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本手册是宁波奉化江口精仪液压有限公司的产品概述。
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产品综合型录

PRODUCT CATALOG

Specializing in the production of Bladder Accumulator

专业生产蓄能器



宁波奉化江口精仪液压有限公司

NINGBO FENGHUA JIANGKO JINGYI HYDRAULIC CO.,LTD.

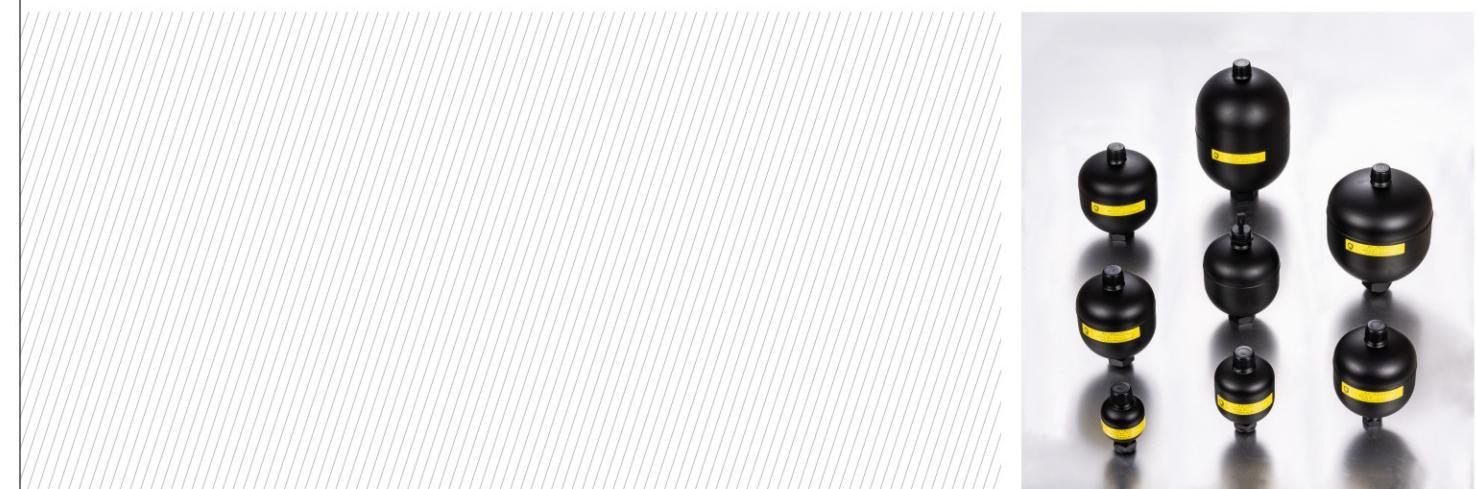
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精仪液压
JINGYI HYDRAULIC

生产和检测设备 Production And Testing Equipment



工业X射线数字成像检测系统
Industrial X-ray digital imaging detection system



数控车床
CNC lathe



真空电子束焊机
Vacuum electron beam welder



气体保护焊机
Gas shielded welding machine



500T液压机
Hydraulic press

生产和检测设备 Production And Testing Equipment

焊接隔膜式蓄能器 Welded Diaphragm Accumulator

精仪液压
JINGYI HYDRAULIC



型号说明 Model Designations

AD - A - 0.75 / 210 - 1 - 1 AK 30

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① 系列代号/Series Code:

焊接隔膜式蓄能器
Welded diaphragm accumulators

⑤ 壳体材料/Shell Material:

1--碳钢
Carbon steel

② 型式/Construction:

A--可充气(M28X1.5)Rechargeable
B--气体侧密封 , 按要求预充气体。Completely sealed⁽¹⁾

⑥ 隔膜材料/Diaphragm Material code:

1--丁腈橡胶(NBR)
2--氢化丁腈(HNBR)⁽²⁾
3--丁基橡胶(IIR)⁽²⁾
7--氯醚橡胶(ECO)⁽²⁾

③ 公称容积(L)/Nominal Volume(L)

④ 允许工作压力(Bar)/Allowable working pressure

⑦ 液侧标准连接AK或AB⁽³⁾

⑧ 20°C时的氮气预充压力Bar⁽¹⁾

注:(1)只有当A型和B型批量订货时;

(2)只有当批量订货时;

(3)非标准接头另行咨询;

焊接式蓄能器采用钢制冲压外壳 , 根据充气端是否可装拆分为可充气及不可重复充气(完全密封)两种。
Welded Diaphragm accumulator use steel stamping shell ,They have two types according to the gas side:Rechargeableand completely sealed.

