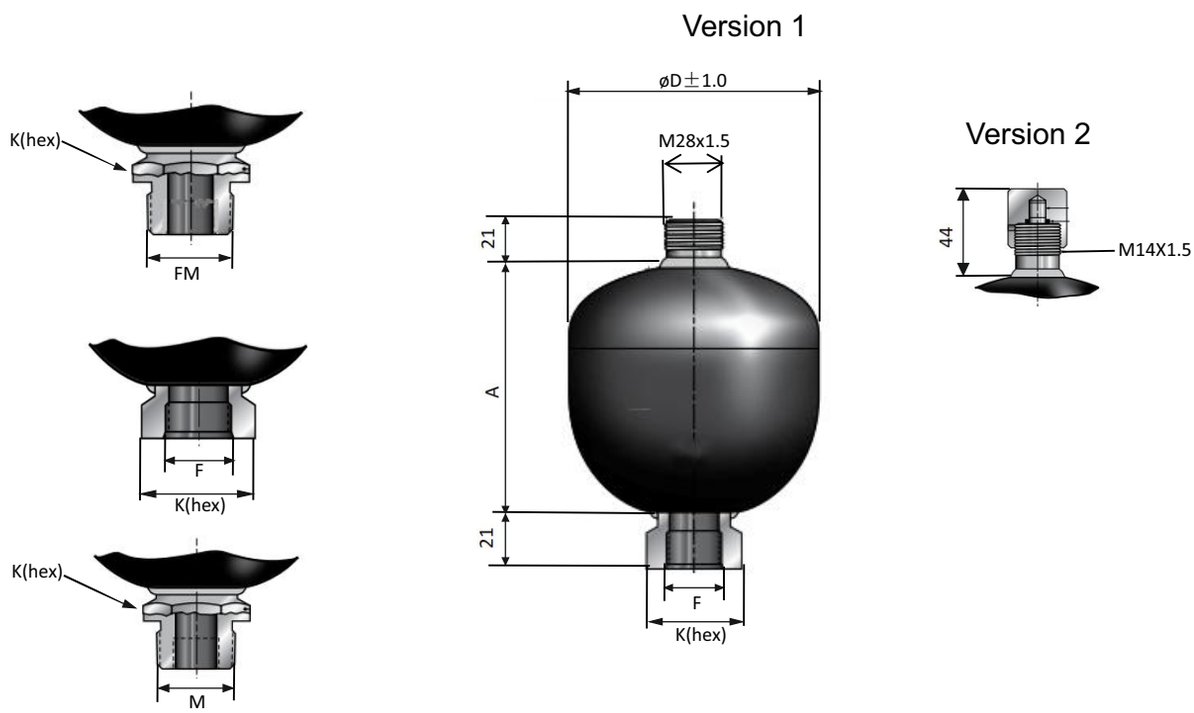
Material Code
Shell And Fluid Port
Carbon steel = C
Stainless steel = S

Diaphragm Compound
NBR = N
HNBR = H
IIR = I
EPDM = E
FPM = F

Compound	Basic Characteristic
NBR	Suitable for most hydraulic fluids
HNBR	Low temperature resistance, wear resistance
IIR	Special for fire resistant hydraulic fluids
EPDM	Corrosion resistance
FPM	High temperature resistan

Shell Construction and Gas Port Design
Welded Construction, rechargeable THM Gas valve Version 1(M28x1.5) = W
Welded Construction, rechargeable THM Gas valve Version 2(M14x1.5) = W2

Unit Dimensions (Dimensions in mm)



