

After cell inputs and calculation commands the programm runs macros automatically. This might take a few seconds.

0. Activate macros at start

1. Type in input data

2. Selection pressure compensation:
Is the accumulator separated from the system(-pressure) after loading or is system pressure available at all time? (Affects the start pressure.)

3. Calculate accumulator volume.

4. Check suggestion:
Output data is calculated again with the volume of the suggested accumulator

5. If necessary check available volume or time to unload with the chosen accumulator.

Rexroth
Bosch Group

Calculation Hydraulic Accumulator

Minimum system pressure	170	bar
Maximum system pressure	270	bar
Minimum temperature	20	°C
Maximum temperature	50	°K
Exchange volume	3,00	L
Time to unload	0,2	sec

Pressure compensation at temperature drop? Yes No

Pre-charge pressure at maximum temperature	153	bar	Pre-charge pressure at 20 °C	139	bar
Mass of nitrogen	5,17	kg	Min. temperature during unloading	-4	°C
Gasvolume at maximum pressure	18,8	L	Start pressure	270,0	bar
Gasvolume at minimum pressure	21,8	L	End pressure	198,9	bar

Volume: 33,40

Accumulator Volume

Available oil volume

Time to unload

Calculate

Notes according to the pre-charge pressure:

- At maximum temperature the pre-charge pressure should not exceed 90 % of the minimum system pressure in order to prevent the bladder from touching the oil valve with a certain safety factor.
- The pre-charge pressure at room temperature results of the calculated pre-charge pressure at maximum temperature and is therefore not arbitrary.
- The following diagram shows further limitations of the pre-charge pressure and the operating range

Rexroth
Bosch Group

Calculation Hydraulic Accumulator

Notes according to the pre-charge pressure:

- At maximum temperature the pre-charge pressure should not exceed 90 % of the minimum system pressure in order to prevent the bladder from touching the oil valve with a certain safety factor.
- The pre-charge pressure at room temperature results of the calculated pre-charge pressure at maximum temperature and is therefore not arbitrary.
- The following diagram shows further limitations of the pre-charge pressure and the operating range

Customer located in:	Europe
Suggestion	Bosch Rexroth Accumulator
Type	HAB
Nominal volume	35
Maximum pressure	330
Series	4X
Pre-charge pressure ex works	2
Oil port	G09
Connection	G
Gas connection	2
Bladder material	N
Vessel material	1
Inside surface	1
Port surface	1
Certification	CE
Type Code	HAB35-330-4X/2G09G-2N111-CE
Materialnumber	R901195143
Data sheet 50170	<input type="button" value="Check this suggestion"/> <input type="button" value="Create PDF"/>