

# Hydraulic Accumulator

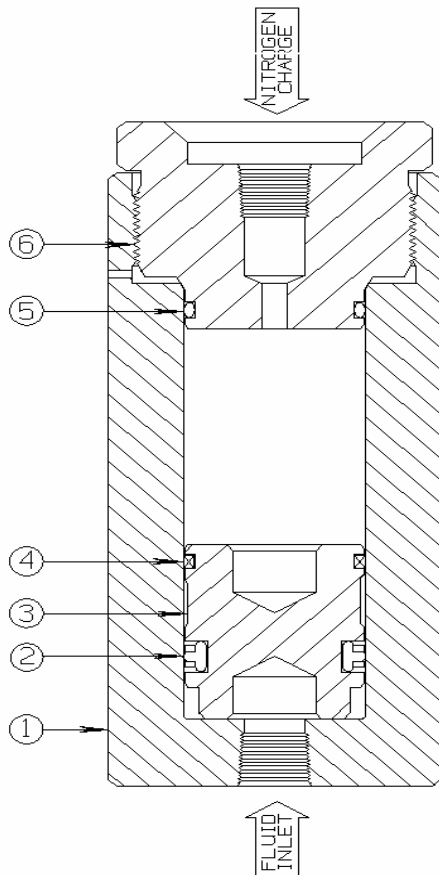
## 4 CUBIC INCH

1/4" FEMALE NPT CONNECTION, 10,000 PSI, 416 SS

Model 21HA11

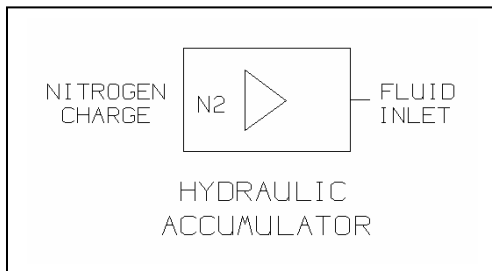


Conforms to the SEP category of the European Pressure Equipment Directive  
Issue No. 97/23/EC



The **21HA11** Accumulator is a Nitrogen Charge System – Opposed Piston, pressurized hydraulic fluid storage, control assembly. It is specifically designed to store and release pressurized hydraulic fluid within a receiving control circuit. Hydraulic Fluid is incompressible; therefore volume reduction cannot provide stored energy. Nitrogen Gas is compressible and can store large amounts of energy. In our accumulator, compressed Nitrogen Gas is used to transfer its energy through movement of the opposed Piston. The Accumulator stores Hydraulic fluid until it is needed.

Hydraulic Well Control Safety Systems generally utilize Hydraulic Accumulators for all of the following: **Shock Suppressor** (Helps to absorb Hydraulic Pump output pressure spikes during demand fluctuations), **Cushion Peak Loads** (Absorbs excess flow when system demand is reduced, stores pressurized fluid until its required), **Thermal Expansion Buffer** ((Stores increased fluid volume during a high temperature change and provides output to compensate for reduced volume changes during low temperature), **Leak Compensator** (maintains an additional source of pressurized fluid to compensate for small volume, system leaks that could occur).



### PARTS LIST:

- |                         |                     |
|-------------------------|---------------------|
| 1. Accumulator Cylinder | 4. TFE Glide Ring * |
| 2. Tee Seal *           | 5. O Ring *         |
| 3. Aluminum Piston      | 6. End Retainer     |

\* Indicates parts included in a Repair Kit

# **Sigma Model Number 21HA11**

**4 CU. INCH, 1/4" FEMALE NPT HYDRAULIC CONNECTION, 10,000 PSI, 416SS**

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## **Product Specifications**

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**Flow Control Application:** Normally Open

**Control Function:** Auxiliary Pressurized Hydraulic Fluid Compensation Source  
(Hydraulic Fluid System Shock Suppressor, Leak Compensator, Thermal Expansion Buffer)

**Storage Capacity:** 4 Cubic Inches

**Pressure Rating:** 10,000 PSI maximum (690 bar)

**Seal Material:** Viton

**Nitrogen Charge System Connection:** 1/4-18 Female N.P.T.

**Connection Size (Hydraulic Fluid Inlet):** 1/4-18 Female N.P.T.

**Wetted Component Material (Metal):** Low Alloy, 416 Stainless Steel

**Pressure Equipment Directive (PED):** This product conforms to the SEP Category of the European P.E.D.

**Important Notation:** It is recommended that a 10,000 PSI Needle Valve (or equivalent isolation device) be installed in the Nitrogen Charge Inlet connection. This is necessary to insure positive, leak proof closure. The recommended Needle Valve is not included with the Sigma Accumulator.

**Repair Kit Information**

Repair Kits can be ordered by requesting Part # 21HA11-RK