Model	Max Working/ Charging Pressure	Volume (L)	Max Working Pressure (BAR)	Weight (KG)	Dia-meter D(mm)	Main Height A(mm)	Commom Fluid Connection Thread			Max Flow Rate L/min	SW(mm)
							Metric	British	US		
THAD210	8:1	0.075	210	1.0	66	72	M14X 1.5	G1/2	9/16 -18 UNF	10	32
THAD250		0.075	250	1.0	66	72					
THAD210		0.16	210	1.2	75	80					
THAD250		0.16	250	1.2	75	80					
THAD210		0.25	210	1.8	89	93			3/4 -16 UNF	25	
THAD330		0.25	330	1.8	89	93					
THAD210		0.32	210	2.1	95	99	M18X 1.5				
THAD330		0.32	330	2.1	95	99					
THAD210		0.5	210	2.9	101	113.8					
THAD330		0.5	330	2.9	101	113.8					
THAD210		0.75	210	4.2	125	128.5					
THAD330		0.75	330	4.2	125	128.5					
THAD210		1.0	210	5.4	142	140					
THAD330		1.0	330	5.4	142	140					
THAD210		1.4	210	8.0	157	169					
THAD330		1.4	330	8.0	157	169					
THAD210		2.0	210	10.0	173	193	M22X 1.5	G3/4	1 1/16 -12 UNF	40	41
THAD330		2.0	330	10.0	173	193					
THAD210	4:1	2.5	210	10.6	173	207					
THAD330		2.5	330	10.6	173	207					
THAD210		2.8	210	11.2	173	228					
THAD330		2.8	330	11.2	173	228					
THAD210		3.5	210	13.8	173	275.2					
THAD330		3.5	330	13.8	173	275.2					

Dimensions are general information only, all critical dimensions should be verified Dimensions are in millimeter and kilogram

Liquid end interface thread(Carbon steel Accumulators)

Common	British	G1/4 Male/Female thread	G1/2 Male/Female thread	Compound Pad
		G3/8 Male/Female thread	G3/4 Female thread	
	US	9/16-18UNF Male/Female thread	3/4-16UNF Male/Female thread	
		7/8-14UNF Male/Female thread	1 1/16-12UNF Female thread	
	Metric	M14X1.5 Male/Female thread	M18X1.5 Male/Female thread	
		M16X1.5 Male/Female thread	M22X1.5 Male/Female thread	
	Combination	G1/2 Female thread AND M33X1.5 Male thread	G3/4 Female thread AND M45X1.5 Male thread	
Optional		Metric (M) British (G) American Unified (UNF) American Pipe (NPT) Internal and External Double Thread (G+M,M+M,UNF+M)		O-Ring /ED-Ring

Stainless Steel Accumulators

Volume (L)	Max Working Pressure (BAR)	Model Code	Fluid Connection Thread Size	Fluid Port Sealing Way
0.16	210	THAD210-0.16-G1/2-SH-W	G1/2 Female thread	O-Ring
0.32	210	THAD210-0.32-G1/2-SH-W		
0.5	210	THAD210-0.5-G1/2-SH-W		
0.75	210	THAD210-0.75-G1/2-SH-W		
	330	THAD330-0.75-G1/2-SH-W		
1.0	210	THAD210-1.0-G1/2-SH-W		
	330	THAD330-1.0-G1/2-SH-W		
1.4	210	THAD210-1.4-G1/2-SH-W		
	330	THAD330-1.4-G1/2-SH-W		
2.0	210	THAD210-2.0-G3/4-SH-W	G3/4 Female thread	
	330	THAD330-2.0-G3/4-SH-W		
2.5	210	THAD210-2.5-G3/4-SH-W		
	330	THAD330-2.5-G3/4-SH-W		
2.8	210	THAD210-2.8-G3/4-SH-W		
	330	THAD330-2.8-G3/4-SH-W		

Diaphragm Spare Parts

Part Number	item	Part Number	item
001369	Vent Screw M8, Version 1	014653	Liquid end protective cap
053482	CompoundPad(NBR and Carbon steel),M8	023541	Liquid end CompoundPad/ O-Ring
210430	Plastic Valve Protection Cap, Version 1	254101	Gas valve core (Version 4)
450130	Metal Valve Protection Cap, Version 1	354021	Valve seal cap (Version 4)
001475	O-ring (28x1.9)		

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

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