Accumulators

Spring accumulator SF

HYDAC develops, constructs and produces accumulator products for the world-wide hydraulic market. Beside of the gas-charged accumulator like bladder, piston, diaphragm and metal bellows accumulators, the product portfolio of Accumulator Division contains also further accumulator designs, e.g. the spring accumulator. With its special features, the spring accumulator augments the application range of HYDAC accumulators and enables HYDAC to meet additional customer requirements.

**DESIGN**

Like the name already assumes, the spring accumulator is equipped with a spring. In comparison to gas charged accumulators, the energy is generated by the spring power.

**ADVANTAGES**

- Functionally insensitive to temperature fluctuation
- No gas loss
- Linear behaviour of pressure to volume

**APPLICATION EXAMPLES**

- Pulsation damping
- Lubrication in emergency cases
- Volume compensation

**COMPARISON SPRING LOAD VS. GAS PRESSURE**

The comparison of the pressure-volume-characteristic of a gas loaded accumulator (at maximum and minimum operating temperature) and the pressure-volume-characteristic of a spring accumulator (at the same temperature influences) results of significant differences.

The behaviour is shown exemplary in the following comparison:

<table>
<thead>
<tr>
<th>Product</th>
<th>Spring load</th>
<th>Gas pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring accumulator</td>
<td></td>
<td>Gas charged accumulator</td>
</tr>
<tr>
<td>p-V-characteristic</td>
<td>( p )</td>
<td>( p )</td>
</tr>
<tr>
<td>v</td>
<td>( v )</td>
<td>( v )</td>
</tr>
</tbody>
</table>

Strong fluctuating temperature ranges, given pressures and constant displaced volumes are requirements, in which the spring accumulator can be an alternative solution. Please feel free to contact us. We support you in selecting the suitable accumulator.