液压蓄能器作用 Hydraulic accumulator action

一个在液压及液体技术中不可缺少的元件。它在液压回路中有许多用途如 :

1) 节省驱动功率 ; 2) 能量储备 ; 3) 衰减压力冲击 ; 4) 减小泵的压力脉动 ; 5) 保持恒定压力上述作用都可由液压蓄能器承担 , 并因而可得到特殊的利益 , 如 ; 提高生产能力及总效率、改善其功能、延长寿命、提高安全性、降低工作及维护费用。

An indispensable component in hydraulic and liquid technology. It has many uses in the hydraulic circuit, such as:
1) saving driving power; 2) energy reserve; 3) attenuating pressure shock; 4) reducing pump pressure pulsation;
5) keeping constant pressure. The above functions can be carried out by the hydraulic accumulator, and thus can obtain special benefits, such as: increasing production capacity and total efficiency, improving its function, prolonging life, improving safety, reducing work and maintenance costs.

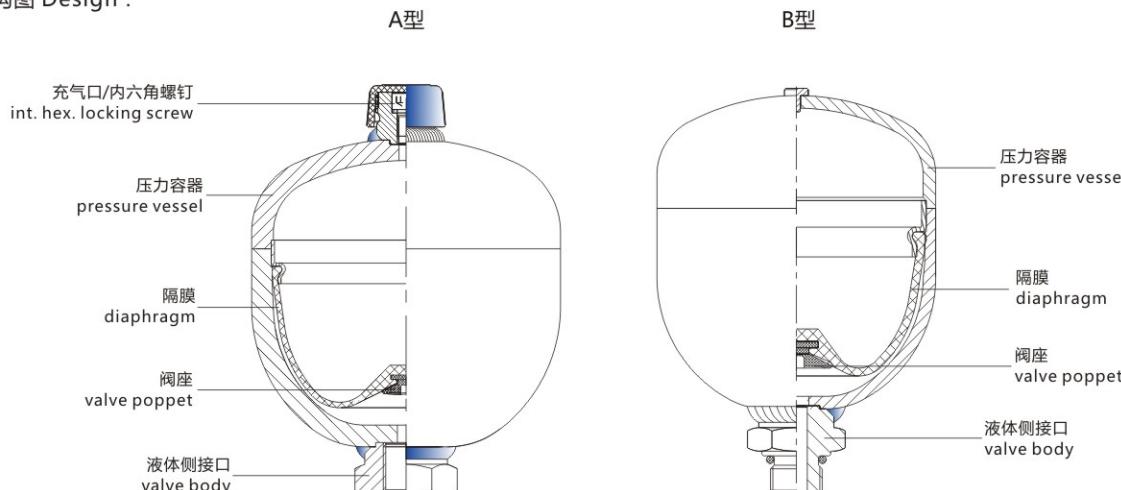
工作原理 Operating Principle

油液在实际中是不可被压缩，所以不能储存压力能。
液气蓄能器是利用气体的可压缩性来储存油液。
隔膜式蓄能器就是基于这一原理，采用氮气作为可压缩介质。
隔膜式蓄能器由液体部分和气体部分组成，隔膜用作气体密封隔离件。液体部分与液压回路相通，因此压力升高时气体被压缩，油液被吸入隔膜式蓄能器。压力下降时，气体膨胀，从而把油液压入系统回路。当蓄能器完全排空时，隔膜底部的阀座关闭液压出口，防止损坏隔膜。

Fluids are practically incompressible and cannot therefore store pressure energy.
The compressibility of a gas is utilised in hydraulic accumulators for storing fluids.
Diaphragm accumulators are based on this principle, using nitrogen as the compressible medium.
A diaphragm accumulator consists of a fluid section and a gas section with the diaphragm acting as the gas-proof screen. The fluid section is connected to the hydraulic circuit so that the diaphragm accumulator draws in fluid when the pressure increases and the gas is compressed. When the pressure drops, the compressed gas expands and forces the stored fluid into the circuit. At the base of the diaphragm is a valve poppet. This shuts off the hydraulic outlet when the accumulator is completely empty and thus prevents damage to the diaphragm.

焊接隔膜式蓄能器结构 Welded diaphragm accumulatir structure

1. 结构图 Design :



2. 组成 This consists of:

- 2.1 焊接隔膜式蓄能，气体侧可充气(A型)或完全密封(B型)。
 - 2.2 液体侧连接可有多种型式。
 - 2.3 柔性隔膜用以隔离气体和液体。
 - 2.4 设置在隔膜底部的阀座。
- 2.1 Welded pressure vessel, rechargeable on the gas side or, alternatively, completely sealed.
2.2 Fluid connection available in various types.
2.3 Exible diaphragm to separate the uid and gas sections.
2.4 Valve poppet set into the base of the diaphragm.

隔膜材料 Diaphragm materiale

可提供下列材料的隔膜：
丁腈橡胶(NBR)；氢化丁腈(HNBR)；氯醚橡胶(ECO)；丁基橡胶(IIR)

以上橡胶材料应根据工作介质及使用温度选用。

The diaphragms are available in the following elastomers:
acrylonitrile butadiene rubber PERB UNAN(NBR); Hydrogenated nitrile(HNBR); ethylene oxide epichlorohydrin rubber(ECO); butyl rubber(IIR)

The material must be selected according to the particular operating fluid and temperature.

安装位置 Mounting Position

适用任何位置安装，但若有污染物汇集危险，请优先选用垂直安装，液体侧接口置向下。

Optional. However, if there is a risk of contamination collecting, a vertical position is preferable fluid connection at the bottom.

安装型式 Type Mounting

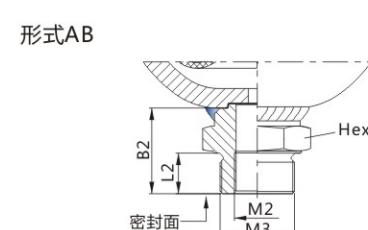
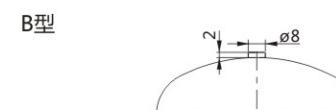
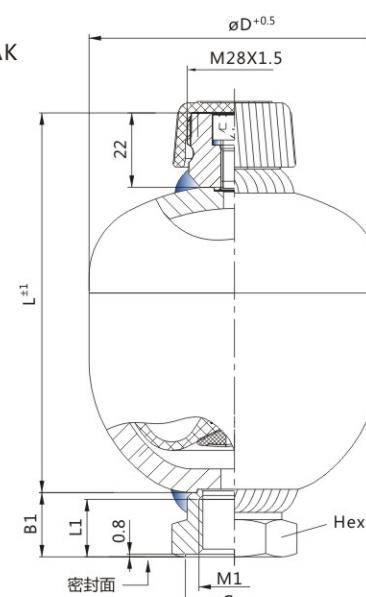
2L以下蓄能器可直接与管路连接。

若在剧烈振动环境下使用，则蓄能器必须固定好，防止松动。建议使用专用卡箍。液体侧附加外螺纹的AB接头，用于拧入安装孔中。请勿通过焊接或机械工作方式把蓄能器安装到液压设备上。液压管路连接后须完全放气。

Accumulators up to 2 l can be screwed directly inline.

Where strong vibrations are expected, the accumulator must be secured to prevent it working loose. For weld type accumulators we recommend support clamps. Additional male threads on the hydraulic connection are available for screwing into mounting holes. Do not attach the accumulator to the hydraulic equipment by welding or mechanical operation. The hydraulic pipe must be completely deflated after connection.

外形尺寸 Overall Dimension



其它可选的液体连接端请咨询，例如：





精仪液压
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焊接隔膜式蓄能器 Welded Diaphragm Accumulator

外形尺寸 Overall Dimension

公称容积 L	允许压缩比 P ² :P ⁰	系列	允许工作压力 (bar)	L (mm)	ΦD (mm)	重量 (kg)	排量	标准液体连接									
								形式AK					形式AB				
								M1 (ISO228)	ΦG (mm)	L1 (mm)	B1 (mm)	Hex SW	M2 (ISO228)	M3 (mm)	L2 (mm)	B2 (mm)	Hex SW
0.075	8:1	210	210	91	65	0.7	38	Φ29	16	18	32	不提供					
			250	250	91	65											
		210	210	96	75	0.9											
		250	250	96	75	0.9											
		100	100	106	80	0.8											
		210	210	112	86.5	1.45											
		250	250	112	86.5	1.45											
		100	100	116.5	89	1.10											
		210	210	121	95	1.75											
		250	250	121	95	1.75											
		100	100	121	89	1.15											
		210	210	124	95	1.8											
		250	250	124	95	1.8											
		210	210	133	106	2.3											
		250	250	133	106	2.3											
		210	210	148.5	121	3.0											
		210	210	152	123	3.5											
		250	250	152	123	3.5											
		210	210	160	138	3.8											
		250	250	163	142	5.0											
		210	210	174	153	5.9											
		250	250	174	153	5.9											
		210	210	202	169	7.6	150	G3/4	Φ42	24	28	46	G3/4	M45X1.5	20	37	46
		250	250	205	172	9.2											
		210	210	250	169	9.2											
		250	250	255	172	11.5											
	4:1	210	210	289	173	13.8											
		250	250	289	173	13.8											

焊接隔膜式蓄能器 Welded Diaphragm Accumulator



技术参数 Technical Specifications

- 2.1 工作压力 : (见3.0参数表)
- 2.2 公称容积 : (见3.0参数表)
- 2.3 有效气体容积 : 与隔膜式蓄能器的公称容积相符
- 2.4 有效容积 : 最高工作压力P²和最低工作压力P¹之间可用的液体容积
- 2.5 使用介质 : 矿物油、液压油。其它介质请咨询
- 2.6 充气 : 给蓄能器充气只能用高纯度氮气(N² > 99%)，严禁使用氧气(有爆炸危险)。所有蓄能器供货时都预充1-2Bar氮气，起保护作用。
更高的预充气体压力请咨询。B型隔膜式蓄能器按订单要求预充气体压力。
- 2.7 允许工作温度 :
NBR隔膜 : -20~+80°C
ECO隔膜 : -40~+80°C
HNBR隔膜 : -20~+100°C
其它请咨询
- 2.8 允许压缩比 : 最大工作压力P²与预充气体压力P⁰之比
- 2.9 压力介质的最大流量 : 若要达到表格中给出的最大流量，则应确保蓄能器中的剩余有效气体容积约10%的液体容积。
- 2.1 Permitted operating pressure: (see tables 3.0)
- 2.2 Nominal volume: (see tables 3.0)
- 2.3 Effective gas volume: Corresponds to the nominal volume of the diaphragm accumulator.
- 2.4 Effective volume: Volume of fluid which is available between the operating pressures p²and p¹.
- 2.5 Fluids: Mineral oils, hydraulic oils. Other fluids on request.
- 2.6 Gas charging: All accumulators are supplied with a protective pre-charge. Higher gas pre-charge pressures are available on request (gas charging screw or sealed gas connection). Hydraulic accumulators must only be charged with nitrogen. Never use other gases.
Risk of explosion!
- 2.7 Permitted operating temperature:
NBR: -20~+80°C
ECO: -40~+80°C
HNBR: -20~+100°C
Others on request.
- 2.8 Permitted pressure ratio: Ratio of maximum operating pressure p² to gas pre-charge pressure p⁰
- 2.9 Max. flow rate of operating fluid: In order to achieve the max. flow rate given in the tables, a residual fluid volume of approx. 10% of the effective gas volume must remain in the accumulator.

维修与保养 Repair and maintenance

- 1、要对配有蓄能器的系统进行工作(维修、连接压力表等)，必须先释放油液压力至零。
- 2、检测充气压力
每次安装或检修之后重新设定，在接下来的一周以内至少检查一次充气压力。如果没有检测到氮气损耗，可在三个月后再作一次检查。如果仍未发现充气压力变化，则可将检测周期定为一年。
- 3、维修、保养和调试人员须经专业受训。
1. In order to work on the system equipped with an accumulator (maintenance, connection of pressure gauges, etc.), the oil pressure must be released to zero.
2. Test the inflation pressure
Reset after each installation or overhaul and check the inflation pressure at least once during the following week. If no nitrogen loss is detected, it can be done again after three months Check. If no change in inflation pressure is found, the detection period can be set to one year.
3. Repair, maintenance and commissioning personnel must be professionally trained.